

Arizona State University

Course Catalog Archive

2016-2017



This document provides an archival record of the course catalog offered during the 2016-2017 academic year. It is a printable option of the online course catalog for accreditation organizations, agencies and university offices for data collection, evaluation purposes and referencing. The courses presented in this archive may no longer be offered. For current course information and offerings, refer to the online version of the course catalog.

For inquiries or questions please contact academic.catalog@asu.edu.

Classification of Courses

course numbering system

Lower-Division Courses

Lower-division courses, numbered from 100 to 299, are designed primarily for freshmen and sophomores. Certain classes are closed to freshmen who lack the designated prerequisites or whose majors are outside the units offering the courses. This information is available in the course catalog [1] or from the student's academic advisor.

Upper-Division Courses

Upper-division courses, numbered from 300 to 499, are designed primarily for juniors and seniors. Prerequisites and other restrictions should be noted before registration. Courses at the 400 level apply to graduate degree requirements for some graduate programs when approved by Graduate Education.

Graduate-Level Courses

Graduate-level courses, numbered from 500 to 799, are designed primarily for graduate students. However, an upper-division undergraduate student may enroll in courses numbered 500-599 with the approval of the student's advisor, course instructor, department chair and dean of the college in which a course is offered. If such a course does not meet an undergraduate graduation requirement, it may be eligible for use in a future graduate program on the same basis as work taken by a nondegree graduate student. See graduate credits earned by undergraduate students [2].

omnibus courses

Omnibus numbers are used for courses offered on an experimental or tutorial basis or for courses in which the content is new or periodically changes. Academic units use their prefixes with omnibus course numbers. The general nature of the work required for a particular omnibus course is consistent from unit to unit, but subject matter varies. Omnibus courses are often offered for a variable number of credit hours.

Within the academic catalog and course catalog, abbreviations are frequently used with a colon to introduce specific omnibus course topics (e.g., MGT 494 ST: Cultural Factors in International Business). See the omnibus course abbreviations.

Omnibus Course Abbreviations

Abbreviation	Title	Number
AP	Applied Project	593, 693, 793
CW	Conference and Workshop	594
FW	Fieldwork	583, 683, 783
FYS	First-Year Seminar	191
HC	Honors Colloquium	497
I	Internship	484, 584, 684, 784
P	Practicum	580, 680, 780
PS	Pro-Seminar	498
R	Research	592, 692, 792
RC	Reading and Conference	590, 690, 790
RM	Research Methods	500, 600, 700
S	Seminar	591, 691, 791
ST	Special Topics	194, 294, 394, 494, 598

Omnibus Undergraduate Courses

191 First-Year Seminar (1–3)

Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.

194, 294, 394, 494 Special Topics (1–4)

Covers topics of immediate or special interest to a faculty member and students.

484 Internship (1–12)

Structured practical experience following a contract or plan, supervised by faculty and practitioners.

498 Pro-Seminar (1–7)

Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.

499 Individualized Instruction (1–3)

Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.

Honors Courses

The courses listed as 298 and 492 Honors Directed Study, 493 Honors Thesis, 497 Honors Colloquium, and all courses with the HON prefix are reserved for students in Barrett, the Honors College. These courses range from one to six credit hours. Consulting with an honors advisor before enrolling is recommended.

Omnibus Graduate Courses

500, 600, 700 Research Methods (1–12)

Course on research methods in a specific discipline.

580, 680, 780 Practicum (1–12)

Structured practical experience in a professional program, supervised by a practitioner or faculty member with whom the student works closely.

583, 683, 783 Fieldwork (1–12)

Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.

584, 684, 784 Internship (1–12)

Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.

590, 690, 790 Reading and Conference (1–12)

Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic or writing a literature review of a topic.

591, 691, 791 Seminar (1–12)

A small class emphasizing discussion, presentations by students and written research papers.

592, 692 Research (1–12)

Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.

593, 693, 793 Applied Project (1–12)

Preparation of a supervised applied project that is a graduation requirement in some professional majors.

594 Conference and Workshop (1–12)

Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.

595, 695, 795 Continuing Registration (1)

Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded and no grade is assigned.

598 Special Topics (1–4)

Topical courses not offered in regular course rotation (e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand).

599 Thesis (1–12)

Supervised research focused on preparation of a thesis, including literature review, research, data collection and analysis, and writing.

792 Research (1–15)

Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.

799 Dissertation (1–15)

Supervised research focused on preparation of dissertation, including literature review, research, data collection, analysis and writing.

The preceding courses are described in Graduate Education announcements and are also available in the respective departments. Under special circumstances, at the dean's request and through the approval of the executive vice president and provost of the university, arrangements may be made to increase the standard credit hours of credit.

Visiting Student Program

The numbers 597, 697 and 797 in the LAW prefix have been reserved for the visiting student program in the Sandra Day O'Connor College of Law.

Study Abroad Programs

Courses with the prefix SAO are reserved for participants in partnership and exchange study abroad programs through the Study Abroad Office. This is a placeholder course that remains on the student's academic record until the student's record is updated by SAO following the completion of the student's study abroad program. This course will be dropped and will be replaced with the ASU courses, credits, and grades equivalent to the course work completed abroad. Students must register for at least the number of credits equivalent to full-time study at ASU (i.e., 12 credits for undergraduate students and nine credits for graduate students during the fall and spring semesters, or one to six hours during the summer session). Students participating in an SAO partnership program must register for the subtopic "SAO: Study Abroad Program;" participants in an SAO exchange program must register for the subtopic "SAO: Exchange Program." Note: The SAO placeholder course is not an indication of the level of course work or the total number of credits the student may complete abroad.

Source URL: https://catalog.asu.edu/course_classification

Links:

[1] <https://www.asu.edu/go/classsearch>

[2] http://catalog.asu.edu/course_load

Grades and Grading Policies

For letter grades and grading policies, please refer to the 2016-2017 Academic Catalog Archive.

Course Prefix **Description**

AAD	Architectural Administration and Management
ABS	Applied Biological Sciences
ACC	Accountancy
ACO	Applied Computing
ACT	Actuarial Sciences
ADE	Architectural Design and Technology Studios
AEE	Aerospace Engineering
AEP	Applied Ethics and the Professions
AES	Aerospace Studies
AET	Aeronautical Engineering Technology
AFR	African and African American Studies
AGB	Agribusiness
AIS	American Indian Studies
ALA	Architecture and Landscape Architecture
ALD	Aging and Lifespan Development
ALT	Alternative Energy Technologies
AME	Arts, Media, and Engineering
AML	Applied Mathematics for the Life & Social Sciences
AMS	American Studies
AMT	Aeronautical Management Technology
ANB	Animal Behavior
ANP	Environmental Analysis and Programming
APA	Asian Pacific American Studies
APH	Architectural Philosophy and History
APL	Applied Linguistics
APM	Applied Mathematics
ARA	Art Auxiliary
ARB	Arabic
ARE	Art Education
ARP	Architecture Professional Studies
ARS	Art History
ART	Art
ASB	Anthropology (Social and Behavioral)
ASC	Applied Science Core
ASE	Analysis and Systems
ASM	Anthropology (Science and Mathematics)
AST	Astronomy
ASU	ASU
ATC	Air Traffic Control
ATE	Architecture and Landscape Architecture
AVC	Architectural Communication
BCH	Biochemistry
BCS	Serbo-Croatian
BDE	Biological Design
BIO	Biology
BIS	Bachelor of Interdisciplinary Studies
BLE	Bilingual Education
BMD	Biomedical Diagnostics

Course Prefix Description

BME	Bioengineering
BMI	Biomedical Informatics
BMY	Biomimicry
BUA	Business Administration
BUE	Business Education
BUS	Business
CBS	Computational Biosciences
CDE	Child Development
CDH	Computational Digital Humanities
CED	Counselor Education
CEE	Civil and Environmental Engineering
CEN	Computer Engineering
CHE	Chemical Engineering
CHI	Chinese
CHM	Chemistry
CHS	College of Health Solutions
CIM	Concrete Industry Management
CIS	Computer Information Systems
CMN	Communication Studies
CNE	Construction Engineering
COE	College of Education
COM	Communication
CON	Construction
CPI	Computing & Informatics
CPP	College of Public Programs
CPY	Counseling Psychology
CRD	Community Resources and Development
CRJ	Criminology and Criminal Justice
CSE	Computer Science and Engineering
CSM	Community Sports Management
CST	Computing Studies
DAH	Dance History
DAN	Dance
DBA	Doctor of Business Administration
DCE	Dance
DCI	Curriculum and Instruction
DNP	Doctor of Nursing Practice
DSC	Design
EAC	Early Childhood East
ECD	Early Childhood Education
ECN	Economics
ECS	Early Childhood Special Education
ECT	Early Childhood Teaching and Leadership
EDA	Education Administration and Supervision
EDP	Educational Psychology
EDS	Environmental Design
EDT	Educational Technology
EED	Elementary Education

Course Prefix Description

EEE	Electrical Engineering
EET	Electronics Engineering Technology
EGR	Engineering
ELL	English as a Second Language
ELS	Environmental Life Sciences
EMS	Executive Sustainability Leadership
ENE	Engineering Education
ENG	English
ENT	Entrepreneurship
ENV	Environmental Science
EPA	Education Policy Analysis
EPD	Environmental Design and Planning
ERM	Environmental Resource Management
ESS	Environmental Social Science
EST	Electronic Systems Technology
ETH	Ethnic Studies
EVO	Evolutionary Biology
EXW	Exercise and Wellness
FAS	Family Studies
FIN	Finance
FIS	Future of Innovation in Society
FMP	Film and Media Production
FMS	Film and Media Studies
FOR	Forensics
FRE	French
FSE	Fulton School of Engineering
FSH	Fashion
GAP	Global Academic Preparation
GBL	Global Launch
GCU	Cultural Geography
GER	German
GIS	Geographic Information Science
GIT	Graphic Information Technology
GLG	Geological Sciences
GPE	Global Professional English
GPH	Physical Geography
GRA	Graphic Design
GRD	Graduate Education
GRK	Ancient Greek
GTD	Global Technology and Development
HCD	Science of Health Care Delivery
HCI	Healthcare Innovation
HCR	Health Care Related
HDA	Herberger Institute for Design and the Arts
HEB	Hebrew
HED	Higher and Postsecondary Education
HES	Health Science
HHE	Healthcare and Healing Environments

Course Prefix Description

HIN	Hindi Studies
HON	Honors
HPS	History and Philosophy of Science
HRC	Humanities, Arts & Cultural Studies
HSC	Health Sciences
HSD	Human and Social Dimensions Science and Technology
HSE	Human Systems Engineering
HSM	Health Sector Management
HST	History
HUD	Housing and Urban Development
HUM	Humanities
IAP	Interdisciplinary Arts and Performance
IAS	Integrative Studies
IBC	Integrated Behavioral Care
IDN	Indonesian
IED	Indian Education
IEE	Industrial Engineering
IFT	Information Technology
IMD	Instructional Media
IND	Industrial Design
INT	Interior Design
ITA	Italian
JAC	Joint Admission Continuous Enrollment
JHR	Social Justice and Human Rights
JMC	Journalism and Mass Communication
JPN	Japanese
JST	Jewish Studies
JUS	Justice Studies
KIN	Kinesiology
KOR	Korean
LAA	Landscape Architectural Administration
LAP	Landscape Architecture Professional Studies
LAS	Latin American Studies
LAT	Latin
LAW	Law
LDE	Landscape Architectural Design&Technology Studies
LES	Legal and Ethical Studies
LIA	Liberal Arts and Sciences
LIN	Linguistics
LIS	Library Science
LNP	Landscape Analysis and Programming
LPH	Landscape Architectural Philosophy and History
LSC	Life Sciences
LSE	Learning Sciences
LTC	Landscape Architectural Technology
MAE	Mechanical and Aerospace Engineering
MAS	Masters of Arts in Interdisciplinary Studies
MAT	Mathematics

Course Prefix **Description**

MBB	Molecular Biosciences/Biotechnology
MCB	Molecular and Cellular Biology
MCE	Multicultural Education
MCO	Mass Communication
MDC	Music and Digital Culture
MDL	Medical Laboratory Science
MED	Medical Studies
MEE	Mechanical Engineering
MET	Mechanical & Manufacturing Engineering Technology
MFG	Manufacturing Engineering
MGT	Management
MHL	Music History/Literature
MIC	Microbiology
MIS	Military Science
MKT	Marketing
MLS	Master of Liberal Studies
MND	Mandarin Chinese
MSA	Modern Standard Arabic
MSE	Materials Science and Engineering
MSI	Music Scholarly Inquiry
MTC	Music Theory and Composition
MTE	Mathematics Education
MUD	Urban Design
MUE	Music Education
MUP	Music Performance
MUS	Music
NAN	Nanoscience
NAV	Naval Science
NEU	Neuroscience
NEW	New College
NLM	Nonprofit Leadership and Management
NTR	Nutrition
NUR	Nursing
OBS	Obesity Prevention and Management
OGL	Organizational Leadership
OMT	Operations Management Technology
OPM	Operations and Production Management
PAF	Public Affairs
PAX	Peace Studies
PBH	Public Health
PGM	Professional Golf Management
PHI	Philosophy
PHL	Philosophy
PHS	Physical Sciences
PHY	Physics
PLA	Landscape Architecture
PLB	Plant Biology
PLC	Polish Languages and Culture

Course Prefix Description

POR	Portuguese
POS	Political Science
PPE	Physical Education East
PRM	Parks and Recreation Management
PSB	Psychology Behavior Analysis
PSY	Psychology
PTX	Pharmacology/Toxicology
PUB	Scholarly Publishing
PUP	Urban and Environmental Planning
QBA	Quantitative Business Analysis
RDG	Reading Education
REA	Real Estate
RED	Real Estate Development
REL	Religious Studies
ROM	Romanian
RUS	Russian
SAO	Study Abroad Office
SBS	Social and Behavioral Sciences
SCM	Supply Chain Management
SCN	Science Education
SEC	Solar Energy Engineering & Commercialization
SED	Secondary Education
SEM	Science and Engineering of Materials
SER	Software Engineering
SES	Earth and Space Exploration
SET	Security Engineering Technology
SGS	School of Global Studies
SHS	Speech and Hearing Science
SLB	Sports Law and Business
SLC	School of International Letters and Cultures
SLV	Slavic
SMC	Simulation, Modeling and Applied Cognitive Science
SOC	Sociology
SOS	School of Sustainability
SPA	Spanish
SPE	Special Education
SPF	Social and Philosophical Foundations
SSH	Social Science and Health
SST	Studies in Social Transformation
STC	Social Technologies
STM	Science, Technology, Engineering and Mathematics
STP	Statistics and Probability
STS	Science, Technology, and Society
SWG	Social Work (Graduate)
SWU	Social Work (Undergraduate)
TCL	Transborder Chicana/o and Latina
TDM	Tourism Development and Management
TEL	Teacher Education and Leadership

Course Prefix	Description
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TEM	Technological Entrepreneurship and Management
TGM	Thunderbird School of Global Management
THA	Thai
THE	Theatre
THF	School of Theatre and Film
THP	Theatre Performance and Production
TMC	Technology Management Core
TSS	School of Transborder Studies
TWC	Multimedia Writing and Technical Communication
UET	Microelectronics Engineering Technology
UNI	University
URB	Urban and Metropolitan Studies
USL	University Service Learning
VIP	Vertically Integrated Projects
VTN	Vietnamese
WAC	Writing Across the Curriculum
WPC	W.P. Carey School of Business
WST	Women's Studies

Course Component	Description
Individualized Instruction (IND)	A class in which an individual student is provided an opportunity for original study or investigation in a major or field of specialization on a more autonomous basis. Normally a contract or plan is used and supervised by faculty and/or practitioners.
Integrated Lecture/Lab (LEL)	Integrated lecture/lab is a class that has some lecture and some hands-on components but do not require a separate time like a traditional lab.
Laboratory (LAB)	The hands-on, workshop component of a class usually held in a laboratory. The laboratory time is separate from the lecture although it is often associated to a lecture(s).
Lecture (LEC)	A traditional method of instruction in which students are taught a subject by a member of the faculty.
Practicum (PRA)	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely. Internships and student teaching fit into this category. These classes are often held off campus at a professional location.
ProMod (PRO)	In ProMod courses, the role of lectures is deemphasized in favor of learning based on projects. The learning is driven by the needs of the project, not by predetermined lecture topics. Students will go where the questions take them, leading to an individualized exploration for the issues at hand.
Recitation (REC)	Recitations are small interactional meetings that combine formal presentations, review, and interaction between the students and an instructor. These are small interactional meetings and are usually combined with a lecture as the primary component. Recitations are often lead by teaching assistants (TAs) or graduate assistants (GAs) to supplement a lecture. TAs/GAs review the lecture, expand on the concepts, and usually allow for question/answer time.
Research (RSC)	Under the supervision of a faculty member or group of faculty, student conducts research that is expected to lead to a specific project such as dissertation, thesis, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.
Seminar (SEM)	A small class emphasizing discussion, presentations by students, and written research papers.
Studio (STO)	A hands-on workshop component of design and the arts courses.

Grading Option	Description
AUD	Audit
CNV	Conversion
ELG	Enhanced Learning Grading Basis
GNA	Graded with No Audit
GRD	Graded
NOG	No Grade Associated
OP2	Student Option - Standard Grading or Audit
OP3	Student Option - Grade, Z or Audit
OP4	Student Option – P/F/Z or Audit
OP6	Student Option – Standard Grading or Audit
OPT	Student Option – Standard Grading or Audit
YGB	Y (Satisfactory) Grading Basis
Z1	Standard Grading with Z Option
Z2	Pass/Fail with Z Option
Z3	Continuing registration

Summer 2016

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AAD	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
AAD	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AAD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
AAD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AAD	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
AAD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
AAD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Building Design MS student
AAD	552	Architectural Management II	Organizational, human performance, and market influences on architecture firms and projects. Readings, case studies, and analysis of managerial problems and solutions.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Building Design MS, Master of Architecture, Master of Urban Design or Master of Landscape Architecture student
AAD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Herberger Institute of Design and the Arts Graduate student
AAD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
AAD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ABS	130	Introduction to Environmental Science	Introduces the interconnected nature of Earth's hydrosphere, lithosphere (soils and rocks), atmosphere, and biosphere.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	SQ	Credit is allowed for only ABS 130 or BIO 130
ABS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Liberal Arts and Sciences	College of Letters and Sciences	1-4		
ABS	207	Applied Plant Taxonomy	Introduces identification of vascular plants emphasizing seed plants. Surveys seed plant families.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: BIO 181 (BIO 188); BIO 182 (BIO 187)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	225	Soils	Fundamental properties of soils and their relations to plant growth, nutrition of man and animals, and environmental quality. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SQ	Prerequisite(s): CHM 101 or CHM 113
ABS	226	Soils Laboratory	Selected exercises to broaden the background and understanding of basic soil principles. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LAB	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1	SQ	Pre/Co-Requisite: ERM (ABS) 225
ABS	260	Fundamentals of Sustainable Horticulture	Principles and practices of horticulture, emphasizing development, growth, and propagation of horticultural plants and environmental factors that affect these processes.	N	LEL	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	SG	
ABS	270	Sustainable Biological Systems	Ecological foundations of sustainable biological systems, anthropogenic impacts on ecosystem structure and function, and ecological risk assessment.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		
ABS	271	Veterinary Medicine Today	Introduces the role of the veterinarian as related to the fields of food supply and veterinary medicine.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		
ABS	274	Introduction to Wildlife Management	Managing wildlife in the Southwest, including life histories of small game, fur bearers, big game, and selected nongame specials.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Pre-requisite: BIO 182 (or BIO 187)
ABS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
ABS	302	Ethical and Policy Issues in Biology	Policy environment and ethics in the practice of biology. Covers ethical reasoning, policy formulation, and regulatory agencies with examples from biotechnology and the environment.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	2		
ABS	311	Molecular and Cellular Biology	Overview of the biology of the cell; emphasizes structure and function of biomolecules within the cell and their applications associated with recombinant DNA technology, genetic engineering, plant and agriculture biotechnology, and human pharmaceutical development.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: BIO 181 (or 188) ; BIO 182 (or 187) with C or better
ABS	312	Structure and Function	Surveys structural and functional attributes of plant and animals of particular importance in the applied biological sciences.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Pre-requisite: BIO 182 (or BIO 187)
ABS	314	Applied Plant Physiology	Understanding control of plant growth and developmental processes through innovated technologies.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: BIO 181 or BIO 182
ABS	350	Applied Statistics	Statistical methods with applications in the biological sciences and natural resource management. Uses computers and the Internet.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	CS	Pre-requisites: ASC 315, MAT 117, 142 or other course meeting General Studies MA requirement with C or better
ABS	355	Ecology and Adaptations of Vertebrates	Evolution, classification systematics, diversity, anatomical and physiological adaptations anatomy, and physiology, specializations and conservation status of the vertebrates.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: BIO 182 (or BIO187) , and BIO 181 (or BIO188)
ABS	360	Southwest Home Gardening	Multimedia course for nonmajors surveying contemporary topics in Southwest home horticulture, including landscaping, flower and vegetable gardening, citriculture, interiorscaping, and others.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	2		
ABS	362	Landscape Plants	Identification, design, and use of plants in urban landscapes.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Prerequisite(s): minimum 45 hours
ABS	363	Sustainable Landscape Practice	Landscape technologies and practices including landscape design theory, job costing and bidding, sprinkler and drip irrigation design, landscape installation, landscape valuation techniques, landscape ordinances, and maintenance practices of commercial and residential landscapes.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Pre-requisites: ABS 260; Credit is allowed for only ABS or PGM 363
ABS	364	Urban Forestry	Care, maintenance, and valuation of the urban forest, including public and private landscape codes.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: ABS 260
ABS	368	Plant Propagation	Theory and application of sexual and asexual propagation techniques. Considers plant materials used both for urban horticulture and ecological restoration applications.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		
ABS	370	Ecology	Interactions between organisms and their environments; structure and dynamics of populations, communities, ecosystems, and landscapes, with emphasis on vegetation.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: BIO 181
ABS	376	Wildlife Ecology	Examines ecological principles underlying wildlife population dynamics with emphasis on physiology, genetics, nutrition, and habitat factors.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre/Co-requisites: ABS 274; ABS 370
ABS	378	Animal Nutrition	Principles of nutrient metabolism in animal species; emphasizes understanding the interaction of animals with their environment.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: BIO 181 or BIO 182; CHM 101 or CHM 113
ABS	380	Restoration and Wildlife Plants	Important wildland plants, including invasive and endangered species, wildlife food species, and species used for ecosystem restoration.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: ABS 207
ABS	381	Natural Resources Policy	Policies and regulations affecting management of natural resources, with emphases on wildlife and ecological restoration.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): minimum 45 hours
ABS	384	Natural Resouces Measurements	Inventory, sampling and monitoring techniques of natural resources. Data evaluation and interpretation as related to management, restoration and conservation needs of natural resources.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): Minimum 45 hours
ABS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	401	Intermediate Statistics	Analysis of variance, multiple comparisons, multiple regression.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		
ABS	425	Soil Classification and Management	Principles of soil genesis, morphology, and classification. Presents management and conservation practices.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: ETM 225
ABS	430	Watershed Management	Hydrologic, physical, biological, and ecological principles applied to watershed management. Impact of ecosystem manipulations on water yield and quality.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): minimum 45 hours
ABS	434	Soil Ecology	Soils viewed in an ecosystem context, soil-plant relationships, nutrient budgets, and abiotic factors that influence soil processes.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: ABS 370 or BIO 320; Credit is allowed for only ABS 434 or BIO 418
ABS	435	Applied Systems Ecology	Simulation modeling as a tool to study ecological processes and human impact on ecosystems and organisms.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: ABS 370, ABS 350 (or STP 420)
ABS	440	Ecological Restoration Techniques	Techniques for ecological restoration, riparian and wetland restoration, and monitoring restoration success.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre/Co-requisite: ABS 370; Credit is allowed for only ETM 440 or ASB 598 (Ecological Restoration Techniques)
ABS	441	Ecological Restoration Practicum	Field experience in the evaluation and monitoring of implemented ecological restoration projects.	N	LEL	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1		Pre/Co-requisite: ABS 440
ABS	460	Organic Gardening	Applies principles and practices of organic gardening in the low desert, including environmental impacts of modern food production.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	2		
ABS	462	Greenhouse/Nursery Management	Greenhouse structures, environment, and nursery operations. Includes irrigation, nutrition, and other principles relative to production of nursery crops.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Pre-requisite: ABS 260
ABS	463	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: ABS 260
ABS	464	Desert Horticulture	Students learn about and practice the principles of sustainable horticulture in an arid climate. Includes capstone projects on sustainability issues related to horticultural practice in arid environments.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ABS 260; Credit is allowed for only ABS 464 or ABS 494 (Sustainable Desert Horticulture) or ABS 498 (Desert Horticulture)
ABS	470	Life History of Mammals	Evolution, classification, environmental, anatomical and physiological adaptations, ecology, and conservation of mammals worldwide. Emphasis on the identification, habitat relationships, conservation, and management techniques of Arizona and select North American mammals.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: ABS 355
ABS	472	Applied Herpetology	Systematics, evolution, ecology and life history of amphibians and reptiles emphasizing wildlife management methodologies.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: ABS 355 or BIO 370; Credit is allowed for only ABS 472 or 498 (Applied Herpetology)
ABS	474	Riparian Ecosystem Management	Management principles of riparian ecosystems based on fluvial geomorphological and ecological concepts. Discusses human impacts to riparian ecosystems.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): Minimum 45 hours
ABS	475	Habitat Management for Small Wildlife	Habitat management considerations and practices for small game and nongame wildlife species in North America.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Pre-requisite: ABS 376
ABS	476	Big Game Habitat Management	Habitat management considerations and practices for big game wildlife species in North America.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): minimum junior standing
ABS	479	Ecosystem Management and Planning	Principles of ecosystem management, with emphasis on economic and policy constraints on the planning process. Risk assessment and management.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Pre-requisite: Senior standing
ABS	481	Riparian and Wetland Restoration	Principles and problems in the restoration of degraded riparian and wetland ecosystems. Construction of wetlands.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ABS 370
ABS	482	Ecology and Planning for Restoration	Ecological principles and resource planning processes applied to the restoration of degraded landscapes.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: ETM 225; 440
ABS	483	Restoration Planning Practicum	Field experience in ecological restoration techniques, selection of mitigation techniques, and implementation planning.	N	LEL	N	OPT	College of Letters & Sciences	College of Letters and Sciences	2		Pre/Co-requisite: ETM 482
ABS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		
ABS	485	GIS in Natural Resources	Principles of Geographic Information Systems (GIS) utilized in natural resource management. Use of computers for spatial analysis of natural resources.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: ABS 350, STP 420, EGR 280 or PSY 230
ABS	486	Introduction to Remote Sensing	Remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery. Not for graduate credit.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Prerequisite(s): minimum 45 hours
ABS	489	Undergraduate Research	Undergraduate research under the supervision of an applied biological sciences faculty member.	N	RSC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-3		Pre-requisite: Junior or Senior standing
ABS	490	Applied Biological Sciences Seminar	Current literature and significant developments related to applications of the biological sciences. May be repeated for credit.	N	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1		Pre-requisite: Senior standing

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ABS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6		Prerequisite(s): Barrett Honors student
ABS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6	L	Prerequisite(s): Barrett Honors student
ABS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
ABS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-7	L	Prerequisite(s): minimum 45 hours
ABS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		
ABS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		
ABS	541	Advanced Rangeland Ecosystem Management	Combines the principles of ecology, planning and restoration in the application of rangeland ecosystem management. Studies fundamental topics such as range plant physiology, range plant ecology, rangeland stocking-rates and grazing systems in considering management practices for rangeland ecosystems.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	4		Pre-requisite: Degree-or non-degree seeking graduate; Credit is allowed for only ERM 541 or ABS 598 (Adv Rangeland Ecosystem Management)
ABS	542	Management of Fire Adapted Ecosystems	Fire adapted ecosystems which evolved with high-frequency and low-intensity fires now support a range of regimes from no fire to uncharacteristically large and intense fires, causing a concern about the current and future role of wildland fire as well as forest and rangeland health. Explores management considerations and techniques for reintroducing fire to these ecosystems.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only ABS 598 (Fire Ecology), or ERM 542
ABS		Vegetation Dynamics	Dynamics of vegetation linking physiological, population, and community ecology. Collection and analysis of vegetation data.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	550	Wildlife Dynamics	Explores major concepts in population and community ecology with an emphasis on their application to the study and management of wildlife species. Explores the theory and sometimes controversial nature of these concepts in the form of lectures and discussions. Instructor and student workshops and oral presentations of student research.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only ERM 550 ABS 598 (Wildlife Dynamics) or ETM 598 (Wildlife Population Ecology)
ABS	551	Advanced Environmental Analysis	Advanced statistical procedures and experimental design for the biological sciences. Techniques for analyzing data that do not meet statistical assumptions.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	553	Riparian Ecology	Review of recent literature, developments, and methods related to riparian ecology. Applies soil and landscape ecology to riparian systems.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	560	Ecological Modeling	Mathematical modeling of animal populations, food-web structural and ecological processes in space and time. May use modeling tools on computer clusters.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Graduate (Degree and non-degree) students; Credit is allowed for only ABS, BIO 560 or MAT 561
ABS	570	Advanced Animal Nutrition	Metabolic and physiological interactions of nutrients in wild and domesticated animals consuming natural feeds.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	586	Remote Sensing in Environmental Resources	Principles and application of remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ABS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Letters & Sciences	College of Letters and Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	101	Accountancy LEAP Program	The Leadership, Ethics, Accountability & Professionalism (LEAP) program aims to ensure a successful transition from high school to college and, ultimately, one's career. Based on the hallmarks of the accounting profession, provides the tools, resources, and expectations to succeed at ASU, W.P. Carey School of Business and the School of Accountancy.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1		
ACC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-3		
ACC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	231	Uses of Accounting Information I	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s) with C or better: CIS 105 (or CIS 236) or CSE 110 if Engineering Management major. Not open to Pre-BIS or Interdisciplinary Studies majors
ACC	232	Financial Accounting I	Develops an understanding of the theory, concepts, principles and practices underlying preparation, interpretation, and use of external financial reports. Emphasizes interpreting the economic substance of events and transactions and their association with contemporaneous and prospective events, relationships, and outcomes. Gains understanding of the accounting information model and develops an ability to analyze and record business transactions and analyze basic financial statements. Meant for prospective accounting and finance majors (and students who plan current majors in these areas) and develops skills and abilities facilitating success in higher-level accounting courses.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): Accountancy or Finance majors; CIS 105, 220 or 236 with C or better
ACC	241	Uses of Accounting Information II	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): ACC 231, 261, or 303 with C or better
ACC	242	Managerial Accounting I	Develops an understanding of the theory, concepts, principles, and practices underlying managerial accounting. Emphasizes three functions managers must perform within their organizations: plan operations, control activities, and make decisions. Explains what accounting information is necessary, how to collect it, and how to interpret it. Meant for prospective accounting and finance majors and students who plan current majors in these areas and develop skills and abilities facilitating success in higher-level accounting courses.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: Open to W. P. Carey Accountancy and Finance majors, and others with School of Accountancy approval; ACC 231, ACC 232, ACC 261 or ACC 303 with C or better
ACC	261	Honors Fundamentals of Financial Accounting	Covers basic financial accounting concepts and applications. Develops an understanding of the environment in which financial reporting choices are made.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey School of Business Honors student; CIS 105 or CIS 220 or CIS 236 with C or better
ACC	271	Honors Fundamentals of Managerial Accounting	Covers basic managerial accounting concepts and applications.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey School of Business Honors student; ACC 231, ACC 232, ACC 261 or ACC 303 with C or better

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ACC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	340	External Reporting I	Financial accounting theory and practice related to external reporting.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s) with C or better: ACC 241, 242 or 271; ECN 221 or 231; MAT 211, 266 or 271; W.P. Carey Accountancy BS or Finance BS student; Pre- or corequisite(s): FIN 300, 302 or 303
ACC	350	Internal Reporting	Internal reporting systems for planning, control, and decision making.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 241, ACC 242 or ACC 271, AND ECN 221 or ECN 231 with C or better
ACC	360	Ethics for Professional Accountants	Addresses ethical obligations and responsibilities of professional accountants.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s) with C or better: ACC 241, 242 or 271; ECN 221 or 231; MAT 211, 266 or 271; W. P. Carey BS Accountancy major
ACC	382	Accounting and Financial Analysis	Introduces nonbusiness majors to financial accounting concepts related to operating, financing, investing, and ethical decisions.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: Non-Business student; must not have previously earned credit in ACC 230, 231, 232, 240, 241, 242, 261, 271 or BUA 381; min ASU cum GPA of 2.00 and min 56 total earned hours OR non-deg student with min ASU cum GPA of 2.00, OR grad student
ACC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	430	Taxes and Business Decisions	Federal income taxation of sole proprietors, partnerships, corporations, fiduciaries, and individuals with an emphasis on tax consequences of business and investment decisions.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): W. P. Carey Accountancy BS student; ACC 340 with C or better; LES 305 with C or better
ACC	440	External Reporting II	Continuation of ACC 340 with emphasis on the recognition, research, and resolution of financial reporting issues.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 340 with C or better
ACC	444	Enterprise Process Analysis and Design	Addresses the major business processes of an enterprise, the impact of recent technological innovations and requisite internal controls. Advances an understanding of the current regulatory environment as it pertains to process controls.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey Accountancy BS or Computer Info Systems BS student; ACC 241(or 242 or 271) with C or better; ECN 221 with C or better; FOR CIS MAJORS: CIS 235 or 236 with C or better
ACC	445	Honors Enterprise Process Analysis and Design	Analysis and design of efficient and effective business processes. Emphasizes taking advantage of new information technologies to improve managerial decision making.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey School of Business Honors student AND Accountancy BS or Computer Info Systems BS student; ACC 241, 242 or 271 with C or better; ECN 221 or 231 with C or better
ACC	450	Principles of Auditing	Standards and procedures in auditing. Planning, evidence gathering and accumulation, and reporting. Ethical and legal considerations.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey Accountancy BS student; ACC 440 with C or better

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ACC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: W. P. Carey BS Accountancy major; 3.50 cumulative GPA; Minimum 72 hours; ACC 340, 350, 430, 440 and 450 with C or better
ACC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-6		Prerequisite(s): Barrett Honors student
ACC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	W.P. Carey School of Business	School of Accountancy	1-6	L	Prerequisite(s): Barrett Honors student
ACC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Accountancy BS student
ACC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-6		Prerequisite(s): Barrett Honors student
ACC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-7	L	Pre-requisite: Accountancy BS, Finance BS or Economics BS student
ACC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-3		Pre-requisite: Accountancy BS student
ACC	502	Financial Accounting	Contemporary financial accounting and reporting systems; emphasizes the interpretation and evaluation of a company's external financial reports.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: MBA student
ACC	503	Managerial Accounting	Managerial accounting concepts and procedures for internal reporting applied to the decision making activities of the professional managers.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: MBA student
ACC	511	Taxes and Business Strategy	Economic implications of selected management decisions involving application of federal income tax laws. Recognition of tax hazards and tax savings.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	512	Advanced Auditing	Builds on the skills obtained in the beginning auditing (assurance) course and focuses on audit planning, risk assessment, evidence, and reporting procedures and fraud.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: Master of Accounting student
ACC	513	Advanced Financial Accounting	Focuses on advanced financial accounting topics along with their application in the financial reporting process.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: Specific Business Graduate majors
ACC	571	Taxation of Corporations and Shareholders	Tax aspects of the formation, operation, reorganization, and liquidation of corporations and the impact on shareholders.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	573	Taxation of Pass-Through Entities	Tax aspects of the definition, formation, operation, liquidation, and termination of a partnership. Emphasizes tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	575	Family Tax Planning and Wealth Transfer Taxation	Tax treatment of wealth transfers at death and during lifetime, with emphasis on tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	577	Tax Research, Professional Responsibilities & Property Transactions	Federal tax issues and consequences, tax authority, property transactions and tax consequences of acquiring, holding and disposing of property.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): Master of Taxation major. Credit is allowed for only ACC 577 or ACC 591 (Tax Research, Professional Responsibilities & Property Transactions)
ACC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	582	Information Security of Interorganizational Systems	Function and responsibility of the information security officer. Advanced topics in security methods and technology.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	585	Performance Measurement and Advanced Managerial Accounting	Applies quantitative techniques to accounting problems.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: Business Graduate student
ACC	586	Shareholder Value Creation and Financial Statement Analysis	Develops skills necessary to exploit financial reporting information in a business environment and appreciation of reporting issues faced by management.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ACC	587	Multi-Jurisdictional Taxation I	Multistate taxation and interplay between multistate tax issues and federal and state constitutional limitations.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): Master of Taxation major
ACC	588	Professional Accounting Research	Applies the technical knowledge of accounting theory and principles developed in other academic courses through the use of "real life" case studies, where such knowledge and professional judgment is applied in resolving advanced accounting problems and issues.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: W. P. Carey Master of Accountancy student
ACC	589	Multijurisdictional Tax II	Addresses the U.S. taxation of U.S. individuals and businesses that do business outside the U.S. as well as the U.S. taxation of foreign persons and tax treaties, allocation of income, foreign tax credits, and transfer pricing. Emphasizes planning related to some of the tax issues that commonly arise in cross-border businesses.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: W. P. Carey student
ACC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Business Administration (Accountancy) PHD student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ACC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ACO	100	All About Data: Design, Query, and Visualization	Data modeling and design, spreadsheets, relational databases and querying, visualization and XML.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	
ACO	101	Introduction to Computer Science	Concepts of problem solving, structured and object-oriented programming in Java, fundamental algorithms, computer system concepts. Social and ethical responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s): MAT 117 with C or better OR Mathematics Placement Test with a score of 50% or higher
ACO	102	Object-Oriented Programming	Object-oriented programming using introductory algorithms and data structures. Overview of concepts in computer science.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisite: ACO 101 with C or better. Credit is allowed for only ACO 102 or CSE 205 or CST 200
ACO	201	Data Structures and Algorithms	Static and dynamic data structures, recursive and iterative sorting and searching, object-oriented design and programming, software design models and implementation/testing strategies, professional responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisites: ACO 102 and MAT 210 with C or better
ACO	210	Introduction to Systems Programming	Introduces operating systems as resource managers, processes, threads, memory allocation, file systems, protection, system calls, application program interfaces.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisite: ACO 201 with C or better
ACO	220	Introduction to Database Systems	Introduces database management systems concepts. Entity-relationship and relational data models. Database design. Relational algebra, calculus, and SQL query languages. Query optimization.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s) with C or better: ACO 210; MAT 243. Credit is allowed for only ACO 220 or ACO 320 or CSE 412 or CST 433
ACO	320	Database Systems	Entity-relationship and relational data models. Database design theory. Relational algebra, calculus and SQL query languages. Query optimization. XML fundamentals. Transactions, recovery and concurrency control.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 210 with C or better; MAT 243 with C or better; Credit is allowed for only ACO 220 or ACO 320 or CSE 412 or CST 433
ACO	321	Database Development & Applications	Stored procedures and triggers. Security and authorization. Call-level interface. Database Web applications. Advanced topics.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 320 with C or better. Credit is allowed for only ACO 321 to CSE 414
ACO	330	Computer Networks	Network architecture and protocols, principles of network applications, socket programming, flow and congestion control, switching and routing, link-layer technologies, traffic capture and analysis, security.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 210 with C or better. Credit is allowed for only ACO 330 or CSE 434
ACO	331	Network Design	Fundamental network design principles, internetworking design, network architectures, network management, traffic analysis, security management, case study and hands-on experiments.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: ACO 330 with C or better
ACO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
ACO	399	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	N	RSC	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		Prerequisite(s): ACO 102; minimum 30 hours
ACO	420	Large-scale Data Management	Modern technologies to manage, process and analyze big data. Data processing of large data sets with Map/Reduce. NoSQL data stores. NewSQL databases. Data visualization. Applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: ACO 320 with C or better
ACO	421	Data Mining and Warehousing	Introduces data mining from a database perspective, including classification, clustering, and association rules. Data warehousing methodologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: ACO 320 with C or better
ACO	422	XML and Databases	XML data model, schema specification and validation, querying, storage, indexing, and current research topics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: ACO 320 with C or better

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ACO	430	Wireless Networks	Wireless transmission fundamentals, multiple access techniques, error detection and control, cellular concepts and systems, wireless LAN, performance analysis, recent advances.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: ACO 210, ACO 330 and STP 300 with C or better
ACO	431	Network Security	Digital threats and attacks, cryptography, confidentiality, authentication protocols, message integrity, security in network applications, intrusion detection, malicious software countermeasures, firewalls.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: ACO 210, ACO 330 and MAT 243 with C or better
ACO	432	Distributed Systems	Distributed system models, distributed programming technique, clock synchronization, distributed snapshot, distributed mutual exclusion, concurrency control, fault tolerance, security, recent advances.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: ACO 210 and ACO 330 with C or better
ACO	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
ACO	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
ACO	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
ACO	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
ACO	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7	L	
ACO	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
ACT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
ACT	201	Introduction to Elements and Techniques of Actuarial Science	Introduces important aspects of actuarial work. Exposes the development of actuarial techniques in the context of life insurance, casualty and property insurance, superannuation and investment. Develops problem-solving skills and gives basic tools for risk management and financial modeling, including the use of Excel spreadsheets for both, calculations and simulations. Shows how studies in related disciplines (such as accounting, demography, economics, statistics, computing and mathematics) are essential to the education of an actuary. Guest speakers from the industry share their knowledge and insight on how to become a successful actuary.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: CIS 105 and MAT 270 with B or better
ACT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
ACT	310	Mathematics of Finance	Prepares potential actuaries to master national exams. Provides an understanding of the fundamental concepts of financial mathematics and how those concepts are applied in calculating present and accumulated values for various streams of cash flows as a basis for future use in: reserving, valuation, pricing, asset/liability management, investment income, capital budgeting and valuing contingent cash flows. Topics include: mathematics of compound interest including annuities certain, amortization schedules, yields curves, sinking funds and bonds. Gives an introduction to financial instruments including derivatives and the concept of no-arbitrage as it relates to financial mathematics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4		Pre-requisite: ACT 201 with B or better; MAT 270 with B or better; Credit is allowed for only ACT 310 or MAT 340
ACT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
ACT	415	Probability for Risk Management	Prepares potential actuaries to master national exams. Develops knowledge of the fundamental probability tools for quantitatively assessing risk. Topics include: introduction to probability concepts including definition of probability, independence, conditional probability, random variables, specific discrete and continuous probability distributions, multivariate random variables, moments and moment generating functions, functions of random variables, sampling distributions and central limit theorem. Emphasizes the application of these tools to problems encountered in actuarial science.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with B or better: ACT 201; MAT 272; Credit is allowed for only ACT 415 or STP 326
ACT	430	Mathematics of Financial Derivatives	Prepares potential actuaries to master the national exams. Develops knowledge of the theoretical basis of certain actuarial models and the application of those models to insurance and other financial risks. Topics include: option pricing, Black-Scholes formula, delta hedging, exotic options, Brownian motion, interest rate models and simulations.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 310 with B or better

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ACT	435	Actuarial Business Forecasting	Business forecasting using statistical techniques such as: simple linear regression, multiple linear regression, hypothesis testing and confidence intervals in linear regression models, testing of models, data analysis and appropriateness of models, linear time series models, moving average, regression based and/or ARIMA models, estimation, data analysis and forecasting with time series models, forecast errors and confidence intervals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 342 or 343 with B or better; STP 420 with B or better
ACT	440	Life Contingencies I	Prepares potential actuaries to master the national exams. Develops knowledge of the theoretical basis of life-contingent actuarial models and the application of those models to insurance and other financial risks. Topics include: life tables, present value determination for life insurances and annuities, benefit premiums and reserves.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 415 with B or better; MAT 343 with B or better
ACT	441	Life Contingencies II	Prepares potential actuaries to master the national exams. Develop the student's knowledge of the theoretical basis of life-contingent actuarial models and the application of those models to insurance and other financial risks. Topics include: multiple life functions, multiple decrement models and benefit reserves.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 440 with C or better
ACT	450	Actuarial Models and Modeling I	Prepares potential actuaries to master the national exams. Helps student understand the steps involved in the modeling process and how to carry out these steps in solving business problems. Students analyze data from an application in a business context, determine a suitable model including parameter values and provide measures of confidence for decision making based upon the model. Topics include: survival, severity, frequency and aggregate models and their modifications.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with B or better: ACT 415; STP 427
ACT	451	Actuarial Models and Modeling II	Prepares potential actuaries to master the national exams. Helps students understand the steps involved in the modeling process and how to carry out these steps in solving business problems. Students analyze data from an application in a business context, determine a suitable model including parameter values and provide measures of confidence for decision making based upon the model. Topics include: construction and selection of parametric models, Bayesian estimation, credibility and simulation.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 450 with C or better
ACT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
ACT	491	Actuarial Exam Preparation Seminar	Provides potential actuaries with review and practice for an actuarial examination.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s) with B or better: ACT 310 (or ACT 415 or 430 or both ACT 440 and 441 or both ACT 450 and 451)
ACT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
ACT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
ACT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
ADE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
ADE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ADE	242	Introduction to Building Systems	Materials and methods of construction. Aesthetic, code and construction costs. Exposure to building information management (BIM).	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Architectural Studies major; Co-requisite: ALA 226. Credit is allowed for only ADE 242 or ATE 294, Building Systems
ADE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ADE	321	Architectural Studio I	Introductory building design problems. Emphasizes design process, communication methods, aesthetics, construction, and technology.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Architecture student; ALA 226 with C or better

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ADE	322	Architectural Studio II	Site and building design problems. Emphasizes programmatic and environmental determinants and building in natural and urban contexts.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Architectural Studies student; ADE 321 with C or better
ADE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ADE	421	Architectural Studio III	Topical design problems of intermediate complexity, including interdisciplinary problems.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: ADE 322 with C or better; Co-requisites: APH 421, ATE 451
ADE	422	Architectural Studio IV	Topical design problems of advanced complexity, including interdisciplinary problems.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Architectural Studies student; ADE 421 with C or better
ADE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
ADE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
ADE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
ADE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ADE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
ADE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
ADE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Master of Architecture, Master of Landscape Architecture, or Master of Urban Design
ADE	510	Foundation Architectural Studio	Fundamentals of architectural design, methodology, visualization, and representation.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	6		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	511	Core Architectural Studio I	Applies design fundamentals in architectural problems, including construction, technology, programmatic and environmental determinants.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	6		Pre-requisites: Master of Architecture student; ADE 510 with C or better
ADE	512	Core Architectural Studio II	Applies architectural design fundamentals to increasingly complex problems, including specific sites and activities.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	6		Pre-requisites: Master of Architecture student; ADE 511 with C or better
ADE	521	Advanced Architectural Studio I	Design problems emphasizing theory, aesthetics, and tectonics as influences on architectural form.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	522	Advanced Architectural Studio II	Design problems emphasizing the comprehensive integration of building systems and technologies as influences on architectural form.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Architecture student; ADE 521 with a C or better; Co-requisites: APH 505 and ATE 556
ADE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ADE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Herberger Institute of Design and the Arts Graduate student
ADE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
ADE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	621	Advanced Architectural Studio III	Design problems emphasizing the urban context, planning issues, and urban design theory as influences on architectural form.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Architecture student; ADE 522 with a C or better; Co-requisite: APH 515 OR Bldg Des(Energy Perform/Bldgs) MS student
ADE	622	Advanced Architectural Studio IV	Individual, student-initiated project reflecting a culminating synthesis of architectural ideas.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Architecture student; ADE 522 with a C or better; Co-requisites: APH 515 OR Bldg Des(Energy Perform/Bldgs) MS student
ADE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		
AEE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
AEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
AEE	313	Aircraft Dynamics and Control	Aircraft static stability; equations of motion; dynamic modes and stability; stability derivatives; response to controls; introduces automatic control of aircraft.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 (or MAE 360) with C or better; MAE 301 and 318 with C or better

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AEE	325	Aerospace Structures and Materials	Applies structural analysis to aircraft and spacecraft structures. Loads on aerospace structures, buckling and stability, stiffened panels, primary wing and launch-vehicle structure, vibration of large structures, properties and selection of aerospace structural materials.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisites with C or better: Aerospace Engr major: MAE 213 & 384; MAT 267 or 272, OR Mat Sci & Engr major: MSE 211 & 415 (or 315); MAT 267 or 272; Credit is allowed for only AEE 325 (or MAE 325), MEE 322, or MAE 394 (Structural Materials in Aerospace)
AEE	344	Fundamentals of Aircraft Design	Aircraft performance, RFP's, Federal Aviation Regulations, aircraft sizing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 (or MAE 360) with C or better; MAE 214 and 384 with C or better; Pre- or corequisite(s): AEE 325 (or MAE 325) or MAE 394 (Aerospace Structures and Materials) with C or better if completed
AEE	360	Aerodynamics	Airfoils and wings, ideal flow, boundary layers, finite-difference solutions, wind-tunnel testing. Both AEE 360 and AEE 362 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4	L	Prerequisite(s): Fulton Engineering undergraduate student; ENG 102, 105, or 108 with C or better; MAE 240 and 384 with C or better; MAT 267 or 272 with C or better
AEE	362	High-Speed Aerodynamics	Compressible flow at subsonic and supersonic speeds; ducts, nozzles, and diffusers; normal and oblique shocks, transonic flow, numerical solutions; experimental applications. Both AEE 362 and AEE 360 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4	L	Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 (or MAE 360) with C or better; MAE 384 with C or better
AEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
AEE	415	Vibration Analysis	Free and forced response of single and multiple degree of freedom systems, continuous systems; applications in mechanical and aerospace systems numerical methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 213 and 318 and 384 with C or better; Credit is allowed for only AEE 415 or MAE 598 (Vibration Analysis)
AEE	426	Design of Aerospace Structures	Flight vehicle loads, design of semimonocoque structures, local buckling and crippling, fatigue, aerospace materials, composites, joints, and finite element applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Aerospace Engineering BSE major; AEE 325 (or MAE 325) or MAE 394 (Aerospace Structures and Materials) with C or better; Credit is allowed for only AEE 426 or MAE 598 (Design of Aerospace Structures)
AEE	445	Fundamentals of Spacecraft Design	Spacecraft subsystems. Systems engineering, space mission design, space environment. Cost analysis. Risk and reliability analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 325 (or MAE 394 Aerospace Structures and Materials) with C or better; MAE 214 and 318 with C or better; Credit is allowed for only AEE 445 or MAE 494 (Fundamentals Spacecraft Dsgn)

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AEE	462	Space Vehicle Dynamics and Control	Attitude dynamics and control, orbital mechanics, orbital transfer/rendezvous, spacecraft control systems design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 301 and 318 with C or better
AEE	463	Aircraft Propulsion	Fundamentals of gas-turbine engines. Analysis and design of components. Alternative aircraft propulsion systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 362 with C or better; MAE 384 with C or better
AEE	465	Rocket Propulsion	Rocket flight performance; nozzle design; combustion of liquid and solid propellants; component design; advanced propulsion systems; interplanetary missions; testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 340 or MAE 362 with C or better; MAE 462 with C or better
AEE	466	Rotary Wing Aerodynamics and Performance	Introduces helicopter and propeller analysis techniques. Momentum and blade-element, helicopter trim. Hover and forward flight. Ground effect, autorotation and compressibility effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 with C or better; Credit is allowed for only AEE 466 or MAE 566
AEE	468	Aircraft Systems Design	Group projects related to aircraft vehicle design, working from mission definition and continuing through preliminary design.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 313 and 344 with C or better; MAE 400 with C or better; Pre- or corequisite(s): AEE 463 with C or better if completed
AEE	469	Projects in Astronautics or Aeronautics	Various multidisciplinary team projects available each semester. Projects include design of high-speed rotocraft autonomous vehicles, liquid-fueled rockets, microaerial vehicles, satellites.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student
AEE	471	Computational Fluid Dynamics	Numerical solutions for selected problems in fluid mechanics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 or MEE 340 with C or better; MAE 384 with C or better; Credit is allowed for only AEE 471 or MAE 561
AEE	478	Fundamentals of Autonomous Aircraft Systems	First of a two-semester capstone sequence. Introduces autonomous aircraft performance and operations, aircraft performance prediction, ground control and support, sensors, communications and telemetry, aerospace ethics and law, design methods.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s) with C or better: AEE 313, 360
AEE	479	Design of Autonomous Aircraft Systems	Interdisciplinary capstone design project for aerospace and electrical engineering students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: MAE 400 with C or better; AEE 478 with C or better
AEE	480	Space Systems Design	Group projects related to space systems design, working from mission definition and continuing through conceptual design.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 445 (or MAE 445) with C or better; EEE 350 with C or better; MAE 214 with C or better; Pre- or corequisite(s): AEE 465 (or MAE 465) with C or better if completed
AEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
AEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		Prerequisite(s): Barrett Honors student
AEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student

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AEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
AEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-7		
AEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		Prerequisite(s): minimum 45 hours
AEP	501	Practical and Professional Ethics	Acquaints students with practical and professional ethics. Assumes no prior experience in ethics, and provides practicable knowledge as well as theoretical knowledge. The first in a series of courses for the MA program in Applied Ethics and the Professions, the course is primarily intended to prepare students in that degree program for their subsequent courses. However, it has been designed to be useful to all graduate students who are interested in learning about practical and professional ethics. The beginning of the course is devoted to the more general subjects of practical ("everyday") ethics and professional ethics, while the remaining weeks are spent focusing on the ethical issues that occur in the context of specific professions, with particular emphasis given to those professions that seem most relevant to the aspirations and interests of the students enrolled in the course.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): graduate student or Barrett Honors student
AEP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP		Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP		Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP		Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP		Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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AEP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AES	101	Air Force Today I	Survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps (AFROTC). Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2		
AES	102	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Emphasizes common Air Force customs and courtesies, drill and ceremonies, health and physical fitness through group participation.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 101
AES	103	Air Force Today II	Introduce students to the United States Air Force and encourage participation in Air Force Reserve Officer Training Corps (AFROTC). Featured topics include: introduction to leadership, Air Force core values, introduction to interpersonal communication and team building, and a continuation of communication skills.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Aerospace Studies	2		
AES	104	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Emphasizes learning the environments and dynamics of an Air Force officer.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 103
AES	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AES	201	The Evolution of USAF Air and Space Power I	Focuses on facilitating the transition from Air Force ROTC cadet to Air Force ROTC candidate. Examines the general aspects of air and space power through a historical perspective. Utilizing this perspective, covers a time period from the first balloons and dirigibles to the modern technology currently used in overseas contingency operations. Featured topics include: Air Force heritage, Air Force leaders, introduction to ethics and values, group leadership problems and continuing application of communication skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2		
AES	202	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Provides application of advanced drill and ceremonies; issuing commands; knowing flag etiquette; and developing, directing, and evaluating skills to lead others.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 201
AES	203	The Evolution of USAF Air and Space Power II	Provides knowledge-level understanding for general element and employment of air and space power. Furthermore, discusses the importance of Air Force Core Values with use of operational examples and historical Air Force leaders. Continues to develop communication skills. Topics include: the Air Force mission and organization, modern joint expeditionary Airmen, officer opportunities, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2		
AES	204	Leadership Lab	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Emphasizes preparation for field training.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 203
AES	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-4		
AES	301	Air Force Leadership Studies I	Study of communication skills, leadership and quality management fundamentals, leadership ethics, and professional knowledge required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3	L	
AES	302	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Advanced leadership experiences applying leadership and management principles to motivate and enhance the performance of other cadets.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 301
AES	303	Air Force Leadership Studies II	Continuation of AES 301. Topics include: communication skills, ethics, leadership, professional knowledge, and quality management required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3	L	

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AES	304	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Emphasizes planning the military activities of the cadet corps and applying advanced leadership methods.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 303
AES	401	National Security Affairs	Examines advanced ethics, Air Force doctrine, national security process, and regional studies. Special topics include: civilian control of the military, military justice, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3	L	
AES	402	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Advanced leadership experience demonstrating learned skills in planning and controlling the military activities of the corps.	N	LAB	Y	GNA	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 401
AES	403	Preparation for Active Duty II	Continuation of AES 401. Topics include: civilian control of the military, doctrine, ethics, military justice, the national security process, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3		
AES	404	Leadership Lab	Continuation of AES 402 with emphasis on preparation for transition from civilian to military life.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0		
AES	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-7	L	
AES	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		
AES	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	210	Measurements and Testing	Measurement systems, components, system response, and the characteristics of experimental data.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): PHY 112; Pre/Corequisite(s): MAT 266
AET	215	Aircraft Systems	Principles and design features of aircraft structures, systems, and materials.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	2		
AET	300	Aircraft Design I	Applied aerodynamics, standard atmosphere, speed measurement, infinite and finite wings, airplane performance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: AET 215; MET 211, ECE 210, or MAE 212
AET	415	Gas Dynamics and Propulsion	Introduces compressible flow, internal and external flow, and aerothermodynamic analysis of propulsion systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): AET 300; MET 340 or MAE 340 or Fulton Schools of Engineering graduate student
AET	417	Aerospace Structures	Analysis and design of aircraft and aerospace structures. Shear flow. Semimonocoque structures. Effects of dynamic loading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MET 213, MET 313 (or ECE 313); MET 212, AET 312 (or ECE 312); AET 300
AET	420	Experimental Aerodynamics and Wind Tunnels	Experimental applied aerodynamics related to aeronautical and mechanical design. Wind tunnel design and testing. Low speed flows.	N	LAB	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1		Pre-requisites: AET 300; MET 340
AET	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
AET	524	Application of Heat Transfer	Energy conservation, steady-state and transient conduction, convection transfer, free and forced convection Reynolds analogy, blackbody and environmental radiation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 432 or MAE 340; Credit is allowed for only AET 524 or AET 432
AET	525	Advanced Propulsion	Mechanics and thermodynamics of propulsion systems. Solid, liquid propellant rocket design performance. Electrical nuclear propulsion systems. Space missions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 434, AET 415 or MAE 340
AET	560	Numerical Methods in Engineering Technology	Analyzes problems in physical sciences, models physical problems, perturbation techniques, curvefitting, data analysis, numerical solutions, ordinary and partial differential equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Fulton Engineering students; Senior or higher academic level
AET	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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AET	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	191	First Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AFR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	200	Introduction to Africana Studies	Introduces the study of African and African-descended peoples; theory, themes, and perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	
AFR	202	Immigration and Ethnic Relations in the U.S.	The ethnic and social consequences of international migration with a focus on the United States. Examines the impact of immigration on both American society and immigrant ethnic minorities over time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Credit is allowed for only AFR 202 (or AFS 202) or ASB 202
AFR	210	Introduction to African American Studies	Examines the political, historical, and cultural origins of African American studies as an academic discipline.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	
AFR	212	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only AFR 212 (or AFS 210) or APA 210 or JUS 210 or TCL 210
AFR	215	Bob Marley and Reggae: Lyrics of Resistance	Studies political content, influence, and impact of Caribbean popular music, in particular the music of Bob Marley.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Credit is allowed for only AFR 215 or AFR 394 (Bob Marley: Reggae and Resistance) or JUS 215
AFR	225	Black Movements in America	Survey course on the historical and political development of mass movements by African Americans and Black resistance in the United States. Traces nearly 400 years of Black resistance against injustices and mass struggles for equality and liberation. Topics include the anti-slavery movement, anti-lynching campaign, the Civil Rights movement, the Black Power movement, prison abolitionism, the reproductive justice movement, and movements for economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only AFR 225 (or AFS 225) or JUS 200 (Black Movements in America) or JUS 225
AFR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student

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AFR	300	Precolonial Africa	In-depth course study of contemporary Africa, providing thorough examination of the continent's pre-colonial history, particularly before 1900. The course will study the continent and its people, the way the history of the continent has been interpreted by non-Africans, how the continent's anatomy has affected historical development, and the methodology and interdisciplinary scholarship in the study of Africa	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 300 (or AFH 300) or ASB 310
AFR	301	Race and Racism in Africa/African Diaspora	Advanced study of the concepts of race and racism and how they manifest themselves in the USA, the Caribbean, and Africa. Examines the construction of race, racism, and race relations in Africa and the African Diaspora as well as practices to challenge ethnicity, racism, and racial oppression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 301 (or AFS 301) or JUS 300
AFR	302	History of Black Women in America	Advanced examination of the challenges that black women have faced historically in America and how they have responded to those challenges socially, politically, economically, and culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 302 (or AFS 302) or HST 335 or WST 302
AFR	304	Islands of Globalization: Caribbean Politics and Political Economy	In-depth study of the complexities of contemporary Caribbean politics and political economy. Examines the countries that constitute the Caribbean community and common market and the Caribbean Latin American countries such as Cuba and the Dominican Republic and analyzes the historical evolution of the region's political and economic systems and the impact of globalization. Traces the development of the region's political economy from the colonial period to the present; looks at the impact of globalization on contemporary politics, economics, and culture and the region's response.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 304 (or AFS 304) or JUS 304
AFR	305	The Global History of the Trans-Atlantic Slave Trade	Reading- and writing-intensive course that employs critical thought to look at the origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or HST 109 or minimum 45 hours; Credit is allowed for only AFR 305 (or AFH 305) or HST 326
AFR	310	African/African American Psychology	In-depth study of the historical development of African and African American psychology. Course will critically examine the African American frame of reference as well as examine African and African American psychology from a contemporary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	312	Contemporary African and African Diaspora Women	A critical analysis of recent literary, theoretical, and methodological themes concerning the study of African and African Diaspora women. Particular study will focus on the historical impact these themes have had on the phenomena of transformation by various African and African Diasporan women's populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	317	Genes, Race and Society	An in-depth examination of the biological and social construction of race in western societies. Special emphasis is placed on examining these constructs from a historical perspective	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H & C	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	318	African and African Diaspora Women Writers	Intersection of race, class, gender, and ethnicity in black women's fiction from the United States, the Caribbean, and Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit allowed only for AFR 318 (or AFH 318) or WST 318
AFR	320	Africa: Politics, Environment, and Development	An in-depth analysis of the African experience as a way to understand the consequences of human environment relationships, wealth and power differentials, and individual and global citizenship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	325	Music as Political Discourse: Reggae, Calypso, and Hip Hop	This is a reading and writing intensive course that employs critical thought that explores African Diaspora popular music as a medium of social and political expression. It examines the political content of Reggae, Calypso and Hip Hop and their role in triggering and influencing popular discourse in the Caribbean and the USA. Course material will analyze the interrelationships among the musical forms and their role in fostering Black and Pan African Cultural Identity, Political Consciousness and World Peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & H & G	Prerequisite(s): AFR 200 (or AFS 200); minimum 45 hours; Credit is allowed for only AFR 325 (or AFS 325) or JUS 326
AFR	327	Human Rights in Africa	In-depth study of the development of African organizations and instruments engaged in the dynamic processes of conceptualizing human rights that reflect its particular histories. It will also assess the effectiveness and appropriateness of efforts to address the human rights abuses and violations found in Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours

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AFR	330	Survey of African American Politics	In-depth study of the dynamics of the African American political experience. Examines the historical development of African American politics from the anti-slavery era to the Civil Rights breakthrough of the 1960's through the present political climate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 330 or JUS 330
AFR	331	Studies in African American Women Writers of Pre-Harlem Renaissance	In depth analysis and advanced comparative study of novels, short stories, essays, speeches, and dramas that gave voices to African American woman in the pre-Harlem Renaissance era.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) and ENG 101 or 105 or 107 with C or better OR ENG 101 or 105 or 107 with C or better and minimum 45 hours
AFR	332	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only AFR 332 (or AFS 332) or ASM 332
AFR	333	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
AFR		American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
AFR	335	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 101 & ENG 102 with C or better. Credit is allowed for only AFR 335, HST 323 or TCL 335
AFR	336	African Art	Anthropological perspective of ancient visual art traditions of Africa. In-depth studies focus on several important themes and case studies that are pivotal to the understanding of the rich and diverse artistic heritage of the African continent.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Prerequisite(s): AFR 200 (or AFS 200) or ASB 102 or minimum 45 hours; Credit is allowed for only AFR 336 (or AFH 336) or ASB 336
AFR	340	The Making of Modern Africa	Advanced study of the events and processes leading up to the colonization of Africa and the subsequent changes in African societies under colonial rule and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	345	Peoples and Cultures of the Caribbean	Traces the socio-political history of the wider Caribbean from the 15th century to the present. Focuses on the following broad areas: the early years of European settlement and colonization; the construction of slavery and plantation society; and the transition from colonization to political independence. Critically examines the origins and building blocks of Caribbean society as well as analyzes the linkages between the region and the rest of the African diaspora.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 345 (or AFS 345) or JUS 345
AFR	350	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
AFR	352	Race, Space and the Production of Inequality	Explores how the relationship between race and space has been important to the development of broad patterns of social inequality in the United States. Through a variety of readings, films and other material, examines how ideas of race and space have been important to the making and maintenance of national boundaries, citizenship, regional histories and spatial typologies such as border, ghetto, suburb and prison.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): APA 200 or 210; minimum 45 hours; Credit is allowed for only AFR 352 (or AFS 352) or APA 352 or JUS 353 or TCL 353 or APA 394 (Race, Space and the Production of Inequality)

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AFR	353	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 353 (or AFH 353) or ENG 353
AFR	354	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or ENG 354
AFR	355	Democracy and Civil Society in Africa	Advanced examination of contending perspectives on the state and civil society of Africa. Course will specifically analyze the democratic struggles in sub-Saharan Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	360	Black Families in the Diaspora: U.S. and Caribbean	Within a historical, cultural, social-economic, and international context, the institution of Black families begins with their lives in Africa, South America, and the Caribbean and follows the cultural continuities and adaptations impacting the structure and functioning of contemporary African America families. Theoretical models provide focus to studying voluntary and involuntary migration, family labor force involvement, gender roles, marital relations, parenting, kinship and community networks. Throughout the course attention is given to the role of social policies in shaping the well-being of Black families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): AFR 200 (or AFS 200) or FAS 101; Credit is allowed for only AFR 360 (or AFS 360) or FAS 360
AFR	363	African American History to 1865	In-depth examination of African Americans' roles in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H & C	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 363 (or AFS 363) or HST 333
AFR	364	African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
AFR	364	African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
AFR	365	Unruly Voices: Black Women and Cultural Narratives	In-depth study of African American women writers and how they (re)define female identities and engage a critical cross-cultural dialogue within the context of cultural history in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 365 (or AFH 364) or WST 364
AFR	366	African Archaeology: Precolonial Urban Culture	In-depth analysis of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data. Places special study on the evidence relating to dynamics of civilizations in ancient Africa, their foundation, growth, and failure, which spans a period of two million years	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 366 (or AFS 366) or ASB 366
AFR	370	Family, Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Credit is allowed for only AFR 370 (or AFS 370) or FAS 370
AFR	372	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 372 (or AFS 372) or REL 362 or SGS 366 or AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History)

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AFR	373	Islam and World Affairs	Advanced examination of complex trends to construct the roles of Islam as a belief, its institutions, leaders and ordinary believers in contemporary world affairs. Studies different developments, including the rise of (political Islam) fundamentalism, to subsequent changes in the Muslim world, challenges Muslims face, and domestic and international conflicts. Challenges students to reconceptualize and broaden their understanding of the powerful presence of religion in this era of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 373 (or AFS 373) or REL 363
AFR	375	Race, Gender and Sport	Advanced and interdisciplinary examination of the social concepts of race and gender and their economic impact on sports in America. In-depth studies will focus on the role of regulatory agencies, the impact of these regulatory agencies have on sport as well as multiple legal issues surrounding athletics	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	380	Health Issues in the African American Community	In-depth examination and discussion of African American health across the lifespan. Discusses the factors associated with disparities in health and healthcare.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 380 (or AFS 380) or 394 (Hlth Issues Af/Am Community)
AFR	383	Blacks in Science, Medicine and Public Health	In-depth study of Blacks who have made significant contributions to science and medicine in the U.S. Begins with a critical examination of ancient African scientific contributions. Highlights specific individuals, analyzing their life's path to their respective careers. Also discusses the role of racism and discrimination and their efforts to overcome these.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 383 (or AFS 383) or AFS 394 (Blacks in Science, Medicine, and Public Health)
AFR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	418	Women of Color in Film	An in-depth analysis of the history and representations of women of color in film and the film industry through the intersections of gender, race, sexuality, class, and nationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 418 (or AFS 420) or FMP 420 or FMS 420 or WST 420
AFR	420	Race Ethnicity and Politics in the African Diaspora	Reading and writing intensive course that employs critical thought to look at the competition for political power among different ethnic groups in Africa, the Caribbean and the USA and the implications for political stability, economic development, democratic governance, democratization, nationhood and the empowerment of African and African Diasporan populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): AFR 200 (or AFS 200) and minimum junior standing OR minimum 9 upper-division hours in any classes with the following prefix: AFH, AFS, AFR, APA, JUS, POS, SGS, SOC, WST; Credit is allowed for only AFR 420 or JUS 421
AFR	428	Critical Race Theory	In-depth analysis of the ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only AFR, APA, JUS or SST 428
AFR	459	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & G	Prerequisite(s): ENG 200 and one other 200-level Literature course with C or better; Credit is allowed for only AFR 459 (or AFH 459) or ENG 459
AFR	460	Race, Gender and Media	Reading seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR non-JMC student with minimum 2.0 GPA OR ASU Online student with a minimum 2.00 GPA OR Graduate Mass Communications student; Credit for AFR or MCO 460

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AFR	465	Harlem Renaissance: a Cultural History: 1877-1945	Socio-political, historical contexts and worldwide ramifications of the cultural productions (theater, music, visual arts, and literature) of the Harlem Renaissance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		
AFR	466	Peoples and Cultures of Africa	An in-depth study of the diversity of African people and culture from an interdisciplinary perspective. Emphasizes social, political, and economic relations, as well as inequality, art, gender roles, slavery, and slave trade.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 466 (or AFS 466) or ASB 466
AFR	470	Women's International Human Rights	In-depth study of the core themes of a global movement for women's international human rights. Analyzes the historical evolution of the development of international human rights and women's rights within the United Nations and regional human rights systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): WST 100 or WST 300 or minimum 45 hours. Credit is allowed for only AFR 470 (or AFS 470) or AFR 494 (or AFS 494) (Women's International Human Rights) or AFR 598 (or AFS 598) (Women's International Human Rights) or WST 471
AFR	480	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AFR 480 (or AFS 480) or REL 461 or SGS 442
AFR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	490	Field Studies in the Diaspora	Introduces methods and principles of research applied to Black communities within and outside Arizona. Involves working with field officer and faculty.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		
AFR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
AFR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
AFR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
AFR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7	L	Prerequisite(s): 9 upper-division hours, or AFR 200 (or AFS 200) and minimum junior standing
AFR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
AFR	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AFR	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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AFR	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	100	Introduction to Agribusiness	Overview of agribusiness industries and career opportunities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-3		
AGB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
AGB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
AGB	302	International Management and Agribusiness	Management and agribusiness issues in the transition of developing countries from subsistence to global operations and competition.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3	G	Prerequisite(s): ECN 212 or 214 with C or better; Credit is allowed for only AGB 302 or MGT 302 or BUA 394 (Perspectives in Global Business)
AGB	321	Agribusiness Marketing	Focuses on food and consumer products marketing at an intermediate level. Covers strategic concepts such as situational analysis, planning and objectives, and target marketing and positioning. Illustrates both the theory and application of strategic decision making through case analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 100
AGB	333	Agribusiness Finance	Introduces financial markets and institutions. Interest rate determination, money and banking, equity markets, farm credit system, vendor financing.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): ACC 231
AGB	340	Food Processing	Introduces processed food quality assurance, statistical sampling, and inspection procedures.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	360	Agribusiness Statistics	Statistical methods with applications in agribusiness and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3	CS	
AGB	366	Agribusiness Production Technologies	Examines methods for managing diverse crop and livestock enterprises with an emphasis on growth, development, marketing, and loss prevention.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	367	Agribusiness Processing Technologies	Biotechnology and other methods used in the production, processing, and distribution of food.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
AGB	410	Agribusiness Management	Principles of human resource management in agribusiness firms.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 100
AGB	414	Agribusiness Analysis	Analysis of agribusiness firm decisions in the ecological, economic, social, and political environments. Special emphasis on ethical issues surrounding food production and consumption.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3	L	Prerequisite(s): Minimum 87 hours; AGB 321 and 333
AGB	420	Food Advertising and Promotion	Focuses on advertising and promotional strategies in the food industry, with an emphasis on the Consumer Packaged Goods (CPG) industry. Recommended proficiency in the computer applications used in this class: word processing, spreadsheets, graphics, presentations, and the Internet.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321, MKT 300, 302, 303 or TMC 310 (BUA 382)
AGB	422	Consumer Behavior	Applies behavioral concepts in analyzing consumer food purchases and their implications for marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321, FIN 300, or TMC 320
AGB	424	Agribusiness Sales	Principles and techniques of selling and merchandising in the agricultural and food industries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		

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AGB	425	Food Supply Networks	Methods, resources and information used to store and deliver food products in a global market. Supplier and customer perspectives help students understand what it takes to develop competitive advantage through distribution and logistics in a global marketplace. Emphasizes food supply network complexities and system design that helps develop critical thinking skills students will be able to use in any area of business. Practicum section with field trips to major food business firms, governmental organizations and industry associations located in metro Phoenix and Nogales area.	N	LEC	N	GNA	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisite:AGB 321, FIN 300, or TMC 320
AGB	429	Marketing Research	Examines the marketing research process and its role in facilitating agribusiness decisions. Emphasizes problem identification, survey design, and data analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: AGB 321 and MKT 300 with C or better.
AGB	431	Agribusiness Financial Management	Comprehensive treatment of topics in financial management of agribusiness: capital structure, dividend policy, asset valuation, mergers and acquisitions, risk management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321, FIN 300 or TMC 320
AGB	433	Agribusiness Financial Markets	Role and function of agribusiness in U.S. financial system. Topics include rural banking, farm credit system, monetary policy, and federal reserve.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 333 or FIN 300
AGB	434	Agricultural Risk Management and Insurance	Strategies to manage agricultural price and business risk: derivatives, insurance, self-insurance, and public policy.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	435	Commodity Futures and Options Markets	Provides an understanding of how to use futures and options markets in a risk management and pricing context, especially as it pertains to the marketing and procurement of agricultural commodities by grain and livestock merchandisers, food manufacturers, and producers/distributors/consumers of natural resources.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: ECN 212 or BUA 294; Microeconomics for Agro-Food / Resources or BUA 294; Economic Theory in Agro-Food / Resources
AGB	440	Food Safety	Control, prevention, and prediction of microbial and chemical food-borne diseases.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	445	Food Retailing	Food retail management. Discusses trends, problems, and functions of food retail managers within various retail institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321 or TMC 310 (BUA 382) or MKT 300 or MKT 302 or MKT 303
AGB	452	International Agricultural Policy	Use of international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agribusiness.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	454	International Trade	International practices in trading of agribusiness, technology, and resource products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisite: AGB 302
AGB	456	Food Product Innovation and Development	The food product development process and how it interfaces with food technology and packaging concepts. Emphasizes the team approach, which is prevalent in the food industry.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): senior standing
AGB	481	Microeconomic Analysis of Food Markets	By applying the basic concepts of microeconomics to real-world data, this course allows the student to not only gain a book-oriented understanding of how businesses in the food industry behave, but practical, hands-on experience that lasts far beyond the classroom.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisite: ECN 212 or BUA 294; Microeconomics for Agro-Food / Resources or BUA 294; Economic Theory in Agro-Food / Resources
AGB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		
AGB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-6		Prerequisite(s): Barrett Honors student
AGB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-6	L	Prerequisite(s): Barrett Honors student
AGB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
AGB	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-7	L	
AGB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-3		
AGB	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		
AGB	511	Advanced Agribusiness Management	Analysis of organization behavior, change, and resource requirements within agribusiness systems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	514	Advanced Agribusiness Analysis	Vertical integration and differentiation in food and agricultural industries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AGB	528	Advanced Agribusiness Marketing	Theory and analysis of marketing strategy related to food and fiber products. Covers concepts of strategic market planning (e.g., segmenting, targeting and positioning), with application of these concepts at an advanced level. Also examines the broad social, cultural, political and economic issues that impact marketing.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	529	Advanced Agribusiness Marketing Channels	Analyzes agribusiness market channel systems. Formulation of marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	532	Advanced Agribusiness Finance	Financial management of agribusiness firms; agribusiness financial analysis, investment analysis, agricultural risk management, and introduction to agricultural financial intermediaries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	535	Commodity Analysis	Analysis of commodity markets.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	552	International Agricultural Policy	Uses international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agribusiness.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	554	Advanced International Trade	Advanced international practices in trading of agribusiness, technology, and resource products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	560	Advanced Agribusiness Management Systems	Development and use of decision support systems for agribusiness management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	561	Applied Econometrics	Uses model building, hypothesis testing, and empirical analysis in solving agribusiness problems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	570	Managerial Economics for Agribusiness	Concepts in micro- and macroeconomics applied to agribusiness management environments: price formation, market structure, information economics, fiscal and monetary policy.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	589	Agribusiness Capstone	Strategic management of organizations focusing on developing value-creating strategies in dynamic environments.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Morrison School of Agribusiness	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AGB	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	701	Advanced Agribusiness I	Advanced topics include demand analysis, empirical industrial organization, welfare economics, agricultural policy, international trade, and consumer behavior.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	702	Advanced Agribusiness II	Topics include macromarketing, marketing research, futures and options markets, derivatives, risk management, financial innovation, and forecasting.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	703	Agribusiness Research Methods	Survey course in current research methods in economics, marketing, finance, and management as applied to agribusiness topics. May be repeated for credit.	N	SEM	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	180	Introduction to American Indian Studies	Introduces the study of American Indian justice issues from an interdisciplinary perspective. Primary topics include sovereignty, law, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	
AIS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	280	American Indian Sovereignty and the Courts	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	H & C	
AIS	285	Federal Indian Policy	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	H & C	
AIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	320	American Indian Philosophies and World Views	Does it make sense to speak about American Indian intellectuals, thinkers or philosophers? Not only have Indians been thinking and thinking deeply for generations, but they have also produced a body of written works that have formed the foundation of contemporary American Indian studies. Covers some of the major figures, their works, and the ideas and opinions (many of which were controversial) that shaped their thinking.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	HU & C	Prerequisite(s): junior standing; ENG 102, 105 or 108 with C or better. Credit is allowed for only AIS 320 or 394 (American Indian Philosophical/World Views)
AIS	360	Issues in Urban Indian Country	In-depth examination of the historical, social, economic, and political implications of indigenous migrations to urban areas. Over 50% of Native people are living in cities. What are they doing? Why are they there? Are they still under the federal trust relationship? Evaluates the social, political, and economic structures built by American Indians living in the urban environment.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum Junior standing; Credit is allowed for only AIS 360 or 394 (Issues in Urban Indian Country)
AIS	370	American Indian Languages and Cultures	Emphasizes understanding of Indian language families and the relationship of oral traditions to culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	Pre-requisite: AIS 180 with C or better
AIS	380	Contemporary Issues of American Indian Nations	Surveys legal, socioeconomic, political, and educational state of contemporary reservation and urban Indians.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	
AIS	381	American Indian Women	Draws from a diverse range of Indigenous critical traditions to examine discourses of gender, identity, and sexuality as sites of cultural revitalization and conflict and theorizes the meaning of each of these categories from diverse Indigenous communities. Considers contemporary and traditional works by Indigenous women with a special emphasis on the historical, socio-cultural, and legal contexts of each work.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	Pre-requisites: WST 100, 300, or AIS 180 with C or better OR co-requisite if completed 30 hours or more: AIS 180, or WST 100 or 300. Credit is allowed for only AIS 381 or WST 382
AIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		

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AIS	420	American Indian Studies Research Methods	Surveys diverse research methods, including statistical, historical, interpretative, and narrative approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	L	Pre-requisite: AIS 180 with C or better
AIS	430	Contemporary Indigenous Spirituality	Why do so many indigenous people across North America want to revitalize their traditional ways when there is supposedly so much opportunity awaiting them in all segments of American society? What are the benefits of such an endeavor and what might be the consequences if this objective is not pursued? This course is premised on the hypothesis that indigenous customs and beliefs contain knowledge that is not only vital to the well-being of the communities in which this native wisdom is found, but also to those communities seeking a more sustainable way of living in the land they call home. After delving into a critique of the religious principles that went into the settling of America, complete with notions of manifest destiny, a way is opened for a more native-oriented discourse on community, nature, economy, and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum Junior standing; Credit is allowed for only AIS 430 or 494 (Ind Spirituality in Postmodern)
AIS	440	Cultural Professionalism	Emphasizes professional and leadership skills to prepare students for academic and career endeavors after undergraduate degree completion. Explores indigenous perspectives on communication, research, professional and leadership skills. Research focuses on addressing the needs of Arizona Indian Nations and Tribes and culminates in a research paper, in-class presentation and community development poster presentation. Showcases research posters in a research symposium in which guests vote on the most innovative and practical poster proposal.	N	LEC	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): minimum junior standing; Credit is allowed for only AIS 440 or AIS 494 (Cultural Professionalism)
AIS	455	Human Rights and Cultural Resource Laws	Examines how U.S. laws, policies, executive orders, and court decisions have affected Indian nations and peoples in matters of cultural resources and burial rights. Considers the protests, legal battles, and political campaigns Indians have waged to reaffirm their fundamental human rights in the areas of repatriation and sacred sites protection. Examines the ways in which filmmakers and the media present these issues to the public. Assesses the present status of Indian religious rights and cultural resource laws. Sovereignty and its relationship to Indian spirituality is a theme that permeates the course.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum Junior standing; Credit is allowed for only AIS 455 or 494 (American Indian Cultural Resources)
AIS	470	Tribal Governance	Critical and historical examination of Indigenous governance and leadership. Includes a survey of historical policy developments and political change that laid the foundation for contemporary Indian government and an assessment of the effectiveness of modern tribal administrations and decision-making bodies. Explores the diverse approaches to tribal governance, community-based political strategy and local interpretations and assertions of sovereignty and self-governance. Project work facilitates focused student learning on the challenges and opportunities in government for a specific Indian nation. Case work and consultation with practitioners in Indian government complement textbook reading in law, history and policy.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3		Pre-requisite: AIS 285; Credit is allowed for only AIS 470 or AIS 494, Tribal Governance
AIS	480	Actualizing Decolonization	Provides an in-depth investigation of the theory and concepts of colonization, decolonization, and Indigenous peoples in America, with brief comparisons with global Indigenous peoples and experiences. Covers classic scholarly works on colonization and decolonization to understand the frameworks in which colonization and decolonization develops, expands, and impacts Indigenous peoples. Through that theoretical understanding, examines and formulates ways in which decolonization can impact and be integrated into Indigenous lives and communities. Students shift from theory to praxis by writing and presenting on an informal grant proposal for a decolonizing project that can be implemented in an Indigenous or non-Indigenous community.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	HU & C & G	Pre-requisites: ENG 101; ENG 102; Junior standing; Credit is allowed for only AIS 480 or 494 (Readings-Decolonization)
AIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		
AIS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-6		Prerequisite(s): Barrett Honors student
AIS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-6	L	Prerequisite(s): Barrett Honors student
AIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-7	L	

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AIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-3		
AIS	501	American Indian Studies Paradigms	American Indian Studies emerged as an academic discipline in the late 1960s in part because of increasing dissatisfaction among Indians about the works of historians, anthropologists, and other scholars that was very often marred by methodological and conceptual flaws. Course provides an overview of ways of "doing" Indian studies from an American Indian Studies paradigm(s) through a critical examination of some of the most significant works emanating from this growing body of literature. Critiques paradigms that selected scholars have employed in the researching and writing of their topics. Seminar format allows students to take the lead in discussing each week's readings. Covers a range of scholarship dealing with American Indian issues; explores the development of American Indian Studies as an academic discipline; probes paradigms that Indigenous scholars have developed; and considers how those paradigms differ from those used by other disciplines.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	502	American Indian Studies Research Methods	Prepares students for thesis research, writing, and completion. Surveys graduate research methods in the field of American Indian Studies including historical, interpretative, and narrative approaches. Focuses on methodological issues specific but not limited to American Indian and Indigenous Studies. Focuses on Indian-centered methodological approaches to research that are essential to qualitative writing of the various topics in Indian country and other issues.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	503	Contemporary Issues of American Indian Nations	Provides an overview of the current status of American Indian Nations with regard to sovereignty, policy, politics, economy, and society. An exploration of current issues illustrates the unique challenges and innovative solutions put forth by Indian communities.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	504	American Indian Film and Activism	Examines the American Indian film and activism with emphases on American Indian production, directing, editing, investigative journalism, documentary film, entertainment, and research. Exposes students to the development of activism in film and how film has been utilized to educate, inspire, and contribute to the challenges in Indian Country.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	505	Contemporary Visual Arts of American Indians	Focuses on a critical analysis of art, film, and media as they intersect with shaping the image and sustaining the culture of American Indians in North America. Examines the persistent and inappropriate stereotypes of American Indians as portrayed in film and media, including explanations for the persistence of negative stereotypes drawing on various aspects of critical race theory including power, politics, and race. Also introduces the scope and diversity of American Indian art and artists and highlights how native artists portray their views and culture through contemporary image making and representations. Stresses the interplay of art with sovereignty, identity, and politics. Emphasizes the powerful and significant connection between contemporary American Indian art and the persistence of indigenous cultures.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	506	Indigenous American Literature and the Tribal Community	Teaches Indigenous (Indian, Native American, First Nations) literature's role in Indigenous history, cultural history, philosophy, society, culture, and developing cultural traditions. Students learn how tribal communities articulate themselves intellectually and artistically through literature and its development locally, nationally, and internationally.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	508	Revitalizing Indigenous Languages	Critically examines Indigenous languages, their decline and revitalization from a language ecology and a self-determination perspective. Includes historical, sociopolitical, educational, linguistic, sociolinguistic, and cultural issues that have had and continue to impact Indigenous peoples and their languages worldwide and their reclamation efforts. Also examines various epistemologies, theories, ideologies, and practices of Indigenous people (including American Indian, Indigenous Alaskan, Hawaiian, Maori, Quechua). Topics include: language policy and planning, language acquisition, child language socialization, identity development, bilingual education, Indigenous language pedagogy, and current models and approaches for Indigenous language maintenance and revitalization (ILMR).	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AIS	509	American Indian and Indigenous Rights	Examines the rights of American Indian peoples with an emphasis on asserting indigenous rights in national as well as international forums. Challenges students to address issues related, but limited to: treaty rights, land rights, water rights, self-determination, rights to a distinct culture, religion, language, spiritual practices, customs, ceremonies, nationhood, autonomy, to seek redress and justice, rights to education, rights to protect from destruction and violence, rights to economic development, rights to protect lands from military, ecological, cultural, and environmental threats, and other rights that may effect the lives of American Indian people.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	510	Social Change in American Indian Communities	Committed to the preservation of political autonomy and cultural identity, American Indian communities are increasingly gaining rule over the effects of social change impinged upon them. Recapturing their histories and redefining colonial relationships, they are forging a preferred future grounded in their own traditional institutions of community, religions, and strengthening of self-determination. Provides students with: (1) an understanding of the enduring struggle of American Indian communities to resist the movement of collective assimilation and retain the right of self-determination; (2) an examination over time of social changes in American Indian communities' social structures and their political and social movements towards the establishment of environmental, economic, and social justice; and (3) knowledge of strategies and tactic for achieving social change within American Indian communities that support Indian self-determination and self-governance.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	511	Genders and Sexualities in American Indian Societies	Grounds students in the theory and concepts of American Indian genders and sexualities. In American Indian societies, there were more than two genders. With colonization through laws, boarding schools, and loss of culture, language, and land, these different genders were attacked and made to disappear. Examine the concepts of gender and sexuality from Native perspectives and theory, and through western imperial views. Also covers the ways in which decolonization plays a role in understanding indigenous genders and sexualities.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	512	Historical Trauma, Healing, and Decolonization	In recent years, scholars have begun to explore the prevalence of historical trauma among American Indian communities. This research argues that the genocide, violence, breakdown of customary cultures through external coercion; and oppression that Indians continue to face at the hands of foreign colonizers has left Indians with harmed with intergenerational self-destructive behavior, domestic violence, suicide, anxiety, depression, low self-esteem, and anger. As a result of this violence and oppression, they have developed models of recovering healthy nations while challenging violations of their human rights in the domestic and international arenas. This history has given rise to a widespread cultural revitalization movement often referred to as decolonization. Scholars from an array of academic disciplines are producing a growing body of literature about decolonization.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	513	Urban Indian Issues	According to the 2010 Census, 64.1% of the American Indian/Alaskan Native population resides in a place outside of tribal areas. Cities such as Los Angeles, New York, and Phoenix have historically counted more than 25,000 American Indian residents. What draws Indigenous families to urban areas? How does an urban address impact the federal trust relationship with nonreservation Indians? What are the social, political, and economic implications for a family who lives off the reservation and away from tribal homeland? Course explores these issues and dynamics and challenges the student to examine the unique identity and contributions of urban Indians. Students learn the history of Indigenous migrations to the city and assess current needs and concerns through consultation work coordinated with Phoenix area Indian Centers and nonprofit organizations.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	514	American Indian Intellectuals	Does it make sense to speak about American Indian "intellectuals," "thinkers," or "philosophers"? Not only have Indians been thinking and thinking deeply for generations, but they have produced a body of written works that have formed the foundation of contemporary American Indian studies. Course covers some of the major figures, their works, and the ideas and opinions (many of which were controversial) that shaped their thinking.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AIS	515	The Work and Legacy of Vine Deloria, Jr	Vine Deloria, Jr, Standing Rock Sioux (1933-2005) has often been referred to as "Uncle Vine" for his role in the intellectual development of innumerable scholars, as well as legal and political figures, all of whom have striven along side Deloria at making the world a better and more just place for indigenous communities. As such, Deloria has also been labeled "the Dean of American Indian Studies" because of his work at shaping the intellectual and political agenda, which began in 1969 with the seminal publication of Custer Died for Your Sins: An Indian Manifesto and continued posthumously with works on the medicine man traditions throughout North America and a reflection on Carl Gustav Jung's analyses of american indian customs and beliefs. this seminar, the first of its kind, takes a comprehensive look at Deloria's philosophical and legalistic legacy by examining his major works and analyzing, in addition to critiquing, the ideas and opinions that shaped his intellectual career.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	516	Concepts of Power and Indigeneity	Grounds students in the theory and concepts of power and indigeneity with comparisons with global Indigenous peoples and experiences. Through that theoretical understanding, examines and understands ways in which these concepts impact Indigenous communities and formulates ways in which to develop practical ways to address these issues.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	517	Customary Tribal Law and Governance	Examines traditional governance systems, institutions, and cultures of American Indians, with emphasis on customary law, justice, and government.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	518	Tribal Jurisdiction	Examines traditional governance systems, institutions, and cultures of American Indians, with emphasis on customary law, justice, and government.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	519	Burial Rights, Repatriation, and Sacred Places Matters	Probes U.S. laws and policies, court cases, and Indian struggles for dignity, burial rights, repatriation, and religious freedom from the late 1800s to the present. Examines developments in the United Nations and international arena pertaining to Indigenous human rights, religious freedom, repatriation, and sacred places protection. U.S. policies, laws, practices, court decisions, land developers, pot hunters, and archaeologists have restricted the human rights of American Indians in term of burial rights and religious freedom. Congress has enacted cultural resource and environmental protection laws, religious freedom, and reburial laws that aim to regulate the use and abuse of cultural resources and Indian rights.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	521	American Indian Leadership and Resistance	Examines the modern leadership struggles in American Indian communities with a foundation of traditional concepts of leadership. Topics include leadership qualities and systems pre-contact, federal-tribal relations, state-tribal relations, tribal politics, internal disputes, activism, mobilization, cultural continuity, social change, community leadership, political/elected leadership, diplomacy, political agendas, and other topics related to American Indian leadership and resistance.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	522	Tribal Governance	Explores American Indian leadership, political ideology, and the history and current state of tribal government. What makes tribal governments tick? Examines past and present challenges faced by leaders and members of indigenous communities. Brainstorms potential strategies for the further enhancement, protection, and assertion of this indigenous "brand" of governance. How do politics, policy development and the ever-changing face of indigenous sovereignty impact the way we think about governance? How can we educate and inspire tribal communities to have greater ownership and interest in government? Students engage with the current research, debate the issues, and learn from people who provide governance to indigenous communities. Case studies focus on specific issues in local communities. Individual portfolio project work facilitates learning and the articulation of leadership and governance as practiced by one particular tribe of your choice.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AIS	523	Community Development with American Indian Communities	Tribal community development is more complicated than large urban population centers or even rural communities because tribal communities continue to struggle with years of colonial, paternalistic, and assimilationist federal policies that have impeded their efforts to become self-determined and self-governing nations. Provides students with the knowledge and skills they need to support community development in American Indian communities within a self-determined and self-governing context. Content includes: (1) a framework for review of current economic, political, social, and cultural issues facing American Indian communities; (2) an overview of community development theories, of the underlying values behind those ideas, and of the linkages between theory and practice in American Indian and other Indigenous communities; and (3) a sampling of intervention strategies and tactics for effective community development in American Indian communities.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	524	Indian Control of Indian Education: Tribal Colleges and Universities	Examines American Indian control of education from a tribal college and university perspective. Focuses on the tribal college movement, including the historical and contemporary political, policy, research, and best practices that have influenced and sustained tribal colleges and universities.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-12		
AIS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	American Indian Studies Program	1-12		
ALA	100	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H & G	Credit is allowed for only ALA or PUP 100
ALA	102	Landscapes and Sustainability	Surveys ideas relating to landscapes and sustainability and the role of landscape architecture in the creation of humanized environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & G	
ALA	121	Design Fundamentals I	Development of visual literacy. Introduces drawing and graphic representation as methods of seeing and problem solving.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Architecture or Environmental Design or Landscape Architecture major
ALA	122	Design Fundamentals II	Exercises in basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): ALA 121 with C or better; Architecture, Environmental Design or Landscape Architecture major. Corequisite(s): ALA 124
ALA	124	Design Fundamentals II Lecture	Theory and applications of basic design principles, history and theory of how architecture and landscape architecture design is impacted by basic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): Architecture, Environmental Design or Landscape Architecture major. Corequisite(s): ALA 122
ALA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ALA	225	Design Fundamentals III	Applies history and theory of design fundamentals with an emphasis on architectural and landscape architectural design issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	4		Pre-requisites: Architecture or Landscape Architecture student; ALA 122 with C or better; Passed milestone; Co-requisite: ALA 235
ALA	226	Design Fundamentals IV	Basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	4		Pre-requisites: ALA 225 with C or better

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ALA	235	Introduction to Computer Modeling	Fundamentals of computer operation, geographic information systems, geometric modeling of 3-D forms and rendering of light, mathematical modeling of processes using spreadsheets.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	CS	Prerequisite(s): Architecture or Environmental Design or Landscape Architecture major. Corequisite(s): ALA 225 (or EDS 200)
ALA	240	Sustainable Design in Built Environment	Reviews the physical principles used in the design of sustainable buildings, landscapes, and urban environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
ALA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ALD	101	Introduction to Aging Issues	Introduces students to general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in midlife and beyond, living options, caregiving, and retirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3	SB	
ALD	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	202	Field Placement I	Provides students an opportunity to work directly with older adults in a variety of settings.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	203	Field Placement II	Provides students an opportunity to work directly with older adults in a variety of settings.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1		Pre-requisites: ALD 101 with C or better; ALD 202
ALD	204	Field Placement III	Provides students an opportunity to work directly with older adults in a variety of settings.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1		Pre-requisites: ALD 101 with C or better; ALD 202; ALD 203
ALD	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	301	Research Methods in Aging	Examines social science approaches to the study of aging. Includes particular methodological issues that must be considered when studying older adults.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	403	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	404	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	420	Health Issues and Older Adults	Analyzes and synthesizes the biological, social, and behavioral aspects of health and healthcare delivery in the later adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3	SB	Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC); Credit is allowed for only ALD 420, 520 or FAS 421
ALD	431	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC); Credit is allowed for only ALD 431, 531 or FAS 421
ALD	440	Social Policy and Aging	Critical analysis and evaluation of the historical, socio-political, and economic issues that are specific to older Americans. Includes federal, state, and local policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	460	Alzheimer's and Related Dementias	In-depth analysis of Alzheimer's disease and related dementias from a caregiver's perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	472	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-6	L	Prerequisite(s): Barrett Honors student
ALD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		

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ALD	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-7	L	
ALD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	505	Perspectives on Aging and the Life Course	Overview of general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in mid-life and beyond, living options, caregiving, and retirement. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	520	Health Aspects of Aging Adults	Examines biological, social, and behavioral aspects of health in the later years, and the organization and delivery of care. Includes an emphasis on wellness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); ALD 505 with a grade of C or better, or co-enrolled. Credit is allowed for only ALD 420 or 520
ALD	525	Mental Health in Midlife and Beyond	Focuses on the psychological, emotional, and cognitive changes as individuals age. Includes assessment and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	531	Caregiving Issues for Families and Professionals	Examines the issues of caregiving by family members, in-home aids, and professionals in care facilities. Focuses on issues related to providing care to older adults in a variety of settings. Includes social policy toward caregiving, caregiver stress and reward, the role of social workers, and cultural concerns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre/Co-requisites: ALD 505 with C or better if completed; Credit is allowed for only ALD 431, 531 or FAS 421
ALD	535	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	REC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	540	Public Policy Issues and Aging	Examines in detail the historical, socio-political, and economic issues that are specific to older Americans at the federal, state, and local levels. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	545	Elder Abuse and Neglect	Provides a comprehensive review of crimes against older adults. Includes all types of abuse and neglect, as well as prevention, intervention, and public policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	560	Dementia	Thorough examination of dementia and dementia syndromes, including Alzheimer's disease. Includes the complexity and diversity of behaviors that define dementia, and implications for planning interventions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ALD 460 or 560
ALD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ALD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	LEC	Y	Z2	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
ALT	360	Renewable Energy Technologies: Fundamentals and Integration	Technical fundamentals, economic, and social aspects of renewable energy technologies with emphasis on solar cells, hydrogen economy, and fuel cells.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MAT 266; PHY 112; CHM 113
ALT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
ALT	401	Hydrogen Generation, Storage, and Distribution	Overview of primary technologies, economic aspects, and social policy issues related to development of hydrogen systems and hydrogen economy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre- or corequisite(s): ALT 360. Credit is allowed for only ALT 401 or ALT 501
ALT	405	Power Conditioning	Fundamentals of power electronics; DC-DC converters and DC-AC inverters; battery charge controllers. Lab experience.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 310; Credit is allowed for only ALT 405 or 505
ALT	410	Solar Cells and Module	Basic device physics and engineering of solar cells. Lab experience on fabrication, characterization, and testing of solar cells and module.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: UET 331
ALT	412	Village Energy Systems	The role of energy resources in economic development. The need for and use of energy at the Base of the Economic Pyramid (BoP). Individual Problem Based Learning (PBL) investigations of potential solutions to energy-poverty at the BoP.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Senior Standing in Engineering, Engineering Technology, Mathematics or another Science-based curriculum. Credit is allowed for only ALT 412 or ALT 494 (Village Energy Systems)
ALT	420	Electrochemical Energy Technologies	Thermodynamic and electrochemical principles of fuel cells. Hands-on experience on fabrication and testing of fuel cells; problem solving skills.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: CHM 113; ALT 360
ALT	435	Applied Photovoltaics	Overview of solar radiation, operating principles of photovoltaics, qualitative analysis on influencing parameters. market trends, basics of PV systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: ALT 360; ALT 410 (not required for BAS students); Credit is allowed for only ALT 435 or 535
ALT	445	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific application.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: ALT 360; CHM 113; Credit is allowed for only ALT 445 or 545
ALT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
ALT	502	Batteries for Portable Electronics	Theoretical and practical overview of primary, secondary, and lithium batteries. Key performance characteristics, construction materials, typical applications, recycling, and disposal.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALT	503	Fuel Cells for Portable Electronics	Overview of electrochemistry, portable electronics industry, principles of fuel cells, and prospects for micro fuel cells.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALT	505	Power Conditioning	Fundamentals of power electronics, DC-DC converters and DC-AC inverters, battery charge controllers.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Credit is allowed for only ALT 405 or 505
ALT	507	Evaluations of Photovoltaic and Fuel Cell Systems	Field testing, data collection, and evaluation of real-world photovoltaic and fuel cell systems available on campus and data analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ALT	512	Village Energy Systems	Establishes leadership in the development of energy resources at the Base of the Economic Pyramid (BoP). Individual Problem-Based Learning (PBL) investigations of potential solutions to energy-poverty at the BoP.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Graduate Standing in Engineering, Engineering Technology, Mathematics or another Science-based curriculum; Credit allowed for only ALT 512 or ALT 598 (Village Energy Systems)
ALT	515	Alternative Energy Reliability and Standards	Alternative energy systems and their reliability issues, accelerated life and safety testing, standards and codes, regulatory requirements.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALT	535	Applied Photovoltaics	Term projects, overview of solar radiation, operating principles, qualitative analysis on influencing parameters, market trends, basics of PV systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status; Credit is allowed for only ALT 435 or 535
ALT	545	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status. Credit is allowed for only ALT 445 or 545
ALT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	101	ASU Digital Culture Experience	Orientation to the Digital Culture program with emphasis on resources for academic success.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1		Prerequisite(s): Herberger Institute for Design and the Arts Digital Culture BA major; Credit is allowed for only AME 101 or AME 194 (ASU Digital Culture Experience)
AME	111	Introduction to Digital Culture	Examines the effects of digital technology on the way we live, communicate, learn, and create. Proposes that we are moving towards a hybrid (physical-digital) existence and culture. Traces that evolution, looks at current examples of hybrid cultural processes and outcomes, and discusses possible future trends. Discusses how these changes are influencing the work and career possibilities of people involved in all aspects of human culture. Comprises diverse readings, media products, class interaction, group discussion and hands-on collaborative projects exploring concepts covered in class. Also includes a number of guest lectures from ASU faculty.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3	CS	Credit is allowed for only AME 111 or 194 (Introduction to Digital Culture)
AME	112	Computational Thinking for Digital Culture	Introduces fundamental concepts relevant for understanding computation. What are algorithms and how can computer code express them? Basics of how real-world signals are captured, encoded, recorded, retrieved and decoded. Designed for students with little or no background in programming.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Credit is allowed for only AME 112 or 194 (Computational Thinking for Digital Culture)
AME	120	Digital Culture Studio	Provides advice on career preparation and industry skills through a series of guest lectures. Sample topics include resumes, personal Websites and portfolios, how to pitch a project idea, and topics chosen by guest industry presenters.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1		Credit is allowed for only AME 120 or AME 194 (Digital Culture Studio)
AME	130	Prototyping Dreams	How do you build your dreams? Explores the idea of inspirational prototyping across multiple media, including physical fabrication, science fiction, virtual worlds and film. Students create and iterate their own prototypes for visions of the future: new technologies, solutions to challenges, and tools or systems that expand the horizon of human potential. These prototypes do not have to be functional tools, but they must be functional stories, effectively sharing the creator's vision with others. Just as the Star Trek communicator inspired early cellphones, these prototypes will help shape new conversations about the future we want to build. Surveys a series of creative paradigms for inspirational prototyping, including design fiction, rapid fabrication and 3D printing, science fiction prototyping, gaming and virtual world-building.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Credit is allowed for only AME 130 or AME 194 (Prototyping Dreams)
AME	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		

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AME	220	Programming for the Web	Introduces a range of technologies used for Web development: marking up content with HTML, styling with CSS and interaction using Javascript. Explores the latest foundational Web standards such as HTML5 and CSS3 to learn how to create compelling content for the World Wide Web. Goes beyond simply coding a Web page to understanding how the Web works. The World Wide Web is used in an incredible variety of applications that we now find integral to our lives, from talking to our friends on Facebook to discovering music on the iTunes Music Store, paying bills from our bank's Web site to finding the route to our vacation destination on Google maps. Investigates how Web standards have enabled the creation of dynamic applications delivered over the Internet.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Credit is allowed for only AME 220 or AME 294 (Programming for the Web)
AME	230	Programming for the Media Arts	Introductory-level course in practical aspects of programming systems for media arts. Explores techniques in programming in the context of images, sounds, interaction, networking and data visualization. Uses the processing programming language, an accessible yet powerful environment for learning how to program. Students create images, animations and interactive programs, and learn how to use images, movies, sound files, microphones and cameras in their programs.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Credit is allowed for only AME 230 or AME 294 (Programming for Media Arts)
AME	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	310	Media Literacies and Composition	When we integrate computational systems into the core of our cultural and social practices, we reinvent how we tell stories. The roles of creators, critics and audiences are blurring at the same time that digital tools allow us to infinitely reproduce and remix narratives, radically changing what we mean by the "work" or "text." These new media platforms empower us to create, share and respond to cultural narratives that defy traditional notions of how stories operate, demanding new literacies. Explores our powers and responsibilities as readers, writers and creators of new cultural languages, including new forms such as games, digital video, electronic literature and social media. Students study relevant media narratives and cultural ecosystems from the 20th and 21st centuries, acquiring a set of literacies that they hone through practices of authorship, critique and collaboration, culminating in the presentation of their own digital media narratives.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; minimum 45 hours. Credit is allowed for only AME 310 or AME 394 (Media Literacies & Composition)
AME	320	Motion Capture for Integrative Systems	Presents the broad principles and techniques for movement study in oneself and others that includes applied, dynamic anatomy. Also presents the functional techniques for motion capture with a special emphasis on the capture of human movement from visual sensors. Students understand the technology behind motion capture; a high-level understanding of movement and anatomical systems; the ability to perform motion capture and customize it to suit the requirements of specific creative applications in animation, sound and live performance as well as applications in movement rehabilitation and education. Looks at the technology behind various modern motion capture systems based on markers, inertial sensors, accelerometers, and depth sensors, so the student appreciates the technical capabilities and limitations of each technique.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; minimum 45 hours. Credit is allowed for only AME 320 or AME 394 (Motion Capture for Integrative Systems)
AME	340	Compositional and Computational Principles for Media Arts	In much of today's contemporary art practice there is a tight coupling of compositional form, content and underlying computational mechanisms. This integration holds the potential to yield new modes of expression and wholly new art experiences as is evident in emerging forms of real-time generative art, network-based art, game-based art, and interactive performance. As both practitioners and participants, we must develop a critical understanding of the relevant compositional and computational principles that frame this work. Students study relevant media art works from the 20th and 21st century, develop a working understanding of fundamental compositional and computational principles, and apply their understanding through the realization of exploratory media artworks that are presented at the end of the semester.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; minimum 45 hours. Credit is allowed for only AME 340 or AME 394 (Compositional & Computational Principles for Media)
AME	385	Collaborative Projects and Research I	Project-based class for experience in collaborative design principles, project pitching and research. Includes readings and small projects with teams formed at the outset of the class. Over the course, teams develop their own project along with a schedule for realization. Project themes vary, yet all projects must explore relationships of digital technologies and cultural products or processes. Includes presentations, discussion and analysis of team projects.	N	STO	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): BA in the Arts (Digital Culture) or BA Design Studies (Digital Culture) or Digital Culture major; Minimum 45 earned hours; Credit is allowed for only AME 385 or 394 (Collaborative Projects & Research I)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AME	386	Collaborative Projects and Research II	Project-based class for experience in collaborative design principles, project pitching and research. Includes readings and small projects with teams formed at the outset of the class. Over the course, teams develop their own project along with a schedule for realization. Project themes vary, yet all projects must explore relationships of digital technologies and cultural products or processes. Includes presentations, discussion and analysis of team projects.	N	STO	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Pre-requisites: AME 385; Credit is allowed for only AME 386 or 394 (Collaborative Projects & Research II)
AME	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	470	Programming for Social and Interactive Media	Web sites, desktop applications connected to the "cloud" and mobile applications depend on services supplied by server-based software that is the invisible center of users' networked experiences. Applications and data servered over the Web are at the core of popular software from social applications such as Facebook, Twitter or Instagram to networked media like iTunes, Netflix or Hulu. Investigates the development of Web applications and services. Creates modern dynamic Web applications using open source technologies.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; minimum 45 hours; Credit is allowed for only AME 470 or AME 570 or AME 494 (Programming for Social and Interactive Media) or AME 598 (Programming for Social and Interactive Media)
AME	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	485	Digital Culture Capstone I	Senior capstone projects in digital culture are interdisciplinary team projects that offer experience in diverse collaborations for solving complex problems, a proficiency widely demanded by employers. Students integrate, extend and apply information, principles, theories and/or methods learned in previous courses while supervised by the instructor.	N	STO	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): BA in the Arts (Digital Culture) or BA Design Studies (Digital Culture) or Digital Culture major or minor or certificate; minimum 45 hours. Credit is allowed for only AME 485 or AME 494 (Digital Culture Capstone I)
AME	486	Digital Culture Capstone II	Senior capstone projects in digital culture are interdisciplinary team projects that offer experience in diverse collaborations for solving complex problems, a proficiency widely demanded by employers. Students integrate, extend and apply information, principles, theories and/or methods learned in previous courses while supervised by the instructor.	N	STO	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Pre-requisites: AME 485; Credit is allowed for only AME 486 or 494 (Digital Culture Capstone II)
AME	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6		Prerequisite(s): Barrett Honors student
AME	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6	L	Prerequisite(s): Barrett Honors student
AME	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-7	L	
AME	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-3		
AME	530	Experiential Media Methodology and Theory I	Engages students in the theory and practice of designing and evaluating experiential media systems. Building on ideas and concepts explored in the companion introductory course, students create and critique a variety of integrated media systems demonstrating technical competence, aesthetic knowledge, analytic rigor and theoretical relevance.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student. Credit is allowed for only AME 530 or 598 (Experiential Media Methodology and Theory I)

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AME	531	Experiential Media Methodology and Theory II	Focuses on media arts and sciences in the 20th and 21st century, discussing issues surrounding the definition of the field, media art creation practices, methods of criticism and analysis, interdisciplinary/transdisciplinary work and research, collaboration and current trends. Also focuses on the methodology, theory and history behind the design and development of experiential media systems. Directed toward those interested in researching, designing, building or critiquing experiential media systems that are culturally provocative, socially meaningful and deeply essential.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): AME 530; credit is allowed for only AME 531 or 598 (Experiential Media Methodology and Theory II)
AME	532	Creating by Algorithm	Focuses on creation of media of all kinds using computation. Using algorithms it is possible to create complex media that is difficult or impossible by traditional methods. Some techniques can capture the unpredictable evolutionary and emergent behavior found in nature. Investigates influential algorithmic methods including stochastic processes and Markov chains, Perlin noise, cellular automata, fractals, L-systems and genetic algorithms.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	533	Realtime Data Analysis and Pattern Recognition for Interaction	Real-time computing is increasingly used in a variety of settings and scenarios--no more so than in mobile computing. Embedded within our mobile devices are a multitude of onboard sensors, including a three-axis accelerometer, magnetometers, microphones, cameras and GPS. Explores, through the frame of mobile computing, the foundations of employing real-time sensor, visual or audio signals to deliver novel media applications. Introduces computational techniques for classification, detection and recognition of these diverse signal sources through practical example and relevant literature, including signal smoothing, feature extraction, clustering, pattern recognition, neural networks and content classification. Introduces the technical possibilities for such systems as well as the considerations involved in designing and developing real-time solutions.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	541	Interactive Forms	This course explores how computational models can enhance the form, meaning, and engagement of interactive mediated experiences. Special emphasis is given on how new computational models (stochastic procedures, non-linear dynamics) can be used to mediate the complexity of our current experiences.	N	LEC	N	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	570	Programming for Social and Interactive Media	Web sites, desktop applications connected to the "cloud" and mobile applications depend on services supplied by server-based software that is the invisible center of users' networked experiences. Applications and data servered over the Web are at the core of popular software from social applications such as Facebook, Twitter or Instagram to networked media like iTunes, Netflix or Hulu. Investigates the development of Web applications and services. Creates modern dynamic Web applications using open source technologies.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only AME 470 or AME 570 or AME 494 (Programming for Social and Interactive Media) or AME 598 (Programming for Social and Interactive Media)
AME	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	590	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AME	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	100	Introduction to Applied Mathematics for the Life and Social Sciences	Introduces quantitative techniques as applied to problems in the life and social sciences. Includes challenges like understanding the complexities of the human genome or the implications of globalization for infectious disease, human health, and economic stability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	MA	Prerequisite(s): MAT 117 with C or better (or MAT 194: EFM with skills mastered for MAT 142 if completed) OR Mathematics Placement Test with a score of 32% or higher; Credit is allowed for only AML 100 or SOS 101
AML	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	253	Introduction to Mathematical Tools and Modeling for the Life and Social Sciences	Introduces the evaluation and construction of mathematical models used in the life and social sciences. Includes the basic steps in developing a model, analyzing it, and testing it with actual data. Covers the first steps concerning how to use formal mathematical techniques including developing equation-based relationships, plotting graphs, linear regression, and solving equations using computer software.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: AML 100 or SOS 101 with C or better (with B or better if Sustainability major). Credit is allowed for only AML 253, SOS 210 or 294 (Intro to Math Tools & Modeling)
AML	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	330	Social Simulation	Students will apply computer simulation and agent-based modeling techniques to study social systems relating to concrete research questions.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4	CS	Prerequisite(s): AML 100 or MAT 142, 170, 210, 265, or 270 with C or better OR Mathematics Placement Test score of 50% or higher; minimum 56 hours; Credit is allowed for only ASB 430 or CPI 430 or AML 330
AML	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		

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AML	406	Directed Reading and Research in Applied Mathematics for the Life and Social Sciences	Collaborative, practice-oriented course where students produce individual or team-initiated research project reports on pertinent topics in the life and social sciences. Students select topics, design, identify and formulate effective research ideas, and then translate them into clear and effective research plans.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites:AML 100 and MAT 342 (or MAT 343); 86 minimum hours
AML	441	Mathematical Concepts and Tools in Sustainability	Explores various mathematical analysis and models pertinent to sustainability science drawn from both social and natural sciences and introduced in a problem-based context. Demonstrates basic concepts from game theory such as pure-strategy and mixed-strategy Nash equilibriums in such classic games as prisoner's dilemma, hawk-dove, coordination. Explores the evolutionary dynamics of these games through the replicator equations. Studies important concepts of stability and regime shift for selected problems. Also discusses some basic solution concepts in cooperative game theory (depending on interest and time).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s) with C or better: AML 253, or SOS 210(or SOS 294 Intro to Math Tools & Modeling). Credit is allowed for only AML 441 or 494 (Math Concepts & Tools in Sustainability) or SOS 441 or 494 (Mathematical Concepts and Tools in Sustainability)
AML	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
AML	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
AML	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Prerequisite(s): Barrett Honors student
AML	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
AML	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7	L	
AML	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	520	Agent-Based Modeling	Introduces agent-based modeling to simulate social and social-ecological systems. Topics include design, analysis, and empirical grounding of agent-based models to a variety of application domains including collective action, diffusion processes, resource use, health, and complex societies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	540	Statistical Modeling for Sustainability	Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to begin conducting empirical analyses in their domains of interest; bring students to a high level of competency in using a cutting-edge statistical software package (Stata) for data management and data analysis tasks; expose students to applications of statistical methods in the economics/policy/social science sustainability literatures in order to develop an understanding for how statistical tools are operationalized in the research world; and develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations and command of statistical tools that constitute quality empirical research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: Graduate (degree or non-degree) student. Credit is allowed for only AML, ESS or SOS 540
AML	541	Mathematical Concepts and Tools in Sustainability	Explores various mathematical analysis and models pertinent to sustainability science drawn from both social and natural sciences and introduced in a problem-based context. Demonstrates basic concepts from game theory such as pure-strategy and mixed-strategy Nash equilibriums in such classic games as prisoner's dilemma, hawk-dove, coordination. Explores the evolutionary dynamics of these games through the replicator equations. Studies important concepts of stability and regime shift for selected problems. Also discusses some basic solution concepts in cooperative game theory (depending on interest and time).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit allowed for only AML 494 (Math Concepts & Tools in Sustainability), AML 541, SOS 494 (Math Concepts & Tools in Sustainability), SOS 541 or SOS 598 (Math Concepts & Tools in Sustainability)

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AML	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	610	Topics in Applied Mathematics for the Life and Social Sciences	Introductory course in applied mathematics for the life and social sciences, combined with the first semester of a two-semester course in mathematical biology. Provides a solid introduction to the modeling of biological and social processes as well as to some of the mathematical approaches involved in their analysis and simulation.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	612	Applied Mathematics for the Life and Social Sciences Modeling Seminar	Presents and applies mathematical modeling principles and techniques for representing the structure and operation of complex life and social systems and processes. Helps students identify potential problems in the life and social sciences and the corresponding mathematical and statistical methods that can be used for their study.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AML	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AMS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
AMS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
AMS	201	American Style	Provides an intellectual foundation for the interdisciplinary study of American culture, history, and society. Introduces students to ideas, methods, tools, and theories in the vibrant field of American studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
AMS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
AMS	310	History of American Systems to 1865	First of a two-part survey of political, legal, and economic institutions, placed in the context of the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H	
AMS	311	History of American Systems Since 1865	Second in a two-part survey of political, legal, and economic institutions, placed in the context of a dynamic industrialist capitalist society, from the age of industrialism and modern America.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H	
AMS	320	American Cultural History I	First of a two-part survey of American culture, broadly defined as historically transmitted patterns of meaning expressed in symbolic forms, including ideas, ideals, the arts, and social and economic standards from the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 320 or HST 313
AMS	326	Popular Culture	Topics in American popular culture, including theories of popular culture; the history and analysis of mass media, including television, film, and the music industry; and vernacular art and the folk tradition.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	327	Regional Cultures	Examines the concept of regionalism and regional cultures in America with a special emphasis on the Southwest/Borderlands.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	330	American Lives	Examines American society through the study of autobiography and ethnography.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C	Prerequisite(s): minimum 30 hours
AMS	332	Studies in Race and Ethnicity	Topics relating to issues of race and ethnicity in American life. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	334	American Class	Explores social class and inequality in the U.S. including history, culture, work, politics, globalization, and intersections of gender, race, ethnicity, and place.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): minimum sophomore standing
AMS	335	American Biography	Topics in biographies of individuals, comparative biographies, the art of biography, and the function of autobiography.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Minimum 45 hours
AMS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
AMS	412	Studies in American Politics & Law	Topics in American political and legal systems, including social movements in the United States and women and the law. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		

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AMS	417	Religious Traditions of the American Southwest	Examines the sacred traditions that have evolved within the North American Southwest context.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
AMS		Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
AMS	422	Studies in American Literature	Topics in American literature, including contemporary American comic fiction, literature of the American South, literature of American wars, Hispanic chronicles of the Southwest, literature of la Chicana, and American rhetoric. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	428	Chicano Cultures in the Southwest	Examines and explores Chicana and Chicano culture as place and sentiment. The physical place and space and the sentiment related to Chicanas and Chicanos.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	Credit is allowed for only MAS 598 (Chicano Cultures) or AMS 428
AMS	429	Interdisciplinary Topics	Senior-level seminar that examines issues relevant to two or more American cultures' fields. Topics may include Southwest/border Hispanic folklore, Southwestern corridors, American art and the city, and the West of the imagination. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	431	Gender Studies	Topics relating to issues of gender in American life. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
AMS	490	Writing Certificate Portfolio	Preparing a portfolio demonstrating advanced writing skills. Limited to and required of students in the Writing Certificate Program.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1		
AMS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
AMS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
AMS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
AMS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	Prerequisite(s): ENG 101 or 105 with C or better; AMS 301 with C or better
AMS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
AMS	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
AMS		Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
AMS	502	American Studies: Theory and Method	Explores some of the major themes in American studies scholarship by considering American cultural formation and change over the last two centuries.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): MA American Studies major
AMS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AMS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AMS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
AMS		Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
AMS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AMS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		

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AMT	101	Introduction to Aeronautical Management Technology	Facilitates entry into aeronautical management technology programs. Emphasizes General Catalog; major and concentration requirements, registration, careers, and Polytechnic campus resources. Introduces various learning styles and strategies that assist students in becoming successful learners. Emphasizes time management techniques and academic integrity.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	1		
AMT	105	Flight Operations and Safety I	Supervised private pilot operations, flight instruction, flight safety briefings and recurrent aviation subjects appropriate for private pilots. Flight instruction is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons and FAA Practical Exam(s) within the appropriate flight training syllabus and satisfactorily completing all academic requirements. Flight instruction costs are not included in university tuition and fees. Students following the single engine flight training track earn their Single Engine Private Pilot certificate. Students following the multiengine flight training track earn their Single Engine Private Pilot Certificate and their Multiengine Private Pilot certificate.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Professional flight program secondary application; Pre- or corequisite(s): AMT 182 and AMT 220 with C or better if completed
AMT	110	Flight Operations & Safety II	Concludes supervised private pilot operations and flight training and introduces students to supervised commercial pilot operations, flight training, flight safety briefings, and recurrent aviation subjects appropriate for private and commercial pilots. Flight instruction costs are not included in university tuition and fees.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 105 with C or better; Pre- or corequisite(s): AMT 222 with C or better if completed
AMT	150	Flight Operations & Safety III	Continuation of supervised instrument pilot operations, flight instruction, flight safety briefings and recurrent aviation subjects appropriate for instrument pilots. Flight instruction is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons and the FAA practical exam within the appropriate FAA-approved Part 141 training syllabus and satisfactorily completing all academic requirements. Flight instruction costs are not included in university tuition and fees. Students earn their Instrument Rating.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 110 with C or better
AMT	170	Introduction to Unmanned Aircraft Systems	Introduces the history of unmanned aircraft systems and current and future developments in civil and military operations. Specific blocks deal with elements that form an unmanned aircraft system: unmanned vehicles, communication, navigation, launch and recovery, control stations, payloads, and support equipment. Explores other current issues in unmanned aircraft operations: aviation regulatory system and integration, safety and human factors, ethical and legal issues, and the future unmanned aircraft systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		
AMT	182	Private Pilot Ground School	Ground school preparation for Private Pilot Certificate. Aerodynamics, navigation, performance, and regulations.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		
AMT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		
AMT	201	Air Traffic Control	Ground and air operations; weather services communications and routing; flight plans, IFR operations, departures and arrivals; and airport conditions and emergencies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: BAS Applied Science (Aviation Management Technology) OR BS Aeronautical Management Technology OR BS Air Traffic Management major
AMT	205	Flight Operations and Safety IV	Continuing introduction to commercial pilot flight operations. Flight instruction, lecture, quizzes and discussion of the current flight syllabus topics, student handbook/general operations manual, monthly safety and informational briefings. Students must maintain enrollment in the appropriate flight operations and safety course while engaging in flight training activities. The flight training is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons within the appropriate FAA-approved Part 141 training syllabus, and satisfactorily completing all academic requirements.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) student; AMT 150 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMT	210	Flight Operations and Safety V	Covers instrument pilot flight operations. Flight instruction, lecture, quizzes and discussion of the current flight topics, student handbooks, operations manual, monthly safety meetings, informational briefings. Students must maintain enrollment in the appropriate flight operations and safety course while engaging in flight training activities. The flight training is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons within the appropriate training syllabus, and satisfactorily completing all academic requirements.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) student; AMT 205 with C or better
AMT	214	Commercial Pilot Ground School	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 1 of 2). 10 hours ground trainer included.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): Aeronautical Management Technology major; AMT 182 and 220 with C or better
AMT	220	Aviation Meteorology	Evaluation, analysis, and interpretation of atmospheric phenomena. Low- and high-altitude weather from the pilot's viewpoint.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		
AMT	222	Instrument Pilot Ground School	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 2 of 2). 10 hours ground trainer included.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: Pre-requisites: Aeronautical Management Technology (Professional Flight) major; AMT 105 and AMT 182 with C or better, OR nonmajor: AMT 182 with C or better
AMT	250	Flight Operations and Safety VI	Continuing introduction to commercial pilot flight operations and begins to introduce the student to certified flight instructor flight operations. Primary activities include flight instruction, lecture and discussion of the current flight syllabus topics, handbooks and general operations manual as well as monthly safety and other informational briefings. The flight training is considered to be the laboratory for this academic class. Course completion requirements are based upon completion of lessons within the appropriate flight training syllabus.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 210 with C or better
AMT	270	Unmanned Aircraft	Introduces elements comprising the unmanned aircraft system (UAS). Includes review of UAS, Unmanned Aerial Vehicle (UAV); system development and certification, selection and design, aerodynamics and airframe configurations, characteristics of vehicle types, design standards and regulatory aspects, airframe design, payload types, and control and stability. Students apply concepts acquired in classroom sessions and construct various unmanned aircraft, train to operate using existing simulators, and conduct flight-testing. The final course project is the design, development and construction of a group 1 unmanned aircraft, serving as the core unmanned vehicle used in subsequent UAS courses. Incorporates UAS data collection and analysis throughout the course. Course concepts enable UAS student pilots to become knowledgeable of aerodynamic aspects of UAV to ensure safety of flight and improved maneuverability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 170 with C or better
AMT	280	Aerospace Structures, Materials and Systems	Basic aerodynamics, incompressible/compressible airflow, wind tunnel testing, wing theory; analysis of aircraft structures; properties and applications of materials, and aircraft systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	4		Pre- or corequisite(s): PHY 111, 113
AMT	285	Flight Instructor Ground School	Ground school in preparation for the FAA Flight Instructor Certificate.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s) with C or better: AMT 150, 214
AMT	286	Multiengine Pilot Ground School	Ground school preparation for the FAA Multiengine Rating.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	1		Pre- or corequisite(s): AMT 150 with C or better if completed; Aeronautical Management Technology (Professional Flight) major
AMT	287	Aircraft Powerplants	Theory and performance analysis of gas turbine and reciprocating aircraft engines. Engine accessories, systems, and environmental control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	4		Pre/Co-requisite: PHY 111 or PHY 121
AMT	292	Flight Instructor Instrument Ground School	Ground school preparation for the FAA Instrument Flight Instructor Rating.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 205 and 222 with C or better; AMT 285 or 385 with C or better
AMT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMT	305	Flight Operations & Safety VII	Continuation of supervised multiengine commercial pilot operations, introduction of single engine commercial pilot operations, flight instruction, flight safety briefings and recurrent aviation subjects appropriate for commercial pilots. Flight instruction is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons within the appropriate FAA-approved Part 141 training syllabus and satisfactorily completing all academic requirements. Flight instruction costs are not included in university tuition and fees. Students earn their Commercial Multiengine and Commercial Single Engine certificates.	N	LEL	Y	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Pre-requisites: Aeronautical Management Technology Professional Flight major; AMT 250 with C or better
AMT	308	Air Transportation	Studies the historical and international development of air transportation and its social, political, and economic impact upon global interrelationships.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3	G	Pre-requisite: Minimum 50 hours
AMT	310	Flight Operations and Safety VIII	Covers certified flight instructor instrument (CFII) and multiengine flight operations. Flight instruction, lecture and discussion of the current flight topics, student information handbooks, general operations manual (GOM), monthly safety, informational briefings. Requires enrollment in appropriate flight operations and safety course while engaging in flight training activities. Flight training is considered to be the laboratory for this academic class. Course completion requirements are based upon completion of lessons within the appropriate flight training syllabus.	N	LEL	Y	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 286 and 305 with C or better. Pre- or corequisite(s): AMT 292 (or AMT 392) with C or better if completed
AMT	350	Aircraft Design and Logistics Management	Fundamental aircraft design principles, including performance factors associated with mission profiles and the identification of basic logistical support requirements.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: AMT 280 with C or better; Pre/Co-requisite: AMT 287 with C or better if completed
AMT	360	Aircraft Dispatch Ground School	Aeronautical knowledge areas required for Aircraft Dispatch certification, as well as preparation for the Aircraft Dispatch knowledge examination. Regulations, aerodynamics, emergencies, flight physiology, weight and balance, navigation, aircraft performance, meteorology, and flight operations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 214; AMT 220; AMT 222; Credit is allowed for only AMT 360 or AMT 394 (Airline Dispatcher Ground School)
AMT	370	Unmanned Aircraft Systems	Students build upon gained knowledge, skills and experience by exploring unmanned aircraft avionics, autopilot systems, first person video (FPV), on-screen displays (OSD), communication systems, command and control (C2), ground control stations (GCS), flight software, and UAV launch and recovery systems. Students continue flight training and gain proficiency in unmanned aircraft operation using simulators and hands-on flight-testing. Students demonstrate their abilities to upgrade and modify their previously constructed unmanned aircraft in order to operate and conduct actual flight-testing. Incorporates UAS data collection and analysis throughout the course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 270 with C or better
AMT	382	Air Navigation	Theory and application of modern advanced navigation and flight instrument systems. Introduces crew resource management in multiplace cockpits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: Aeronautical Management Technology (Professional Flight) major; AMT 250 with C or better; Minimum 64 hours
AMT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		
AMT	396	Aviation Professional	Career focus for management and flight students, including internships, writing, interviews, and employment search in aviation industry.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): BAS or BS aviation program major; junior standing
AMT	408	National Aviation Policy	Examines aviation and airspace policies and policy process, including agencies involved in formulation, implementation, and evaluation of aviation policy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: AMT 308 with C or better
AMT	410	Aviation Safety and Human Factors	Aviation accident prevention, human factors, life support, fire prevention, accident investigation, and crash survivability. Development and analysis of aviation safety programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 182 with C or better; AMT 308 with C or better
AMT	442	Aviation Law and Regulations	Aviation within context of U.S. Common Law system. Public law, administrative rule making, sovereignty, enforcement, and case law analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 308 with C or better
AMT	444	Airport Management and Planning	Orientation to administration and management of modern public airports, including overview of planning, funding, and development of airport facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: AMT 308 with C or better
AMT	456	Introduction to Organized Labor	Introduces labor relations, unions, federations, collective bargaining, grievances, and labor legislation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): MGT 301 or TMC 330 (TMC 346)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMT	460	Aircraft Dispatch Capstone	Capstone for aircraft dispatch whereby students are engaged in practical applications of regulations, aerodynamics, emergencies, flight physiology, weight and balance, navigation, aircraft performance, meteorology and flight operations. Uses various scenarios in which students can employ the strategies and procedures necessary for safe flight.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 360
AMT	470	Unmanned Aircraft Payloads, Sensors, and Control Stations	Builds on previously gained knowledge and experience. Student pilots utilize long-range communication and data links, UAS sensors, geospatial data collection, and still-imaging mosaicking. Students continue flight training using existing simulators and flight-tests during the course. Students apply concepts acquired during classroom sessions and construct a ground control station, modify and upgrade existing unmanned aircraft with payloads/sensors, train to operate sensors using existing simulators, and conduct flight-testing. Incorporates UAS data collection and analysis throughout the course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 370 with C or better
AMT	482	Airline Instrument Procedures	Advanced instrument flight using airline instrument procedures and airline crew and cockpit resource management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: Aeronautical Management Technology (Professional Flight) major; AMT 382 with C or better
AMT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): AMT 308 with C or better; junior standing
AMT	486	Regional Jet Aircraft Systems	Regional jet airline aircraft systems and flight procedures. Includes theoretical education for regional jet commercial passenger aircraft.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 382 with C or better; Aeronautical Management Technology (Professional Flight) student
AMT	488	Regional Jet Aircraft Systems II	Regional jet systems, with emphasis on air navigation systems, including Flight Management System (FMS), Selective Calling (SELCAL), and flight profiles.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: Aeronautical Management Technology (Professional Flight) student; AMT 382 with C or better
AMT	489	Airline Administration	Administrative organizations, economics of airline administration, operational structure, and relationship with federal government agencies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: Minimum Junior status; AMT 308 with C or better
AMT	490	Regional Jet Operations Capstone	Regional jet aircraft operations and flight procedures. Includes theoretical education for RJ aircraft, FTD and full-motion simulator time.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 205 and 482 and 486 with C or better
AMT	491	Aviation Management Capstone	Integrated group project with industry partner to address current problems in either air carrier or airport management focus area.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): junior standing. Pre- or corequisite(s): AMT 489 with C or better if completed
AMT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-6		Prerequisite(s): Barrett Honors student
AMT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Aviation Programs	1-6	L	Prerequisite(s): Barrett Honors student
AMT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		Pre-requisite: Minimum 2.25 GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMT	495	Unmanned Aircraft Systems Operations	Capstone course applies student pilots' knowledge and skills gained in previous UAS courses to safely deploy a UAS in response to real-world situation or research. Students collaborate with other university departments, state or federal agencies, and other organizations and conduct actual or simulated missions in geospatial data collection, search and rescue, and near-space operations. Course blocks include flight planning and preparation, aircraft preflight and maintenance, launch and recovery operations, payload operations, normal and emergency procedures, and mission planning and execution. Students continue flight training using existing simulators and flight-tests. Students use real-world situations which require deployment of equipment and systems developed during previous course. Places specific emphasis on aircraft and payload selection based upon proposed mission analysis. Incorporates UAS data collection and analysis throughout the course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 470
AMT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-7	L	
AMT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-3		
AMT	522	Aviation Law	Examines the U.S. legal system with a focus on the aviation perspective, administrative agencies, FAA enforcement, and case law.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	523	Intermodal Transportation Management	Systems theory applied to intermodal transportation networks. Surveys air and ground transportation infrastructure, institutional frameworks, and intermediaries promoting connections between modes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton Schools of Engineering with a University Cum GPA 3.0 or greater
AMT	525	Airport Planning and Design	Completion of various phases of airport master planning process. Provides guidance for logical and timely development of airports. Project work groups assigned.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	526	Aviation Labor Relations	Investigates labor-management relations in the aviation industry, including laws, unionism, collective bargaining, public sector relationships, grievance procedures, and conflict.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	527	Airline Management Strategies	Since deregulation, airlines have undergone profound changes through mergers, consolidation, and acquisition. In-depth look at airline management strategies for the 21st century.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	533	Training Systems & Simulation	Provides an overview of simulation and its various uses in aviation instruction. Three main focus areas: simulation, learning and human performance, instruction and evaluation of instructional effectiveness. Focuses on research findings in these areas and practical application and implementation of simulation to improve learning and performance.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	534	Airline Pricing and Yield Management	Focuses on the fundamentals of airline economics and the volatility of industry performance at the operating level. Topics include the structure of the airline industry and the various historical and current operational strategies; demand, traffic, price and yield; operating revenues and operating costs. The airline industry is affected by various economic, environmental, political and regulatory conditions. Reviews the implications of these conditions on airline pricing, capacity, fleet selection and scheduling. Analyzes current and predicted future conditions to develop potential strategies for successful revenue management within the industry.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: degree- or nondegree-seeking graduate student. Credit is allowed for only AMT 534 or AMT 598 (Airline Pricing and Yield Management)
AMT	541	Aviation Physiology	Surveys human physiology and human performance principles related to modern aircraft and aircraft systems operating in multiple environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	546	Crew Resource Management/Line-Oriented Flight Training	Evaluates in-depth, multicrew coordination issues for commercial aviation pilots. Stresses importance of critical thinking, decision making, integrated resource utilization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	565	Safety in Complex Systems	Evaluates human error in aerospace systems. Discusses different theories of error and taxonomies as well as safety management systems to help identify hazards and risks and then help mitigate and/or eliminate them. Extensively uses case studies to highlight human failures as well as demonstrate organizational changes that resulted in safe and successful operations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AMT	570	Unmanned Aerial Systems	Examines the system design, operations and employment of unmanned aerial systems (UAS), beginning with an overview of the system and human factors and specific issues involved with UAS design and operations. Communication, remote operations, operator display interface, and situational awareness and teamwork required for successful employment. Evaluates accident data to understand technology and human error concerns.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
ANB	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ANB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	600	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	601	Research Strategies in Animal Behavior	Using hands-on experiences, teaches key concepts underlying the control and function of animal behaviors and contemporary methods for measuring, analyzing, and reporting animal behaviors. Combines introductory classroom lectures on concepts and methods with direct application in observations and experiments on animal behavior in the field and the lab. Topics include communication, mating behavior and systems, parental care, kin selection, cooperation and competition, migration and dispersal, foraging, and anti-predator strategies.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: Animal Behavior PhD student
ANB	602	Current Issues In Animal Behavior	Student-led seminar course centers on discussions of contemporary literature in the field of animal behavior. Takes a student-driven approach, with course participants selecting a target theme for the semester, selecting individual papers to discuss each week, and leading discussions about relevant merits and shortcomings of each article. Additional topics may include: conceptual frameworks and results from the dissertation projects of participating students, career options and strategies in the behavioral sciences, responsible research conduct in the field, and tactics in manuscript publication and grantsmanship.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Pre-requisites: Animal Behavior PhD student
ANB	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ANB	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
ANP	194	Special Topics		Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ANP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ANP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ANP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
ANP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
ANP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
ANP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ANP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	

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ANP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
ANP	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Building Design (Energy Perform/Bldgs) MS, Building Design (Facilities Dev/Mgt) MS or Building Design (Knowledge/Compng) MS student
ANP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ANP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ANP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ANP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student
ANP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student
ANP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Building Design Knowledge and Computing MS student; ANP 592 with a grade of Y
ANP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Building Design Knowledge and Computing MS student
APA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisite: Freshman status
APA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	200	Introduction to Asian Pacific American Studies	Examines historical and contemporary issues facing Asian Americans and Pacific Islanders in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		(HU or SB) & C
APA	210	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		C Credit is allowed for only AFR 212 (or AFS 210) or APA 210 or JUS 210 or TCL 210

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APA	220	Introduction to Social Transformation	Introduces key concepts in the study of social change, social innovation, and social transformation. Studies examples of social movements, social activism, community organizing, and coalition building and how such efforts have transformed society and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only APA 220 or JUS 220 or SST 220
APA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
APA	310	Asian Pacific American Arts and Cultures	In-depth exploration of Asian Pacific American cultural expression in art, literature, film, theatre, dance, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisite: APA 200 or APA 210 or minimum 30 hours. Credit is allowed for only APA 310 or FMS 310
APA	315	Asian Pacific American Literature	In-depth exploration of the literary history, critical reception, and major theories in Asian Pacific American poetry, fiction, and prose.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisite: APA 200 or 210 or 30 minimum hours
APA	330	Asian Pacific American Genders and Sexualities	In-depth exploration of gender and sexuality issues as they relate to Asian Pacific American experiences, including interracial relationships, stereotypes, feminism, queer theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisites:APA 200 or 210 or 30 minimum hours. Credit is allowed for only APA 330 or WST 331
APA	340	Asian Pacific Americans and Media	Advanced study of the social construction of Asian Pacific American media images and resistance to those images in various historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisite: APA 200 or APA 210 or 30 hours
APA	345	Asian Pacific Americans and Film	In-depth examination of the representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C & H	Pre-requisite: APA 200, APA 210, or FMS 100, or minimum 30 hours. Credit is allowed for only APA 345 or FMS 345
APA	347	Immigration, Education and the Family	Cultural processes related to immigration and their impact on the social construction of the immigrant family and the education of other children. Immigration theories, immigration debates and discourses, the immigration landscape of the 21st century, conceptualizations of the family, and the methodological challenges family researchers face. Topics include issues pertaining to education and the family and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only APA 347, JUS 347, APA 394 (Immigration, Education & Family) or JUS 394 (Immigration, Edu. & Family)
APA	350	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
APA	352	Race, Space and the Production of Inequality	Explores how the relationship between race and space has been important to the development of broad patterns of social inequality in the United States. Through a variety of readings, films and other material, examines how ideas of race and space have been important to the making and maintenance of national boundaries, citizenship, regional histories and spatial typologies such as border, ghetto, suburb and prison.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): APA 200 or 210; minimum 45 hours; Credit is allowed for only AFR 352 (or AFS 352) or APA 352 or JUS 353 or TCL 353 or APA 394 (Race, Space and the Production of Inequality)
APA	356	Race and Child Development	Reviews the current research and literature about the particular role of race in child development. Even though race is not a valid biological construct, it has significant social implications as it shapes how children interact and are treated by others. Through primarily class discussions/activities, presentations and papers, addresses: (1) What are the research and theoretical issues in studying race? (2) What does race and racism mean? (3) How does race influence developmental processes?	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): APA 200 or APA 210 or 30 hours. Credit is allowed for only APA 356 or CDE 356 or APA 394 (Race and Child Development)
APA	360	Asian Pacific American Experience	Advanced study of the historical and contemporary experiences of Asian Pacific American racial/ethnic groups in the United States.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(HU or SB) & C	Pre-requisite: APA 200 or APA 210 or 30 hours
APA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisite: APA 200 or APA 210 or 30 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APA	428	Critical Race Theory	In-depth analysis of the ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only AFR, APA, JUS or SST 428
APA	450	Asian Pacific American Contemporary Issues	Advanced study of the issues shaping Asian Pacific American communities, including immigration, politics, education, health, family, gender, youth, interracial relations, and other contemporary topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisite: APA 200 or APA 210 or minimum 45 hours
APA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
APA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
APA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
APA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisite: APA 200 or APA 210 or minimum 45 hours
APA	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
APA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7	L	
APA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
APA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
APA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APH	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
APH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
APH	212	Culture of Place	Explores contemporary conditions in the built environment as they are shaped by cultural phenomena.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	
APH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
APH	300	World Architecture I/Western Cultures	Historical and contemporary built environments of Western civilizations: Mediterranean, Europe, and the Americas as manifestations of cultural history and responses to environmental determinants.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	2-3	HU & H & G	Pre-requisite: May not be Pre-Architectural Studies or Architectural Studies BSD student
APH	305	Contemporary Architecture	Europe and America from the foundations of the modern movement to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Pre-requisites: Non-majors only (non-architecture students)
APH	313	History of Architecture I	Intensive study of history of architecture from earliest traces to 1300. Examines cultures from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	(L or HU) & G & H	Pre-requisites: Architectural Studies major with ALA 100 or ALA 102 and passed degree milestone review or non-majors with junior standing
APH	314	History of Architecture II	Intensive introduction to history of architecture from roughly 1300 to present day. Examines cultures from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	(L or HU) & G & H	Pre-requisites: APH 313 with C or better
APH	336	20th-Century Architecture I	Architecture in Europe and America from the foundations of the modern movement to the culmination of the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	Pre-requisites: Minimum Junior standing or Digital Culture: Design major

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APH	337	20th-Century Architecture II	Developments in architecture since the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	Pre-requisite: APH 336
APH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
APH	414	Great Cities	Historical survey of great cities from antiquity to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	(L or HU) & H	Prerequisite(s): minimum ASU cumulative 3.00 GPA; minimum 60 hours; Credit is allowed for only APH 414 or MUD 598 (Great Cities)
APH	421	First Concepts: What is... The Writing, Philosophy, and Culture of Architecture	Examines the major writings and concepts that surround the history of architecture. Focuses on (but not exclusively) work in the 20th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	L or HU	Pre-requisites: APH 313 & APH 314 with C or better; Architecture or Digital Culture Design student
APH	441	Ancient Arch	Architecture of the ancient Mediterranean world with selective emphasis on major historical complexes and monumental sites.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
APH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
APH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
APH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
APH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
APH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
APH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
APH	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APH	505	Foundation Theory Seminar	Foundation of conceptual architectural inquiry, stressing the reciprocal and interdependent relationship between design and theory.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Master of Architecture student; Co-requisites: ADE 522; ATE 556
APH	509	Foundation Seminar	Historical, technical, theoretical, environmental, and professional issues in architecture.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Master of Architecture; Co-requisite: ADE 510
APH	515	Current Issues and Topics	Critical examination of current architectural issues, topics, and discourse.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: APH 505 with a C or better; Co-requisite: ADE 621
APH	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	581	Contemporary Urban Design	Explores contemporary city and urban design issues related to contemporary cities.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Herberger Institute of Design and the Arts Graduate student
APH	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Herberger Institute of Design and the Arts Graduate student
APH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
APH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	518	World Englishes	Examines the implications of the global spread of English, including its diverse forms and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only APL 518 or APL 591 (World Englishes) or APL 691 (World Englishes)
APL	555	Disciplinary Discourses	Professional and disciplinary issues in linguistics and applied linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	557	Computer-Assisted Language Learning	Explores the field of computer-assisted language learning. Traces the development of computer-assisted language learning (CALL) over the last three decades. Focuses on research that explores how computer technology can help facilitate second language development; relies primarily on empirical data to do so. Examine established as well as new research methods in CALL. Participants participate in one research study and apply theoretical and practical aspects of CALL in these projects.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only APL 557, ENG 557 or LIN 591 (Intro to Computer Assisted Language Learning)
APL	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	588	Spanish Language Acquisition	Examines Spanish language acquisition in children and adults in the context of monolingual and bilingual language acquisition.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only SHS 588 or APL 588
APL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APL	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	601	Introduction to Applied Linguistics	Overview of the field of applied linguistics. Applies linguistic knowledge to the resolution of language-related issues facing multilingual societies (e.g., second language acquisition and ultimate attainment, literacy, language assessment, bilingualism, heritage and indigenous languages, language attitudes, language planning and policy, language and politics, world Englishes).	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APL	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	501	Differential Equations I	Linear and nonlinear ordinary differential equations. Existence and uniqueness of solutions, limit sets, stability, Lyapunov functions, linear systems with constant coefficients. Geometry of behavior in two and three dimensions, including Poincare-Bendixson theorem, Lorenz equations, linearization, sensitive dependence on initial conditions, bifurcations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	502	Differential Equations II	Partial differential equations, including classification, method of characteristics, separation of variables, boundary value and initial value problems, Green's functions, maximum principle, distributions, and weak solutions. Students must have already taken or be concurrently enrolled in Differential Equations 1.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	503	Applied Analysis	Convergence sequences and series of functions; metric space topology, compactness, completeness and the Ascoli-Arzelà Theorem; Contraction Mapping Principle, Implicit Function Theorem; intro to Lebesgue integration leading to L^p -spaces; properties of Hilbert spaces, Fourier transform. Students should have knowledge of linear algebra, multivariable calculus, and analysis at the undergraduate level.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	504	Applied Probability and Stochastic Processes	Markov chains, Martingales, probability measures, SDE, Brownian motion, Monte Carlo methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	505	Applied Linear Algebra	Fundamentals of linear algebra and numerical linear algebra, including decompositions (LU, QR, SVD), Eigen values, spectral theory, least squares problems. Programming with MATLAB.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	506	Computational Methods	Covers interpolation, solution of nonlinear equations and systems, numerical differentiation, numerical integration, numerical solution of ordinary and partial differential equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	520	Advanced Numerical Linear Algebra	Extends topics of APM 505. Introduces essential iterative methods, Gauss-Seidel, conjugate gradients. Methods for SVD, total least squares and root-finding applications in image analysis. Students should have basic knowledge of numerical linear algebra and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	522	Numerical Methods for Partial Differential Equations	Numerical methods for parabolic, elliptic, and hyperbolic partial differential equations, including finite difference/volume, finite element, and spectral methods. Mathematical concepts of stability, consistency, and convergence. Applications to scientific, biomedical, and industrial problems. Students should have a basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	523	Optimization	Building on a fundamental undergraduate background in linear algebra and calculus, covers continuous optimization, constrained/unconstrained and linear/nonlinear, as well as selected topics in discrete optimization. Some programming experience is needed for course projects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	524	Spectral Methods	Extends approximation theory to global methods, including Fourier and orthogonal polynomial expansions. Applications to imaging and hyperbolic, parabolic, and elliptic partial differential equations. Students should have previous graduate courses in ordinary and partial differential equations, basic programming skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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APM	525	High-Performance Computing	Supercomputer architectures, parallel programming environments, languages, libraries, and algorithms for high-performance numerical simulations. Instructor/Department approval is required for this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only APM 525, MAE 494 (High-Performance Computing) or MAE 598 (High-Performance Computing)
APM	526	Advanced Numerical Methods for Partial Differential Equations	Partial content will vary from semester to semester, but may include hyperbolic conservation laws, finite element methods, multigrid methods, and parallel algorithms for partial differential equations. Applications to scientific, biomedical, and industrial problems. Students should have basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	530	Mathematical Cell Physiology.	Mathematical modeling of dynamical aspects of cell physiology. Diffusion, membrane transport, intracellular calcium channel kinetics, calcium oscillations and waves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	531	Mathematical Neuroscience I	Mathematical modeling of electrochemical processes in nerve cells. Dendritic modeling, dendritic spines and synaptic plasticity, bifurcation analysis of excitable membrane models, deterministic and stochastic methods for threshold dynamics and bursting, relaxation oscillations. Students should have had a previous graduate-level PDE course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	533	Mathematical Population Biology I	Selectively covers population biology models in the forms of systems of difference equations or ordinary differential equations. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous graduate-level course in ODE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	534	Mathematical Population Biology II	Selectively covers population biology models in the form of partial differential equations and systems. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous basic graduate-level course in ODE and PDE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	535	Mathematical Models in Medicine	Mathematical models for the etiology, epidemiology, pathogenesis, morphology and treatment of disease. Covers dynamical models of cancer and viral infections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	541	Stochastic Modeling in Biology	Markov processes, random walks, martingales, branching processes, logistic growth model, Wright-Fisher model, Kingman's coalescent, bound and site percolations, contact processes, voter models. Students should have previously taken course work in probability and/or stochastic processes (or have a recommendation from their advisor). Recommendation from advisor is typically for students in biology or physics that have not taken statistics courses but have a good background in mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	553	Dynamical Systems	Center manifolds, structural stability, normal forms, averaging, chaos, control and synchronization. Students should have a previous graduate course in ODE or applied analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	560	Applied Dynamical Systems	Bifurcations, normal forms, pattern formations, mixing, Lagrangian chaos, and applications to fluid dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	570	Applied Linear Operators	Bounded linear and compact operators on Hilbert spaces. Linear integral equations, Fredholm and Hilbert-Schmidt theory, and approximate methods. Distributions. Completion of a course in Applied Analysis is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	575	Perturbation Methods in Applied Mathematics	Regular and singular perturbation methods for ordinary and partial differential equations, Boundary layer theory, matched asymptotic expansions, multiple-scale, homogenization, and WKB methods. Application to nonlinear oscillations, bifurcation and stability problems. Completion of a course in Differential Equations II or Partial Differential Equations in Engineering is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: APM 502 or MAE 502; Credit is allowed for only APM 575 or MAE 505
APM	576	Theory of Partial Differential Equations I	Existence and uniqueness theorems, boundary value and initial value problems, characteristics, Green's functions, maximum principle, distributions, and weak solutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	577	Theory of Partial Differential Equations II	Continuation of existence and uniqueness theorems, boundary value and initial value problems, characteristics, Green's functions, maximum principle, distributions, and weak solutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): APM 576
APM	581	Geometry and Control of Dynamical Systems I	Manifolds, tangent and cotangent bundle, Lie theory, integrability and controllability, and feedback control. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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APM	582	Geometry and Control of Dynamical Systems II	Variational principles, Euler-Lagrange equations, Hamiltonian systems, optimal control, connections and curvature. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP4	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ARA	101	ASU: The Art Experience	Introduces the culture, challenges and opportunities of the School of Art. Addresses essentials for academic and personal success within the university.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	1		Credit is allowed for only ARA 101, 194 (ASU Art Experience) or HDA 194 (ASU Herberger Inst Experience)
ARA	110	Sculpture Safety	Introduces safety and environmental health in the sculpture studios. Pre- or corequisite for all sculpture classes.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	1		
ARA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	195	Art in My World	Basic concepts and fundamental questions that provide insights into art making and that affect one's understanding and appreciation of art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	
ARA	202	Understanding Photographs	Slide lecture course in understanding photography as a fine art form.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ARA	218	Art and Visual Learning	Broad-ranging introduction to art and the visual world, focusing on art and artifacts from diverse cultures and eras, various two- and three-dimensional media, meaning and purpose in art, as well as community and internet art resources.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3	HU	Credit is allowed for only ARA 218 or 294 (Art and Visual Learning)
ARA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	309	Photography Now	Explores contemporary practice through lectures, readings, exhibition visits, screenings and discussions. Explores work created within the past thirty years up to the present. Students act as a collective "ear to the ground" for the medium, engaging in first-hand experiences and research and being responsible to share those experiences with the class as active agents of discovery. Requires reading current periodicals, attending and discussing photographic lectures and exhibitions both in-class and beyond within the local community.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): minimum 2.00 GPA; minimum 45 hours. Credit is allowed for only ARA 309 or 394 (Photography Now)
ARA	311	Art Appreciation and Human Development	Foundations of art for children and young adults. Emphasizes learning, development, and understanding art in historical and cultural contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Prerequisite(s): non-ART student; ENG 101; ENG 102; minimum junior standing

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ARA	330	Issues in Intermedia	Critical survey of recent theory and practice in "intermedia" art. Created specifically to provide a common historical and theoretical framework for students majoring in the intermedia area, as well as to anyone seeking to broaden his or her understanding of non-traditional media, performance, installation, computer art, video, social practice, Webart and interactivity and their relationship to contemporary society and discourse.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 216 or minimum 45 hours; Credit is allowed for only ARA 330 or ARA 494 (Issues in Intermedia)
ARA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ARA	396	Professional Practices for Design and the Arts	Prepares young designers, artists and individuals in other creative fields to successfully enter the professional world of art and culture beyond the support system of the university. Through examining contemporary artists' models of practice and creative entrepreneurship, participating in hands-on exercises, field trips, engaging with guest lecturers from local cultural institutions and initiatives, student artists learn how they can shape their lives to sustain their artistic practice once they graduate.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): minimum 56 hours. Credit is allowed for only ARA 394 (Professional Practices for Artist) or ARA 396
ARA	460	Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Credit is allowed for only ARA 460 or 560
ARA		Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ARA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARA	489	Writing Art and Design Criticism	Arts writing workshop designed to help develop critical voice in written form. During the course of the semester, students learn about art and design criticism by reading work in a variety of contexts, looking at examples of art and design in person and discussing them, and writing and revising their own pieces of criticism.	N	SEM	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Minimum 2.00 GPA; Minimum 45 hours; Credit is allowed for only ARA 489 or 494 (Writing Art and Design Criticism)
ARA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ARA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7	L	
ARA		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		
ARA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
ARA	560	Gallery Exhibitions	Provides practical experience in all phases of art gallery operations. Students learn professional art gallery practices through hands-on experience in the School of Art Student Galleries including Harry Wood, Step, and Gallery 100. Class members assist BFA and MFA candidate students in many phases of exhibition preparation and execution as well as assist with the curation and design of group exhibitions.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARA 460, 560 or 598 (Gallery Exhibitions)
ARA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

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ARA	589	Writing Art and Design Criticism	Arts writing workshop designed to help develop critical voice in written form. During the course of the semester, students learn about art and design criticism by reading work in a variety of contexts, looking at examples of art and design in person, analyzing and discussing them, and writing and revising their own pieces of criticism.	N	SEM	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Graduate student (degree seeking or non-degree seeking). Credit is allowed for only ARA 489 or ARA 589 or ARA 598 (Writing Art & Design Criticism)
ARA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ARA		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ARB	101	Elementary Arabic I	Reading, writing, speaking, and understanding basic Arabic.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Credit is allowed for only ARB 101 or MSA 101
ARB	102	Elementary Arabic II	Reading, writing, speaking, and understanding basic Arabic.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Credit is allowed for only ARB 102 or MSA 102
ARB	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Maximum 24 earned hours
ARB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	201	Intermediate Arabic I	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Credit is allowed for only ARB 201 or MSA 201
ARB	202	Intermediate Arabic II	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Credit is allowed for only ARB 202 or MSA 202
ARB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	311	Advanced Arabic Skills I	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	321	Arabic Conversation I	Emphasizes spoken Arabic and conversation skills. Simultaneously develops communicative skills, vocabulary, and cultural awareness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	331	Arabic/Islamic Culture and Literature	General introduction to the Middle East that synthesizes cultural, social, and literary information. Focuses on the experiences of ordinary Middle Eastern people to convey a grassroots sense of the Middle East.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARB	335	Arabic Culture and Islam	Develops awareness of Arabic culture and Islam. Covers a variety of cultural topics, including family, status of women, food, music, and Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	
ARB	336	Introduction to the Qur'an	Introduces the Qur'an and examines the historical, contextual, religious and interpretive dimensions wherein the Qur'an developed. Deals with the structure of the Qur'an, the different sections, suras (Qur'anic chapters), and some of the verses. Also includes an introduction to the idea of revelation, its history, the content and some of the different themes of the Qur'an, and discusses aspects of the Qur'an as a source of law. Taught in English; requires no knowledge of Arabic or Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ENG 101, ENG 105, or ENG 107 with C or better; Credit is allowed for only ARB 336 or 394 (Introduction to the Qur'an)
ARB	337	Hadith and Prophetic Tradition	Considers the Hadith as a literary text and as the prophetic tradition in Islam. Focuses on the development of the Hadith as a vast subject in Arabic literature, its collection methodology, Hadith science, and its contents. Gives special attention to the relationship of the Hadith as the second source, after the Qur'an, of Islamic knowledge, Islamic theology, Islamic philosophy and Islamic law. Explores the various ways and approaches in which Muslims employ the Hadith along with the Qur'an in their search for meaning, identity and knowledge. All readings are in English; requires no prior knowledge of Arabic language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ENG 101, ENG 105, or ENG 107 with C or better; Credit is allowed for only ARB 337 or 394 (Arabic Hadith and Prophetic Tradition)
ARB	341	Quran Text and Women	Addresses Muslim women scholars' argument that it is not the religion but the patriarchal interpretation of the Quran that have kept Muslim women oppressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	351	Classical Arabic Literature	Provides a survey in classical Arabic literature. Focuses on the development of classical Arabic poetry and prose since their interceptions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	352	Modern Arabic Literature in Translation	Surveys the major trends, themes and genres of modern Arabic literature in translation. Provides a foundational knowledge of modern literature in the Arabic language. Focuses on continuity and change, cultural diversity and multiplicity in the Middle East, and the social, religious and historical aspects of modern Arab culture. No knowledge of Arabic language is required for this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only ARB 352 or 394 (Introduction to Modern Arabic Literature)
ARB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	411	Advanced Arabic Skills II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	421	Arabic Conversation II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ARB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
ARB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
ARB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ARB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARE	250	Teaching Inquiry in Art	Issues in teaching and learning through directed, guided, and independent inquiry about artworks and through art making.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: ARS 101, ARS 102, and 6 hours (2 classes) from ART 111, 112, 113 or 115 with a C or better or currently enrolled
ARE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	301	Studio Art and Human Development	Study of human development in studio art from early childhood to adult years.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ARE	370	Teaching Visual Culture	Explores issues and applications of everyday aesthetics that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: BA or BFA Art major: ARE 250 OR BIS Interdisciplinary Studies (Studio Art concentration) or Studio Art minor; ARS 101 or ARS 102; ART 110; ART 112 (or ART 113, 115 or 116)
ARE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	440	Interdisciplinary Art Education	Explorations in art education's disciplines, history, and people's artmaking development at diverse age levels and abilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): BIS Interdisciplinary Studies (Studio Art concentration) or Herberger Institute major or Studio Art minor; minimum 2.00 GPA; minimum 55 hours
ARE	446	Multicultural Issues in Art Education	Explores multicultural issues, ethnicity and cultures related to art and education. Discussion course on facts and sometimes controversial interdisciplinary materials draws upon knowledge from various disciplines. Emphasizes art educational issues and teaching. Also explores international and global issues concerning multiculturalism.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Minimum 45 hours; Credit is allowed for only ARE 446, 494 (Multicultural Issues in Art Education), 546 or 598 (Multicultural Art Education)
ARE	482	Teaching Art Processes	Art traditions of the 20th century as a basis for studio and art history instruction. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Fine Arts Art student
ARE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARE	486	Art Education: Strategies and Applications	Implementation and evaluation of art instruction for K-12 population. Includes teaching of Saturday classes in the Children's Art Workshop. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Art student; ARE 482 with C or better
ARE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		Prerequisite(s): Barrett Honors student
ARE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequisite(s): Barrett Honors student
ARE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	496	Methods and Assessment of Learning in Art	Individual or group research on the assessment of art learning incorporating theory and practice. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Art student; ARE 250 with B- or better
ARE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7	L	
ARE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisites: Minimum 90 hours
ARE	510	Visual Culture Research	Research on instruction of everyday aesthetics and related issues that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARE	520	Issues in Teaching Inquiry in Art	Issues in teaching and learning focused both on inquiry about artworks and on inquiry through art making.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	525	Research on Art Instruction	Research methods and assessment of learning in art. Pilot studies on the effects of instruction on learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	530	Issues in Teaching Studio Art	Critical examination of issues concerning teaching multicultural art to different populations of students. Historical and philosophical foundations reviewed. Recommended to be taken before ARE 535.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	535	Research on Teaching Studio Art	Review of empirical and historical research methods, learning theory, and assessment of learning in studio art, including developmental studies and their limitations. Pilot studies on the effects of instruction upon learning. Recommended to be taken after ARE 530.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	540	Teaching Art in Cultural Contexts	Relationship of multicultural perspectives to teaching/learning art criticism, aesthetics, studio art, and art history.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	546	Multicultural Issues in Art Education	Explores multicultural issues, ethnicity and cultures related to art and education. Discussion course on facts and sometimes controversial interdisciplinary materials draws upon knowledge from various disciplines. Emphasizes art educational issues and teaching. Also explores and analyzes international and global issues concerning multiculturalism.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only ARE 446, 494 (Multicultural Issues in Art Education), 546 or 598 (Multicultural Art Education)
ARE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
ARP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ARP	451	Architecture Field Studies	Organized field study of architecture in specified national and international locations. Credit/no credit. May be repeated for credit with director approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-6		
ARP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: ADE 322 with a C or better; Co-requisite: ADE 421; ATE 451
ARP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ARP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7		
ARP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
ARP	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Master of Architecture student; ADE 522 with a C or better
ARP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Herberger Institute of Design and the Arts Graduate student
ARP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
ARP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Master of Architecture student
ARS	100	Introduction to Art	Provides an introduction to the understanding and enjoyment of art through the study of painting, sculpture, design, photography, and the decorative arts. Students gain an awareness of meaning, functions, and significance of art, while learning an art-related vocabulary and a set of analytical tools for discussing and understanding art from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: Non-Art majors; Credit is allowed for only ARS 100, 101, 102, or 300
ARS	101	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	
ARS	101	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	
ARS	102	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	
ARS	102	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	
ARS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	201	Art of Asia	History of the art of the Asian cultures, with emphasis on China, Japan, and India. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H & G	
ARS	202	Art of Africa, Oceania, and the Americas	History of art of Africa, Oceania, and the New World. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H & G	
ARS	250	History of Photography	History of photography from the 19th century to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	
ARS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	300	Introduction to Art	Parallels ARS 100 course content but requires a higher level of accomplishment and comprehension. Introduces visual culture, the purpose of art, and the relationship between art and visual culture. Students learn how visual culture pervades our everyday lives and how understanding visual literacy can help us participate more fully in the world around us.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: Non-Art major: Minimum 55 hours; Minimum 2.00 GPA; Credit is allowed for only ARS 100, 101, 102 or 300; Graphic Design majors: Minimum 2.00 GPA; Minimum 55 hours; Graphic Design majors with credit for ARS 100 may not enroll in ARS 300
ARS	302	Art/ Africa,Oceania & Americas	Issues in the art of Africa, Oceania, and the Americas related to ritual, gender, transformation of tradition, and encounters with Europeans.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H & G	Pre-requisite: ENG 102, 105, or 108
ARS	310	The Renaissance in Tuscany	Course taught in Florence, Italy. History of arts in Tuscany with focus on city of Florence from 14th through 16th centuries. Completion of ARS 101 and 102 suggested.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARS	330	The Portrait	Examines the history and production of portraits in contexts of social hierarchies, historical events, gender, politics, class, morality and aesthetics with a focus on the 15th to the 21st centuries in painting, sculpture and photography.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3	HU	Prerequisite(s): Any 200-level or higher course in APH, ARS, ENG, FMS, HST, MHL with B or better; Credit is allowed for only ARS 330 or 394 (Genre: Portraits)
ARS	340	Art in America	American art from colonial times through the Second World War. Not available to students who have completed ARS 542.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: BA or BFA Art major: ARS101; ARS 102 with C or better OR BIS Interdisciplinary Studies (Studio Art concentration) or Studio Art minor: ARS 101. Credit is allowed for only ARS 340 or 542
ARS	345	Art and Television	Critical introduction to the interrelation of technology and visual art using the tools of art history and media/cultural studies. Students read theorists of the relation between visual art and the mass media, and use them to analyze early presentations of visual art and art history on television of the 1960s and 1970s. Examines the contemporaneous and parallel development of video art--an artistic medium appropriated from television technology--through the study of key video artworks.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: minimum 2.00 GPA; minimum 45 earned hours; Credit is allowed for only ARS 345 or ARS 394 (Art & Television)
ARS	362	Pre-Columbian Art I	Architecture, sculpture, ceramics, painting, and other arts of Mesoamerica before European contact. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ARS	402	Art of Ancient Egypt	Aesthetic, philosophical, and cultural basis of Egyptian art from pre-Dynastic period through New Kingdom. Emphasis on sculpture and architectural monuments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: ARS 101 or ARS 102 with C or better; Credit is allowed for only ARS 402 or 502
ARS	404	Greek Art	History of art, architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Prerequisite(s): ARS 101 with C or better; Credit is allowed for only ARS 404 or 504
ARS	406	Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: BA or BFA Art major: ARS101; ARS 102 with C or better OR BIS Interdisciplinary Studies (Studio Art concentration) or Studio Art minor: ARS 101
ARS	410	Early Christian and Byzantine Art	Art and architecture of the early church and the Byzantine Empire from the 4th to the 15th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	412	Early Medieval Art	Painting, sculpture, architecture, and the minor arts from Migration, Carolingian, and Ottonian periods considered within religious, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Prerequisite(s): ARS 101 (or ARS 102) OR any 200-level or higher course in ASB, ENG, FRE, GER, HST, ITA or REL with B- or better
ARS	414	Romanesque Art	Sculpture, painting, architecture, and minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Prerequisite(s): ARS 101 (or ARS 102) OR any 200-level or higher course in ASB, ENG, FRE, GER, HST, ITA or REL with B- or better. Credit is allowed for only ARS 414 or ARS 514
ARS	416	Gothic Art	Painting, sculpture, and architecture in western Europe during the Gothic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: ARS 101; ARS 102

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ARS	417	Late Gothic Art in Central Europe	Sculpture, painting, and architecture of the late-Gothic style, ca. 1350-1525, considered within religious, social, economic, and political contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ARS 101 (or ARS 102) OR any 200-level or higher course in ASB, ENG, FRE, GER, HST, ITA or REL with B- or better. Credit is allowed for only ARS 417 or ARS 517
ARS	418	German Renaissance and Reformation Art	Graphics, painting, sculpture, and architecture, ca. 1450-1550. Reformation themes and Renaissance style considered within religious, political, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	ARS 101 (or ARS 102) OR any 200-level or higher course in ASB, ENG, FRE, GER, HST, ITA or REL with B- or better. Credit is allowed for only ARS 418 or ARS 598 (German Renaissance and Reformation Art)
ARS	422	Italian High Renaissance Art and Mannerism	History of Italian art during the 16th century, including the achievements and influence of Leonardo da Vinci, Raphael, and Michelangelo.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 422 or 522
ARS	424	Italian Baroque Art	Italian painting, sculpture, and architecture of the 17th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	426	Art of the 17th Century in Northern Europe	Baroque painting, sculpture, and architecture in Flanders, the Netherlands, France, and England.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	434	Art and Visual Culture of 19th Century	History of European art (all media) from French Revolution to Paris World Fair of 1900.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: At least one course in APH, ARS, ENG, FMS, HST or MHL with B or better. Credit is allowed for only ARS 434 or 534
ARS	435	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): one course in ARS, ENG, or HST at 200 level or higher with B or better; Credit is allowed for only ARS 435 or ARS 533 or ENG 428
ARS	436	The Artist, War, and Revolution (Versailles to Vietnam)	Critical study of artistic responses to war and revolution in Europe and United States from French Revolution to Vietnam conflict.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	438	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisite: ARS 102 with B- or better or one course in ARS, ENG or HST at 200 level or higher with B or better
ARS	438	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Pre-requisite: ARS 102 with B- or better or one course in ARS, ENG or HST at 200 level or higher with B or better
ARS	439	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: ARS 102 or ARS 438 with B- or better; Credit is allowed for only ARS 439 or ARS 539
ARS	439	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Pre-requisites: ARS 102 or ARS 438 with B- or better; Credit is allowed for only ARS 439 or ARS 539
ARS	440	Identity and World Film	Examines how films around the world represent gender, race, ethnicity, and sexual orientation through the lens of genres and their variations and how genres reinforce or critique stereotypes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Minimum 55 hours; At least one 200-level course in literature, art history, history, OR film and media studies with a grade of B- or better; Credit allowed for only ARS 440, FMS 427, ENG 465, ARS, ENG or FMS 494 (Identity and World Film)

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ARS	441	Public Art	Explores the lively field of contemporary public art, particularly as defined by percent-for-art programs established through city ordinances during the last forty years. Also considers historical precedents, including Civil War monuments and the City Beautiful Movement.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Minimum 50 hours; Minimum 2.00 GPA; Credit is allowed for only ARS 441, 498 (Public Art), 541 or 591 (Public Art)
ARS	442	Critical Issues in American Painting	Explores issues of national identity and western expansion, Manifest Destiny, through images of race and violence in western American painting from 1800 to the early 20th century. Includes "claiming and settling the wilderness," cultures in conflict, the cowboy, and visions of an enchanted land.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 442 or 542
ARS	443	Artists in Film: Artists' Biopics	Examines artists' "biopics," biographical films about artists, chronologically from the subgenre's first appearance in 1936 to recent films. Explores relationships between film and history and between film and myths of creativity; major directors' attraction to artists' biopics; stereotypes of artists (e.g., genius, deviant); and how notions of creativity are inflected by gender, race and national identity. Assignments include weekly readings and film viewings and one short paper; optional documentaries and films are also available.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): a least one course at the 200 level or above in ARS, ENG, FMS, HST with B or better; Credit is allowed for only ARS 443, 494 (Artists Biopics) or FMS 430
ARS	444	Films of India	Examines classic, Bollywood and diasporic films of India from 1950 to the present.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ARS 444, ARS 544, FMS 426, ARS 494 (South Asian Cinema) or ARS 494 (Films of India)
ARS	451	20th Century Photography	Personalities, processes, images, and ideas in photography from 1914 to present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ARS	456	Introduction to Museums	Broad scope of what museums do by exploring their history and the critical issues they face. Acquaints students with the basic functions of specific museum departments and staff, including the role of director, curator, registrar, preparator, as well as fund raising, marketing, audience development, education, exhibitions, conservation, ethics, cultural/heritage tourism and public art. Guest speakers and field trips enhance classroom material.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ARS 101 or ARS 102 OR any 200-, 300- or 400-level course in ASB, ENG or HST with B- or better
ARS	458	Critical Theories in the Visual Arts	Examines current critical theories through their application to all visual arts. May include new historicism, Marxism, deconstruction, post-structuralism, semiotics, Lacanian psychoanalysis, feminism, postmodernism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	459	Writing Art Criticism	Traditional and contemporary approaches to the criticism of art. Students write critical essays. Latter half of the semester stresses the criticism of contemporary art in various media.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: ARS 458
ARS	460	Art Now	Critical overview of major issues and controversies of the last 10 years within the global, national, and local art scene.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: ARS 102 with B- or better or one course in ARS, ENG or HST at the 200 level or higher with B or better; Digital Culture major
ARS	465	Native Art of North America	Native American art forms of the United States and Canada from prehistoric times to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & C & H	Pre-requisites: Minimum 45 hours; Minimum 2.00 GPA; Credit is allowed for only ARS 465 or 565
ARS	466	Native American Art of the Southwest	American Indian art in the southwestern states from its origins to the present day. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & C & H	Pre-requisites: Minimum 45 hours; Minimum 2.0 GPA
ARS	468	Art of the Arctic and Northwest Coast	Art associated with ceremony, shamanism, and daily life in the Arctic and on the Northwest Coast. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & C & H	Pre-requisites: Minimum 45 hours; Minimum 2.0 GPA
ARS	469	Mexican Art	Art of Mexico and related Central American cultures from the prehistoric to the contemporary schools. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	472	Art of China	Study of major forms in Chinese art: ritual bronze, sculpture, ceramic, calligraphy, painting, and architecture. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: Minimum 50 hours; Minimum 2.00 GPA
ARS	473	Art of Japan	Japanese art from the Joman period to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisite: Minimum 55 hours; Credit is allowed for only ARS 574 or ARS 473

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ARS	475	Chinese Painting	From Ku K'ai-chin to Ch'i Pai-shih. Major artists, styles, and movements in Chinese painting. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: Minimum 50 hours; Minimum 2.00 GPA; Credit is allowed for only ARS 475 or 575
ARS	480	Research Methods	Methodology and resource material for art historical research. Techniques of scholarly and critical writing and evaluation of bibliographic sources.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3	L	Pre-requisites: Museum Studies or Art History student; Junior standing; ARS 101 and ARS 102 with B- or better
ARS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
ARS	485	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	L	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 485 or 585
ARS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		Prerequisite(s): Barrett Honors student
ARS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequisite(s): Barrett Honors student
ARS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ARS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7	L	
ARS		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
ARS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisite: Minimum 90 hours
ARS	501	Methodologies and Art History	History of the discipline and an exploration of various methodologies, critical theory, and bibliographies used by art historians.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	502	Critical Studies in Egyptian Art	Egyptian art from pre-Dynastic to New Kingdom periods. Focus on aesthetic, philosophical, and cultural contexts. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 402 or 502
ARS	504	Critical Approaches to Greek Art	Art and architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 404 or 504
ARS	506	Critical Studies in Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire. Research paper and/or supplemental readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	514	Critical Approaches to Romanesque Art	Sculpture, painting, architecture, and the minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts. Requires research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 414 or 514

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ARS	533	The Pre-Raphaelites	Explores Pre-Raphaelite culture, both literature and art, and relevant social history, from the Pre-Raphaelite Brotherhood through Aestheticism and early twentieth century, focusing on interactions between images and texts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ARS 435 or ARS 533 or ENG 428
ARS	534	Art and Visual Culture of the 19th Century	Critical study of visual arts using primary source material from mid-19th century to WWI within philosophical, socioeconomic, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 434 or 534
ARS	538	Art of the 20th Century I	Charts how the avant-garde in the early 20th century developed different strands of modern art as it sometimes grew closer to, and at other times veered away from, radical politics.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 438, 538 or 598 (Art of 20th Century I)
ARS	539	Art of the 20th Century II	General introduction to major trends and issues of Euro-American art created between 1955 to around the turn of the 21st century.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking). Credit is allowed for either ARS 439 or ARS 539 or ARS 598, Art of 20th C
ARS	540	Identity and World Film	Examines how films around the world represent gender, race, ethnicity, and sexual orientation through the lens of genres and their variations and how genres reinforce or critiques stereotypes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 540, FMS 527 or (ARS 494, ENG 465, FMS 494 or ARS 598 Identity and World Film)
ARS	541	Public Art	Explores the lively field of contemporary public art, particularly as defined by percent-for-art programs established through city ordinances during the last forty years. Considers historical precedents including Civil War monuments and the City Beautiful Movement.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 441, 498 (Public Art), 541 or 591 (Public Art)
ARS	542	Critical Issues in American Painting	Explores themes and social issues in American art with a critical study of American painting from the 18th century to 1850.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 340, 442 or 542
ARS	543	Artists in Film: Artists' Biopics	Examines artists' "biopics," biographical films about artists, chronologically from the subgenre's first appearance in 1936 to recent films. Explores relationships between film and history and between film and myths of creativity; major directors' attraction to artists' biopics; stereotypes of artists (genius, deviant, etc.); and how notions of creativity are inflected by gender, race and national identity. Assignments include weekly readings and film viewings and one short paper; optional documentaries and films are also available.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ARS 443 or ARS 543 or FMS 430 or FMS 543 or ARS 598 (Artists in Film: Biopics)
ARS	544	Films of India	Examines classic, Bollywood and diasporic films of India from 1950 to the present.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking). Credit is allowed for only ARS 444, ARS 544, ARS 598 (Films of India) or FMS 426
ARS	565	Native Art of North America	Critical examination of Native American art within culture, prehistory to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 465 or 565

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ARS	574	Studies in Japanese Art	Critical examination of the nature and history of Japanese art, its rich heritage and its indebtedness to foreign sources.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 473 or 574
ARS	575	Approaches to Chinese Painting	Critical history of Chinese painting from Eastern Chou to 1911. Emphasis on masters, regional developments, and conceptual underpinnings.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Minimum 108 hours; Senior or Postbaccalaureate Undergraduate or Graduate; Credit is allowed for only ARS 475 or 575
ARS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	585	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 485 or 585
ARS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ART	110	Drawing as Seeing and Thinking	Immerses students from a broad range of non-art disciplines in the practice of drawing. Considers and reflects on drawing in its most expanded form: as a primary tool of communication and creative problem solving, as movement, as sensory experience and as its own unique method of cognition. Divides class meetings among lectures, exercises, field excursions and opportunities for critical dialogue. Students leave with an appreciation of the unique power of mark-making and an improved understanding of its application in their lives.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3	HU	Credit is allowed for only ART 110 or 194 (Drawing as Seeing and Thinking)
ART	111	Drawing I	Fundamental, technical, and perceptual skills using common drawing media and their application to pictorial organization. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	112	2-D Design	Fundamentals of pictorial design. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art, Art-Exploratory, Minor in Studio Art, or BIS concentration in Studio Art student
ART	113	Color	Principles of color theory as related to the visual arts. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	115	3-D Design	Fundamentals of 3-D form. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	116	Introduction to Digital Media	Concentrates on the fundamentals of digital media, including imagery, sound, video, animation, and the Web. Assignments are given to engage students in the technical, conceptual, and aesthetic aspects of digital media. Students employ a diverse range of techniques and software as they become familiar with contemporary artistic processes involving the use of the computer and/or other technologies. Consists of hands-on experimentation and production supplemented by slide lectures, videos, visiting artists, and academic research.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Credit is allowed for only ART 116 or 194 (Introduction to Digital Media)
ART	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ART	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	201	Photography I	Development of skills and techniques of black and white photography. Emphasis on camera work and darkroom procedures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Corequisite(s): ART 202
ART	202	Photography I Lab		N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	0		Corequisite(s): ART 201
ART	204	Photography II: Black and White	Photography as an art medium with additional exploration into personal photographic aesthetics. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: ART 201, 202

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ART	205	Photography II: Color	Uses both film and digital capture to explore color photography in depth. Emphasizes computer editing and printing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: ART 201, 202
ART	211	Drawing II	Continued development of technical and perceptual skills. Emphasizes materials and pictorial content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 111 and ART 112 with C or better
ART	214	Life Drawing I	Development of skill and expressiveness in drawing the basic form, construction, and gesture from the human figure. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 111 and ART 112 with C or better
ART	216	Intermedia Practices	Investigates the multidisciplinary practice of Intermedia within a fine art context and functions as a bridge between foundation courses and the Intermedia degree area specialty. Relying on principles and techniques from foundation level classes, students learn to choose appropriate media for a particular idea and construct work that is concept-driven and incorporates cross-disciplinary approaches. Students develop individual and diverse approaches to fusing traditional art disciplines with experimental, performative, spatial, and digital technologies. Students explore the full range of options available to contemporary artists and discuss the ever-shifting definition of intermedia and new media. Students may work in media including drawing, photography, mixed media, video, sculpture, networked, multimedia, electronic arts, digital sound manipulation, image processing, performance, and installation.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre/corequisite(s): ART 113, 116 or 194 (Intro to Intermedia) with C or better; 2 from ART 111, 112 or 115 with C or better OR Art Digital Culture major; ART 111, 112 or 113 with C or better; credit for only ART 216 or 294 (Intermedia Practices)
ART	218	3D Tools	Introduces 3D data capture, 3D modeling and rendering, and 3D prototyping and fabrication through creative/research activities using CNC and rapid prototyping tools. Projects are given to engage students in the technical, conceptual, and aesthetic aspects of digital media. Students employ a diverse range of techniques, software tools, and hardware in the course of making their creative/research projects, becoming familiar with contemporary artistic and engineering processes involving the use of the computer and/or other technologies. Consists of hands-on experimentation and production supplemented by slide lectures, videos, visiting artists, and academic research.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	3		Credit is allowed for only ART 218 or 294 (3D Tools)
ART	223	Painting I	Fundamental concepts and materials of traditional and experimental painting media. Emphasizes preparation of painting supports, composition, and color. Lab. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 111 and ART 113 with C or better
ART	227	Watercolor I	Fundamental concepts, materials, and techniques of watercolor. Emphasizes problem solving, basic skills, composition, and color. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART major: ART 111 with C or better; ART 113 with C or better, OR Studio Art minor or BIS Studio Art emphasis: ART 110 with C or better
ART	231	Sculpture I	Explores sculptural forms through concepts related to basic materials. Focus on studio production, safety, aesthetic criticism, and history of sculpture. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 111 and ART 115 with C or better
ART	253	Introduction to Printmaking	Introduces basic monotype, intaglio, relief, and related techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 113 with C or better
ART	261	Ceramic Survey	Handforming methods, throwing on the wheel, decorative processes, and glaze application. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 112 and ART 115 with C or better
ART	272	Introduction to Metals and Jewelry	Emphasizes metal fabrication. Basic techniques of cutting, piercing, forging, soldering, and forming of non-ferrous metals.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; maximum junior standing; ART 112 and ART 115 with C or better
ART	274	Wood I	Fundamental woodworking techniques to produce creative functional 3-D objects. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		

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ART	276	Fibers I	Explores traditional and contemporary materials and basic techniques related to fibers. Embroidery, felting, dyeing, block printing, plaiting, 3-D structures.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: ART 112, 115; undergraduate Art major; maximum junior standing OR The Arts (Fashion Design) major with ART 110 with C or better
ART	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	301	Alternative Processes	Recognition Alternative Processes of the inherent characteristics of nonsilver processes and their use in communicating ideas. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major with completed portfolio; ART 204 with C or better
ART	304	Junior Photographic Projects	Interpretation and manipulation of light as a tool in the performance of expressive photography. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; completed portfolio milestone (if required); ART 204 (and ART 101, ART 201) with C or better
ART	307	View Camera	View camera and darkroom techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART204 (and ART101, ART201) with C or better
ART	311	Drawing III	Emphasizes composition and exploration of drawing media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major or completed studio milestone; ART 211 with C or better or Studio Art Minor or BIS (Studio Art); ART 110 with C or better; ART 112 with C or better
ART	314	Life Drawing II	Drawing from the model with greater reference to structural, graphic, and compositional concerns. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: ART 110, 112, 214 (or Studio Art concentration or minor); Art student or completed portfolio milestone
ART	323	Painting II	Development of competency in skills and expression. Assigned problems involve light, space, color, form, and content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student with portfolio; ART 223 with C or better OR Studio Art minor: ART 110 with C or better; ART 113 with C or better
ART	325	Figure Painting	The human figure clothed and nude as the subject for painting in selected media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 214 and ART 323 with C or better
ART	327	Watercolor II	Explorations of personal expression in watercolor. Continued development of watercolor skills using traditional and experimental materials and techniques. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 227 with C or better
ART	331	Sculpture II	Emphasizes metal fabrication as an expressive sculptural process. Techniques in welding, cutting and bending of metals and their aesthetics. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major or completed studio milestone: ART 231 with C or better OR BIS (Studio Art) or Studio Art minor: ART 110, 115 with C or better
ART	332	Sculpture III	Explores diverse media with a focus on mold-making processes. Development of the sculpture portfolio. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 331 with C or better
ART	333	Foundry Casting Methods	Fine art and techniques of metal casting: mold making, foundry safety, finishing techniques, application of patinas, and history of casting. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 332 with C or better OR Studio Art minor; ART 110 and 115 with C or better
ART	345	Visualization and Prototyping	Studio/seminar introduces concepts of computer visualization, modeling, and rapid prototyping in an interdisciplinary manner.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Digital Art OR Intermedia student

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ART	346	3-D Computer Imaging and Animation	3-D modeling and animation. Emphasizes concepts and fine arts applications.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3	CS	Prerequisite(s): ART major or Digital Culture (Art) major: ART 111, ART 112 or ART 113 with a 'C' or better OR Minor in Studio Art (HISTARTMIN); ART 110 with a 'C' or better, and ART 112 or ART 113 or ART 115 or ART 116 with a 'C' or better.
ART	348	Animation Motion Studies	Principles and applications of 3-D animation for fine arts. Emphasizes animation techniques for expressive effects.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 346 with C or better
ART	351	Intaglio I	Introduces concepts and techniques of intaglio processes, including non-acid and acid techniques such as drypoint, line etch, aquatint, photo etching; introduces multiple plate printing ala poupee wiping, chine colle, and basic color. Idea-generating exercises include visual signifiers of identity, democratic multiple, time and space, the disembodied gaze, and reconsidering beauty. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 253 with C or better OR Studio Art minor; ART 110 with C or better; ART 112 or 113 with C or better
ART	352	Lithography I	Monochromatic and color planographic printmaking utilizing stone and aluminum plate processes. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 253 with C or better
ART	354	Screen Printing I	Introduces paper, direct, and photographic stencil techniques. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; two from ART 111, 112, 113 with C or better OR Studio Art minor; ART 110 with C or better; ART 112 or 113 with C or better
ART	360	Ceramic Throwing	Design analysis and production of functional pottery. Emphasis on throwing techniques, surface enrichment, and glaze application.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: BA Art major: ART 261 OR Studio Art minor (or BIS Studio Art emphasis): ART 110 and 115
ART	364	Ceramic Handbuilding I	Search for form using handbuilding techniques. Kiln firing and related problems.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 261 with C or better or BIS Studio Art emphasis or Studio Art minor; ART 110 and 115 with C or better
ART	365	Ceramic Handbuilding II	Continuation of ART 364 with an additional focus on large-scale works, surface treatments, and glaze decoration with related kiln firing applications.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 261 and 364 with C or better or BIS Studio Art emphasis or Studio Art minor; ART 364 with C or better
ART	372	Casting and Jewelry Techniques	Covers lost wax casting for jewelry scale work and alternative casting methods and mold making as well as other techniques such as chain making and marriage of metals.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 272 with C or better
ART	373	Form Emphasis in Metals	Covers forming non-ferrous metals using techniques such as anticlastic and sinclastic forming, raising, fold forming. Projects focus on hollow forms using these various techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 272 with C or better
ART	374	Wood II	Individual and directed problems in wood related to the production of unique functional art objects. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 274 with C or better
ART	376	Woven Structures I	Explores weaver- and loom-controlled structures with an emphasis on formal issues, historic precedence, and contemporary investigations.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 276 with C or better OR Studio Art minor; ART 110 with C or better; ART 112, 113, 115 or 116 with C or better
ART	377	Surface Design	Application of dyes and pigments on cloth exploring techniques, formal issues, and content. Cyanotype, monoprinting, painting on silk, resists, stenciling.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 276 with C or better OR Studio Art minor; ART 110 with C or better; ART 112, 113, 115 or 116 with C or better
ART	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		

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ART	403	Senior Photographic Projects	Technical and philosophical refinement of personal aesthetic with various photographic media. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 204 (and ART 101, ART 201) with C or better
ART	404	Portraiture Photography	Photographing people. Critical discussions and slide lectures on issues in portraiture. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 204 (and ART 101, ART 201) with C or better
ART	408	Experimental Film	Facilitates the exploration of 16 mm motion picture film as material and methodological fodder for artists. Students use original, found, and hand-altered footage to create projects of their own design. Covers basic techniques including camera operation, film exposure, and analog editing practices. Explorations also include in-class experiments, readings, discussions and screenings. For upper-division undergraduate and graduate art students attracted to the material and theoretical issues embodied in film and who are curious about how film might inform their own ongoing advanced artistic pursuits.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): minimum 3.00 GPA; minimum 45 hours. Credit is allowed for only ART 408 or ART 508
ART	409	Photographic Exhibition	Care of photographic prints, print presentation, and exhibition. Practical experience in gallery operations. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	410	Landscape Photography	Photographing landscapes. Critical discussion and presentations on issues in landscape photography. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	411	Drawing IV	Visual and intellectual concepts through problem solving and independent study. Emphasis on the individual creative statement. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 211 and ART 311 with C or better
ART	414	Life Drawing III	Various media and techniques on an advanced level. The human figure as an expressive vehicle in various contexts. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 314; credit is allowed for only ART 414 or ART 514
ART	423	Painting III	Further exploration of techniques and concepts of painting.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 223 with C or better; ART 323 with C or better; Art major; credit is allowed for only ART 423 or 523
ART	425	Advanced Figure Painting	The human figure clothed and nude as the subject for painting in selected media. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 223, 323 and 314 with C or better; credit is allowed for only ART 425 or 525
ART	427	Art on Paper	Advanced techniques, concepts, and processes with water media and mixed painting and drawing media on paper.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Herberger Institute student: min 55 hours; min 2.00 GPA or BIS Studio Art emphasis or Studio Art minor: ART 110 and ART 112 (or ART 113, 115, 116) with C or better; min 2.00 GPA; min 45 hours. Credit is allowed for only ART 427 or 527
ART	428	Video & Sound as Sculptural Materials	Uses video and sound as tools to explore sculptural ideas. The emphasis is not on advanced techniques and technologies for the creation of video and sound, but rather on the creative use of these tools to arrive at an enlivened relationship to the physical world and thus to sculpture.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: BA or BFA Art major; ART 231 with C or better; Credit is allowed for only ART 428, 494 (New Systems-Sculpture) or 528
ART	431	Special Problems in Sculpture	Development of a personal approach to sculpture. Emphasis on form, individual problems, and related color technology. Professional practices and presentation. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 231, ART 331 and 332 with C or better
ART	432	Neon Sculpture	Techniques for creating neon in an art context. Glass tube bending and fabrication. Construction of artworks utilizing light-generating gasses. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 231 with C or better or BIS Studio Art emphasis or Studio Art minor; ART 110 and 115 with C or better

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ART	433	Foundry Casting Methods	Thorough and directed course for the professional preparation of sculptors. Requires participation in all aspects of the foundry process, including serving on both a casting and foundry process maintenance team. Provides a history of the use of cast metal in the visual arts and an understanding of how casting processes can be applied to contemporary sculptural concepts. Requires participation in special projects such as exhibitions, iron casting, and field trips to local foundries as the semester course schedule dictates.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre/Corequisite(s): ART 332 with C or better
ART	435	Foundry Research Methods	Research in foundry techniques.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Prerequisite(s): minimum 45 hours
ART	436	Architectural Sculpture	Sculptural concepts as related to architecture and other man-made environments. Scale drawing, models, and relief sculpture. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 231 with C or better; ART 331 with C or better; ART 332 with C or better
ART	437	Film Animation	Production of short 16mm films that feature articulated sculptural objects, models, dolls, puppets, and graphics through the use of single-frame filming techniques. 6 hours a week. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 231 with C or better
ART	438	Moving and Interactive Systems in Sculpture	Explores new tools in digital fabrication, multipart constructions and digitally manipulated surfaces. Earmarks exploration regarding fabrication with computer numerically controlled lasers, plasma cutters and routers. Regular technique demonstrations, slide lectures and hands-on studio work.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 231 with C or better; Credit is allowed for only ART 438 or 538
ART	439	Intermedia Studio	Exploring visual effects by combining traditional and nontraditional methods, techniques, and concepts. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student or Digital Culture (Art) student; ART 111, ART 112 or ART 113 with C or better or Studio Art minor (or BIS Studio Art emphasis), ART 110 and 116; credit is allowed for only ART 439 or 539
ART	440	New Media Concepts	Continued experiments with new media and interdisciplinary concerns in art. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Corequisite(s): ART 441
ART	441	Video Art	Utilizing video and audio equipment essential to the production of broadcast quality video art. 2 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): Art portfolio completed; corequisite ART 440
ART	442	Art and Community	Explores through studio practice, research and presentations intermedia social art practice, public practice, art/life practice, relational aesthetics, community-based projects, and other critical theories and conventions that engage art and community.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Minimum 45 hours or Studio Art minor (or BIS Studio Art emphasis); ART 110 and 116 with C or better; credit is allowed for only ART 442 or 494 (Art and Community)
ART	443	Intermedia Performance	Experimental, conceptual, and interdisciplinary studio art with emphasis on performance and new media practices. May be repeated once for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student or Studio Art minor (or BIS Studio Art emphasis); ART 110 and 116 with C or better; credit allowed for either ART 443, 543 or 598 (Intermedia Performance)
ART	444	Web Art	Explores Web technology as a medium to create interactive art works for the Internet. Concept-driven curriculum wherein the idea for each work and its development is emphasized. The technical aspect of the work supports the concept. Students create storyboards and flowcharts to facilitate the application of the concept to the technology. The technical emphasis is on interactivity and time-based Net art. Students use existing software, learning the interface and programming associated with the software.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Intermedia majors eligible for upper-division credit; credit is allowed for only ART 444 or 494 (Web Art)
ART	445	Digital Processes for Printmaking	Introduces digital applications and processes as they relate to all areas of photo-mechanical printmaking processes. Comprised of three smaller sections to give a broad overview of possibilities and how they relate to analog printmaking techniques, including image capture, film generation and analog processes, and digital and inkjet printing.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): 50 minimum hours; credit is allowed for only ART 445 or 494 (Digital Process for Print)
ART	449	Computer Animation and Video	Integrates 3-D fine arts animation with video and compositing. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 346 and ART 348 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	451	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 351 with C or better; credit is allowed for only ART 451 or 551
ART	452	Advanced Lithography	Continuation of ART 352. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student or completion of portfolio milestone; ART 253 and ART 352 with C or better
ART	453	Experimental Printmaking: Expanding the Matrix	Alternative methods of working with print techniques, including installations, actions or performances, and other nontraditional formats.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 351, 352, or 354 with a C or better; credit is allowed for only ART 453, 553 or 598 (Experimental Printmaking)
ART	454	Advanced Screen Printing	Continuation of paper, direct, and photographic stencil techniques. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 354 with C or better
ART	456	Fine Printing and Bookmaking I	Letterpress printing and typography as fine art. Study of history, alphabets, mechanics of hand typesetting, presswork, and various forms of printed matter.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 253 with C or better, or non-art major with 56 credit hours; minimum 2.50 GPA. Credit is allowed for only ART 456 or ART 556 or ART 598 Fine Printing and Bookmaking I
ART	457	Fine Printing and Bookmaking II	Continuation of ART 456. Bookbinding, book design and printing, advanced typography, theory, and presswork. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Art student; ART 253 and ART 456 with C or better; Credit is allowed for only ART 457, 557 or 598 (Fine Printing and Bookmaking II)
ART	458	Papermaking	History, theory, demonstrations, sheet forming, collage treatments, and 3-D approaches. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 253 with C or better, or non-majors with 56 minimum credit hours; minimum 2.50 GPA. Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ART 458 or ART 558
ART	459	Monoprinting	Nonmultiple printed image using a variety of technical approaches. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): BA or BFA Art major, minimum 45 hours; or OR BIS Interdisciplinary Studies (Studio Art concentration) or Studio Art minor; ART 110, ART 112 (or ART 113, 115 or 116) with C or better
ART	460	Ceramic Clay	Research into various clay body formulations, local natural materials, slip glazes, and engobes.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 261 with C or better; Pre- or corequisite(s): ART 360 and ART 364 with C or better if completed
ART	461	Polymer Plate Prints	Explores the creative process of polymer plate printmaking as a fine art medium.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Minimum 50 hours; credit allowed for only ART 461 or 494 (Polymer Plate Prints)
ART	463	Ceramic Glaze	Glaze calculation and formulation using various glaze colors and surfaces.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 261 with C or better
ART	466	Special Problems in Ceramics	Emphasis on personal expression within structure of seminars, critiques, and studio work. Professional methods of presentation/documentation of work. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 261 and ART 364 with C or better

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ART	472	Advanced Jewelry and Surface Techniques	Covers jewelry forms and techniques including surface embellishment such as granulation, keum-boo and filigree to be used as tools for aesthetic expression and expand student awareness of historical and contemporary jewelry/metalwork.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 272 and ART 372 with C or better
ART	473	Advanced Metals and Mechanisms	Covers new techniques and develops existing skills in non-ferrous metal forming and mechanism fabrication while further refining fitting and finishing techniques, incorporating concept with craft and emphasizing professional practices/portfolio development.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 272 with C or better; ART373 with C or better; credit is allowed for only ART 473 or 598 (Adv. Metals & Mechanisms)
ART	474	Advanced Wood	Extended experience and advanced techniques in the use of wood to create functional works of art. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 274 and ART 374 with C or better
ART	476	Woven Structures II	Emphasizes personal expressions and continues technical exploration in woven structures. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 276 and ART 376 with C or better
ART	477	Printed Textiles	Techniques for screen printing on fabric exploring pattern as a compositional element. Various stencil methods including photographic processes. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 276 and ART 377 with C or better
ART	478	Advanced Surface Design	Emphasis on personal expression with advanced problems in stitch resist, arashi shibori, transfers, indigo, vat and disperse dyes, and pigments.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student with portfolio completed; ART 276, ART 377 and ART 477 with C or better
ART	479	3-D Fibers: Construction and Content	Explores hand-constructed fiber techniques through the context of the history and communities from which they came, as well as contemporary applications. Emphasizes research and the development of one's work through studio and social practice.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Art major or Studio Art minor; ART 276 with C or better; Credit is allowed for only ART 479 or ART 579 or ART 598 (3-D Fibers)
ART	482	Senior Exhibitions/Portfolio	Capstone course required of all BFA studio art majors. Students participate in a group exhibition and focus on professional practices, including exhibition display and advertisement, career planning, and development of a professional packet with artist statement, CV, and digital portfolio.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): BFA student; minimum 100 hours; credit is allowed for only ART 482 or 494 (Senior Exhibition/Portfolio)
ART	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): Art student
ART	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	STO	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		Prerequisite(s): Barrett Honors student
ART	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	STO	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequisite(s): Barrett Honors student
ART	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ART	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7	L	
ART		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
ART	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		Prerequisite(s): Art student
ART		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		Prerequisite(s): Art student

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ART	501	Cross-Practice Critique	Engages graduate students in deep, sustained critical discussion about artwork made by students in the class. Students investigate together the process(es) of critiquing artwork and consider and discuss the underlying assumptions and values they bring to this method of communication and pedagogy. Helps students develop and improve their critical voice at whatever level they are at, including the ability to receive and accept critical feedback of their work. Encourages students to hone their sense of personal agency in the context of "the crit."	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate
ART	508	Experimental Film	Facilitates the exploration of 16 mm motion picture film as material and methodological fodder for artists. Students use original, found, and hand-altered footage to create projects of their own design. Covers basic techniques including camera operation, film exposure, and analog editing practices. Explorations also include in-class experiments, readings, discussions and screenings. For upper-division undergraduate and graduate art students attracted to the material and theoretical issues embodied in film and who are curious about how film might inform their own ongoing advanced artistic pursuits. Graduate level focuses on the development of a personal approach.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ART 408, 494 (experimental Film), or ART 508, or ART 598 (Experimental Film)
ART	514	Graduate Life Drawing	Advanced study of the human figure as an expressive vehicle in various contexts. Graduate level focused on the development of personal approach. Timed poses of short and long duration with emphasis on using the figure to enhance the students individual research. Art historical component will be included to enable the student to fit themselves into the context of the use of the figure as it relates to the study of the history of art.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 414 or 514
ART	523	Graduate Painting	Concentrates on formal and conceptual skills and explores a variety of topics, including historical and contemporary painting issues, visual literacy, critical thinking, and professional practices.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student OR Senior or Postbaccalaureate undergraduate with minimum 108 hours; credit is allowed for only ART 423 or 523
ART	525	Graduate Figure Painting	Advanced study of the human figure clothed and nude as the subject for painting in selected media. Graduate level study focused on the development of personal expression.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 425 or 525
ART	527	Graduate Art on Paper	Exploration focused on conceptual and technical approaches combining mixed media painting and drawing on paper and related surfaces.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Herberger Institute for Design and the Arts graduate student; credit is allowed for only ART 427 or 527
ART	528	Video & Sound as Sculptural Materials	Uses video and sound as tools to explore sculptural ideas. The emphasis is not on advanced techniques and technologies for the creation of video and sound, but rather on the creative use of these tools to arrive at an enlivened relationship to the physical world and thus to sculpture.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ART 428, ART 528, or ART 598 (New Systems Sculpture)
ART	530	Digital Compositing	Fine arts digital compositing of computer animation, video, and video editing of composites with audio.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student OR senior OR postbaccalaureate undergraduate with minimum of 108 earned hours
ART	532	Neon Sculpture	Emphasizes techniques for creating neon in an art context, including glass bending and fabrication.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 532 or ART 598 (Neon Sculpture)
ART	533	Foundry Casting Methods	Thorough and directed course for the professional preparation of sculptors. Students are expected and required to participate in all aspects of the foundry process, including serving on both a casting and foundry process maintenance team. Students deepen their knowledge of the history of the use of cast metal in the visual arts and understanding of how casting processes can be applied to contemporary sculptural concepts, participating in special projects such as exhibitions, iron casting, and field trips to local foundries as the semester course schedule dictates.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 533 or 598 (Foundry Casting Methods)

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ART	538	Experimental Systems in Sculpture	Students create sculptures that incorporate movement, sound and interactivity while also developing their personal expression as artists.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 438, 538 or 598 (Exp. Systems in Sculpture)
ART	539	Intermedia Studio	Investigates how intermedia practice can expand the realm of conversations within contemporary art, life and society. Encourages investigation of social art practice, art/life practices, conceptual art, digital art, emergent media, installation, new genre public art, performance, and visual art with emphasis on research, production and theory. Students expand their ability to assess interdisciplinary strategies. Through reinforcing artistic rigor, students deepen their ability to employ intermedia methods as artistic communication, to express a personalized point of view.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 439, 539 or 598 (Intermedia Studio)
ART	542	Art and Community	Through studio practice, research and presentations, explores intermedia social art practice, public practice, art/life practice, relational aesthetics, community-based projects, and other critical theories and conventions that engage art and community. Graduate students, in conjunction with the instructor, create their own workplan for the course.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 542 or 598 (Art and Community)
ART	543	Intermedia Performance	This concept-driven course explores intermedia as a contemporary art practice from a performance/live art perspective. Students create performance and time-based work connected to their individual artistic interests while making connections among art, life, and society. Students working in a diverse range of disciplines and artistic genres discover new processes of working and negotiate unexpected connections inherent in interdisciplinary production and cross-disciplinary collaboration. Student projects depend on particular specializations and passions brought to the class and may produce a range of multimedia performance work including performing for the camera, interactive networks, analogue/digital sound, video, sculpture, and installation. Semester I addresses the body as material exploring the body, subjectivity, and cultural histories. Semester II focuses on the body in public space exploring intervention and the everyday.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 543 or 598 (Intermedia Performance)
ART	544	Graduate-Level Web Art	Students research Web art and apply this to their own art practice. Concepts and content of the Web art class projects parallel individual aesthetic preferences. Explores Web technology as a new medium to create interactive Internet works. Technical emphasis on interactivity and time-based net art. Utilizes existing software, learning the interface and programming associated with it. Includes articles and essays by professional Web artists and theorists in required reading.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 494 (Web Art), ART 544, or ART 598 (Web Art)
ART	545	Digital Processes for Printmaking	Introduces digital applications and processes as they relate to all areas of photo-mechanical printmaking processes. Course is comprised of three smaller sections to give a broad overview of possibilities and how they relate to analog printmaking techniques: image capture, film generation and analog processes, and digital and inkjet printing.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 545 or 598 (Digital Processes for Printmaking)
ART	551	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or post-baccalaureate undergraduate with minimum of 108 earned hours; credit is allowed for only ART 451 or 551
ART	553	Experimental Printmaking: Beyond the Matrix	Focuses on the development of concepts in printmaking beyond the traditional two-dimensional image on paper that is contained in a portfolio or frame. Explores alternative techniques and materials, methods of extending the print beyond 2 dimensions, and expanding the concept of what is a print. Students are encouraged to understand printmaking within the wider context of contemporary art, especially those directly related to the student's main artistic emphasis (if not printmaking).	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum 108 hours; credit is allowed for only ART 553, 453
ART	554	Graduate Screenprinting	Focuses on the development of screenprinting techniques and the ability to utilize these techniques as an expressive visual method of exploring and developing individual research concepts.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 554 or 598 (Advanced Screen Printing)

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ART	556	Fine Printing and Bookmaking I	Offers instruction in the techniques of fine printing--letterpress--and using typography and printing as a fine art medium, as well as evaluating text as image and content in the aesthetics of print. Also considers bookforms, binding techniques and artists' books for the expansion of that aesthetic.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ART 456, ART 556, or ART 598 (Fine Printing and Bookmaking I)
ART	557	Fine Printing and Bookmaking II	Continuing study of letterpress in fine art--the book arts--with emphasis on the book.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only ART 457, 557 or 598 (Fine Printing and Bookmaking II)
ART	558	Papermaking	History, theory, demonstrations, sheet forming, collage treatments and 3-D approaches.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only ART 458, ART 558 or ART 598 (Papermaking)
ART	559	Monoprinting	Investigates monoprint/monotype printmaking and its aesthetic possibilities. Students acquire basic and advanced skills in the medium through demonstrations, problem solving exercises, and experimentation.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum 108 hours; credit is allowed for only ART 559 or 598 (Monoprinting)
ART	561	Polymer Plate Prints	Explores the creative process of polymer plate printmaking as a fine art medium.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum 108 hours; credit is allowed for only ART 561 or 598 (Polymer Plate Prints)
ART	576	Woven Structures	Expanding upon prior woven techniques, develops methods in warp manipulation through material explorations, dye techniques and structure applications. Dye methods include ikat, warp painting and over-dyeing. Complex structural investigations include loom controlled double weave, over-shot, computer-aided design, and the compu-dobby loom. In addition to learning technical skills, also provides theoretical and historical readings with in-class discussions that provide impetus for conceptual developments within the assignments.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: degree- or nondegree-seeking graduate. Credit is allowed for only ART 476, 576, or ART 598 (Woven Structures)
ART	577	Printed Textiles	Provides advanced instruction in surface design techniques, focusing on screen printing on fabric. Explores a variety of stencil methods. Studio problems explore structured pattern and single edition prints. Emphasizes conceptual development with technical proficiency.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 577 or 598 (Printed Textiles)
ART	578	Advanced Surface Design	Explores advanced surface design methods and the expressive potential of fabric. Critical analysis of the integration of materials, process, and concept. Emphasizes conceptual development with technical proficiency.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 578 or 598 (Advanced Surface Design)
ART	579	3-D Fibers: Construction and Content	Explores hand-constructed fiber techniques through the context of the history and communities from which they came, as well as contemporary applications. Emphasizes research and the development of one's work through studio and social practice.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only ART 479, 579 or 598 (3D Fibers)
ART	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ART	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ART	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ART	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ART	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ART	621	Studio Problems	Advanced study. 3 hours a week each section.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ART	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ART	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ASB	100	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; comparative health systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Credit is allowed for only ASB 100 or SSH 100
ASB	101	Anthropology: Understanding Human Diversity	Provides an integrated understanding of biological, historical, and cultural evolutionary processes that account for human variation. Specifically examines how humans evolved and how they obtained the characteristics that make us a unique species. Considers cultural and biological models of cooperation, resource acquisition and distribution, sex and marriage, parenting, conflict and warfare, political structures, power and status, sex roles, ritual, religion, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	
ASB		Culture in a Globalizing World	Introduces concepts and methods of sociocultural anthropology, with illustrative materials from a variety of communities in a globalizing world. Explores the concept of culture and examines a variety of social, political and economic dimensions of how humans organize their lives.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	
ASB	102	Culture in a Globalizing World	Introduces concepts and methods of sociocultural anthropology, with illustrative materials from a variety of communities in a globalizing world. Explores the concept of culture and examines a variety of social, political and economic dimensions of how humans organize their lives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	
ASB		Culture in a Globalizing World	Introduces concepts and methods of sociocultural anthropology, with illustrative materials from a variety of communities in a globalizing world. Explores the concept of culture and examines a variety of social, political and economic dimensions of how humans organize their lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	

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ASB	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Freshman standing, Maximum 25 hours
ASB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	202	Immigration and Ethnic Relations in the U.S.	The ethnic and social consequences of international migration with a focus on the United States. Examines the impact of immigration on both American society and immigrant ethnic minorities over time.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & C	Credit is allowed for only AFR 202 (or AFS 202) or ASB 202
ASB		Immigration and Ethnic Relations in the U.S.	The ethnic and social consequences of international migration with a focus on the United States. Examines the impact of immigration on both American society and immigrant ethnic minorities over time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & C	Credit is allowed for only AFR 202 (or AFS 202) or ASB 202
ASB	210	Human Sexuality: Anthropological Perspectives	Examines the sexual nature and behavior of humans from both a biological and an anthropological point of view across various cultures around the globe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	
ASB	211	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & G	
ASB		Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & G	
ASB		Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(HU or SB) & G	
ASB	220	The Expressive Culture of Latin America and the Caribbean: A Transborder Perspective	Interdisciplinary social science introduction to various forms of cultural expressions found throughout Latin America and the Caribbean region and in Latina/o communities within the United States. Uses a transborder perspective to examine how migration, race, ethnicity, gender, power, history and identity shape and influence different aspects of Latina/o culture and identity. Focuses on the study of a wide array of expressive practices including music, dance, verbal arts, myths and folktales, festivals, sports and food in Mexico, the Spanish Caribbean and their counterpart Latina/o communities in the United States. Class lectures and readings introduce basic concepts such as ethnography, ethnomusicology, culture, representation and globalization. The Expressive Culture of Latin America and the Caribbean: A Transborder Perspective	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or HU or SB) & C	Credit is allowed for only ASB 220 or TCL 230
ASB	222	Buried Cities and Lost Tribes	Archaeology through its most important discoveries.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & G & H	
ASB		Buried Cities and Lost Tribes	Archaeology through its most important discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & G & H	
ASB	223	Aztecs, Incas and Mayas	Archaeological and historical study of the three best-known ancient cultures of Mesoamerica and South America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & G & H	
ASB	230	Beginning Social Research	Introduces basics of social research design; fosters independent thinking and critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASB	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
ASB		Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
ASB	252	Sports and Culture	Cross-cultural examination of symbolic and social dimensions of sports past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	
ASB	272	Environmental Justice	Surveys key environmental justice issues and movements. Uses interdisciplinary social science perspectives to review and analyze U.S. and international case studies.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Credit is allowed for only ASB 272 or SOS 272
ASB	275	Culture, Language and Learning	Examines the dynamic and complex interplay of language, culture and learning within and across individuals, groups, institutions and cultures in diverse multicultural, multilingual and transborder contexts.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Credit is allowed for only ASB 275 or TCL 275
ASB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASB	300	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & C	Pre-requisites: ENG 101, 105, 107, or ENG 111; Credit is allowed for only ASB or SSH 300

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ASB	301	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	Pre-requisites: SSH 100, ASB 100, HST 100, or HST 101 with C or better. Credit is allowed for only ASB 301, HST 301 or SSH 301
ASB	302	Ethnographic Field Study	Fieldwork study of cultural adaptation through ethnographic research methods and local culture. Taught in Latin America or other international locations.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Pre-requisite: ASB 102, 222, 223, or ASM 104
ASB	310	Precolonial Africa	In-depth course study of contemporary Africa, providing thorough examination of the continent's pre-colonial history, particularly before 1900. The course will study the continent and its people, the way the history of the continent has been interpreted by non-Africans, how the continent's anatomy has affected historical development, and the methodology and interdisciplinary scholarship in the study of Africa	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 300 (or AFH 300) or ASB 310
ASB	311	Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	
ASB		Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G & H	
ASB	314	Comparative Religion	In-depth study of origins, elements, forms, and symbolism of religion; an advanced comparative survey of religious beliefs and ceremonies; the place of religion in culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASB 102, ASB 222, or ASB 223
ASB	316	Money and Culture	Using the fundamentals of economic anthropology, investigates how culture shapes our relationship to money and decision making. Provides a foundation for thinking about how production, exchange and consumption can be explained by looking at human behavior, thought and culture, and encourages students to apply anthropological knowledge to real-world situations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
ASB	319	The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASB 102, ASB 222, or ASB 223
ASB		The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: ASB 102, ASB 222, or ASB 223
ASB	321	Indians of the Southwest	The advanced study of cultures among the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or SB) & H & C	Pre-requisites: ENG 101 and ASB 102 or ASB 222 or ASB 223
ASB		Indians of the Southwest	The advanced study of cultures among the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & H & C	Pre-requisites: ENG 101 and ASB 102 or ASB 222 or ASB 223
ASB	322	Peoples of Latin America	Indigenous, mestizo, and national cultures, rural and urban peoples in the region that today we call Latin America. Covers historic and contemporary events and cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Pre-requisites: ASB 102 with C or better or minimum 45 hours
ASB	324	Peoples of the Pacific	Peoples and cultures of Oceania focusing particularly on societies of Melanesia, Micronesia, and Polynesia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	G	
ASB	325	Peoples of Southeast Asia	Cultural-ecological perspective on the peoples of mainland and insular Southeast Asia. Subsistence modes, social organization, and the impact of modernization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	G	
ASB	326	Human Impacts on Ancient Environments	World survey of successful and unsuccessful ancient societies and their impacts on the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & H	
ASB	327	Disaster!	Examines the causes of disasters, such as famines and pandemics, throughout human history. Explores cases in which social responses to disaster have helped people survive or led to their demise. Through hands-on activities, students gain experience with popular tools to understand human responses to disasters.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & C	Prerequisite(s): ASB 102 with C or better or minimum 45 hours
ASB	328	Rules, Games, and Society	Concepts and practical tools to study the relation between groups of people and their common resources and public goods. Methods for identifying the diversity of institutional arrangements and analyzing their effectiveness. Example topics include sports, digital commons, environmental management, and urban environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	Pre-requisites: ENG 101; Minimum 45 hours
ASB	330	Understanding Archaeology	In-depth study and critique of theories and methods for reconstructing the lives of prehistoric peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): minimum 45 hours
ASB	335	Ancient Ruins of the Southwest	Archaeological exploration of the the major cultural developments in the prehispanic Southwest, including Mesa Verde, Chaco Canyon, Mimbres, Hohokam and Rio Grande.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H & C	Prerequisite(s): ASB 102 or 222 or 223 or minimum 45 hours
ASB		Ancient Ruins of the Southwest	Archaeological exploration of the the major cultural developments in the prehispanic Southwest, including Mesa Verde, Chaco Canyon, Mimbres, Hohokam and Rio Grande.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & H & C	Prerequisite(s): ASB 102 or 222 or 223 or minimum 45 hours

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ASB	336	African Art	Anthropological perspective of ancient visual art traditions of Africa. In-depth studies focus on several important themes and case studies that are pivotal to the understanding of the rich and diverse artistic heritage of the African continent.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	HU & G	Prerequisite(s): AFR 200 (or AFS 200) or ASB 102 or minimum 45 hours; Credit is allowed for only AFR 336 (or AFH 336) or ASB 336
ASB	337	Pyramids and Hieroglyphs: Life in Ancient Mesoamerica	Preconquest cultures and civilizations of Mexico. The Aztecs, Mayas, and their predecessors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & G & H	Prerequisite(s): minimum 45 hours
ASB	338	Archaeology of North America	In-depth study of the origin, spread, and development of the prehistoric Indians of North America up to historic tribes. Does not include the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Pre-requisites: ASB 102 or ASB 222 or ASB 223
ASB	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
ASB	340	Migration and Culture	Examines migration and culture embedded in a transnational field of social, economic and political processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours. Credit is allowed for only ASB 340 or SOC 328
ASB	342	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB, SBS or SOC 342
ASB	344	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	Pre-requisite: Minimum 45 hours; Credit is allowed for only ASB 344 or SOC 334
ASB	346	Marriage and Family Diversity	Social, economic, and cultural factors that shape family diversity in relation to generational and gender dynamics within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	
ASB	350	Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	HU	
ASB		Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU	
ASB		Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the perspective of anthropology and allied disciplines. Uses a global, comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3-4	(HU or SB) & G	Pre-requisite: Minimum 45 hours; Credit is allowed for only SOC 353 or ASB 353
ASB	353	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the perspective of anthropology and allied disciplines. Uses a global, comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4	(HU or SB) & G	Pre-requisite: Minimum 45 hours; Credit is allowed for only SOC 353 or ASB 353
ASB		Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the perspective of anthropology and allied disciplines. Uses a global, comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3-4	(HU or SB) & G	Pre-requisite: Minimum 45 hours; Credit is allowed for only SOC 353 or ASB 353
ASB	355	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	HU or SB	Pre-requisites: ASB 102, ASB 222, ASB 223 or ASM 104 or SSH 100 or ASB 100 with C or better. Credit is allowed for only SSH 355 or ASB 355
ASB	356	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356
ASB	361	Pleistocene Archaeology	Biosocial evolution in the Pleistocene, emphasizing technological achievements and the relationship between technology and environment in western Europe, sub-Saharan Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	H	
ASB	362	People and Plants	Offers a global survey of ethnobotany, the study of the uses of plants by people. Integrating botany, anthropology and archaeology, students learn about the roles plants have played as foods, tools, medicines and foci of religious devotion and ritual experience across human history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): minimum 45 hours

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ASB	366	African Archaeology: Precolonial Urban Culture	In-depth analysis of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data. Special study will be placed on the evidence relating to dynamics of civilizations in ancient Africa, their foundation, growth, and failure, which spans a period of two million years	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 366 (or AFS 366) or ASB 366
ASB	368	Hunter-Gatherers	Studies of known hunting and gathering societies with the goal of developing approaches to understanding past and/or present hunting and gathering societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): minimum 45 hours
ASB	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with C or better; ASB 100 (or 102), SOC 101, SOS 110, or SSH 100 with C or better. Credit is allowed for only ASB 370, SOC 370, SOS 370, or SSH 370
ASB	371	Inequality and Sustainability	Efforts to shift societies onto a sustainable trajectory are facing profound challenges from the degree and dynamics of global inequalities of income, wealth, and life chances. Data and ideas from a spectrum of disciplines are employed to examine, analyze, and criticize the prospects for redressing global inequalities in a sustainable manner.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	Pre-requisites: ENG 101, 105 or 107 with C or better; Minimum of 45 hours completed; Credit is allowed for ASB 371, ASB 394 (Inequality and Sustainability), SOS 371 or SOS 394 (Inequality and Sustainability)
ASB	374	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit for only ASB 374, POS 374, SBS 374 or SOC 374
ASB	375	Humans and the Environment: What's the Connection?	How do diverse human groups across global ecosystems (desert, tropics, arctic, alpine, urban) interact with and adapt to their environments and how are these relationships changing in response to globalization, climate change and other social, historical and political-economic drivers? Cultures situated in landscapes are the basis for an incredible global diversity of worldviews and behaviors that in turn affect how humans experience and "use" their environments. This course will provide an introduction to current and benchmark literature and methods in environmental and ecological anthropology that address people-environment interactions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 375 or SOS 375 or ASB 394 (People: Environment Connections in Anthropology) or ASB 494 (Ecological and Environmental Anthropology)
ASB	378	McGlobalization: Migration, Mass Media and McDonald's	Explores the impact of globalization on local societies and cultures by focusing on the international migration of peoples, the global expansion of capitalism and global mass media and popular culture. Examines both the socioeconomic causes and consequences of globalization, as well as how local peoples around the world have been affected by, participated in and resisted the forces of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 378 or TCL 378
ASB	380	Language, Culture and Gender	Focuses on how language, thought and culture are intertwined in everyday practice. Students learn the central role of language in shaping and reflecting social norms and social actions cross-culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): minimum 42 hours
ASB	389	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		
ASB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
ASB	395	Topics in Comparative Culture	In-depth study of specific topic(s) cross-culturally. Students engage with the subject matter through critical evaluation of literature, hands-on analysis and interpretation of data, and scientific writing.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Prerequisite(s): minimum 42 hours
ASB	402	Visual Anthropology	Explores visual anthropology as a method for social documentation, and as a way to interpret cultural ways of seeing. Brings together anthropology, fine art, and art history students to exchange ideas about how we create, interpret, and communicate visual meanings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		

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ASB	410	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 410 or SSH 400 or WST 410 or JHR 598 (Poverty, Social Justice, & Global Health) or MAS 598 (Poverty, Social Justice, & Global Health)
ASB	412	History of Anthropology	Historical treatment of the development of the culture concept and its expression in the chief theoretical trends in anthropology between 1860 and 1950.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	
ASB	417	Political Anthropology	Comparative examination of the forms and processes of political organization and activity in primitive, peasant, and complex societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	
ASB	421	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	
ASB	430	Social Simulation	Students will apply computer simulation and agent-based modeling techniques to study social systems relating to concrete research questions.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4	CS	Prerequisite(s): AML 100 or MAT 142, 170, 210, 265, or 270 with C or better OR Mathematics Placement Test score of 50% or higher; minimum 56 hours; Credit is allowed for only ASB 430 or CPI 430 or AML 330
ASB	442	Urban Studies	Studies local and global urban issues such as social geography, political economy, culture and social space, urban social diversity.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours. Credit is allowed for only ASB 442 or SBS 460
ASB	443	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	(L or SB) & G	Pre-requisite: SSH 100 or ASB 100. Credit is allowed for only ASB 443 or SSH 403
ASB	447	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB 447, POS 447, or SBS 447
ASB	452	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites: Minimum 45 credit hours; SSH 100 or ASB 100; Credit is allowed for only SSH 402 or ASB 452
ASB	455	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Global Health major; Minimum 87 hours; SSH 100 or ASB 100 and SSH 403 or ASB 443 with C or better; Credit is allowed for only ASB 455 or SSH 405
ASB	462	Medical Anthropology: Culture and Health	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & C	Credit is allowed for only ASB 462 or SSH 404
ASB	463	Political Ecology of the Border	Using a political ecology approach, focuses on the creation of border communities of Southwest North America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 463 or SOS 463 or TCL 443
ASB	464	The Ethnography of Mexico and the Borderlands	Focuses on the internal characteristics of a selected Mexican rural border towns and villages; analyzes the dynamics of development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Pre-requisites: Minimum 45 earned hours; Credit is allowed for only ASB 464, TCL 444 or 598 (The Ethnography of Mexico and the Borderlands)

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ASB	466	Peoples and Cultures of Africa	Surveys African peoples and their cultures, external contact, and changes. Meets non-Western requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 466 (or AFS 466) or ASB 466
ASB	471	Introduction to Museums	History, philosophy, and current status of museums. Explores collecting, preservation, exhibition, education, and research activities in different types of museums.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	
ASB	480	Principles of Linguistics	Descriptive and historical linguistics. Surveys theories of human language, emphasizing synchronic linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASB	483	Sociolinguistics and the Ethnography of Communication	Relationships between linguistic and social categories; functional analysis of language use, maintenance, and diversity; interaction between verbal and nonverbal communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	
ASB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASB		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
ASB	485	U.S.-Mexico Border in Comparative Perspective	Explores the multicultural and social dimensions of communities along the U.S.-Mexico border, emphasizing social organization, migration, culture, and frontier ideology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASB	490	Earliest Cities	Archaeological research on the origins and development of the earliest urban centers around the world. Applies urban theory and comparative analysis. Compares ancient and modern cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & H	Pre-requisites: ASB 222 or ASB 223 with C or better; Minimum 45 hours; Credit is allowed for only ASB 490 or PUP 490
ASB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Prerequisite(s): Barrett Honors student
ASB		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
ASB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
ASB	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASB	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
ASB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASB		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
ASB	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	503	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories. ASB 503/SSH 503.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	510	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	511	Ethics in Health Social Science Research	Ethics and social justice issues in community-based health research relevant to health social science, including informed consent, community involvement, control, advocacy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ASB	512	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	513	Research Design and Proposal Writing in Health Social Science	Research design, piloting, and proposal writing for social scientists conducting health research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	517	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
ASB	525	Introduction to Material Culture	Considers how objects embody social relationships and therefore cultural meanings. Seminar explores theories that give insight into social processes such as exchange, consumption, and identity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	529	Culture and Political Economy	Origin and spread of Western capitalism and its impact on non-Western societies. Utilizes ethnographic and historical case studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	530	Ecological Anthropology	Focuses on the theories and methods that environmental anthropology (EA) can bring to bear on human-environmental questions across a variety of social-ecological systems. Explores how environmental anthropologists approach these complex challenges, and considers the role of EA within larger interdisciplinary approaches for understanding development, adaptation, vulnerability, and change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only ASB 530 or SOS 553
ASB	532	Graduate Field Anthropology	Independent research on a specific anthropological problem to be selected by the student in consultation with the staff. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	2-8		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	537	Topics in Mesoamerican Archaeology	Explores changing organization of pre-Columbian civilizations in Mesoamerica through interpretive issues, such as regional analysis, chiefdoms, urbanism, and exchange.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	540	Scholarly Inquiry in Anthropology	Basic issues and concepts in anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Graduate student within one of the following programs in the School of Human Evolution and Social Change: Anthropology, Museum Anthropology, Social Science and Health, and Environmental Social Sciences
ASB	541	Theory in Sociocultural Anthropology	Basic issues and concepts in sociocultural anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	542	Archaeology of Small-Scale Societies	Approaches to small-scale (i.e., hunter-gatherer and tribal) societies, archaeological method and theory, ethnography, models of human and cultural evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	544	Settlement Patterns	Spatial arrangement of residences, activity sites, and communities over landscape. Emphasizes natural and cultural factors influencing settlement patterns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	547	Origins of Agriculture	Archaeological evidence for transitions in Old World subsistence economies from hunting and gathering to dependence on domesticated plants and animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	549	Chiefdoms	Examines archaeological evidence of chiefdoms, distinguished by hereditary leadership and non-bureaucratized decision-making elite, to illustrate emergence of social complexity, inequality.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	558	Mortuary Practices and Cultural Analysis	Critical overview of theory and methods of reconstructing lifeways of past peoples with ethnographic/archaeological data and a bioarchaeological perspective.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	560	Theory and Archaeology	Applies social theory to archaeological study of societies of the past. Includes practice theory, hierarchy, space and place, material culture.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	563	Hunter-Gatherer Adaptations	Evolution of prehistoric hunter-gatherer societies in the Old and New Worlds from the most ancient times through protohistoric chiefdoms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	567	Southwestern Archaeology	Broad coverage of Southwestern cultural developments focusing on current debates and rigorous use of archaeological data in making cultural inferences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ASB	568	Intrasite Research Strategies	Research issues within a single site context. Topics include quantitative spatial analysis, site definition, sampling, distributional analysis, and substantive interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	572	Museum Collection Management	Principles and practices of acquisition, documentation, care, and use of museum collections; registration, cataloging, and preservation methods; legal and ethical issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	573	Museum Administration	Formal organization and management of museums, governance, personnel matters, fund raising and grantsmanship, legal and ethical issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only ASB 573 or HST 573
ASB	574	Exhibit Design and Development	Exhibition philosophies and development; processes of planning, designing, staging, installing, evaluating, and disassembling temporary and long-term exhibits.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	579	Critical Issues in Museum Studies	Current debates of museum practice from an anthropological perspective. Addresses issues of collection, presentation, authenticity, and authority.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB		Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB		Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ASB	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ASC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-3		
ASC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		

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ASC	315	Numeracy in Technology	Contextual uses of mathematics in applied sciences. Emphasizes using mathematical methodologies to solve technology-related problems.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	MA	Prerequisite(s): BAS major
ASC	325	Physical Sciences in Technology	Physical systems and their interrelationships on technology systems. Real-world applications of physical systems.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	SQ	Pre-requisites: BAS major
ASC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		Pre-requisites: Polytechnic BAS student
ASC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
ASC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-7	L	
ASC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		Pre-requisites: Polytechnic BAS student
ASC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisites: Polytechnic BAS student
ASE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		Pre-requisites: Must be a non degree undergraduate student with less than or equal to 25 total earned hours
ASE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
ASE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		Prerequisite(s): Barrett Honors student
ASE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Prerequisite(s): Barrett Honors student
ASE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
ASE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
ASE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	104	Bones, Stones, and Human Evolution	Physical anthropology and archaeology. Evidence and processes of human evolution and of culture change. Primates. Fossil hominids and their tools. Race, variation, and heredity. Environment and human biology. Prehistoric culture and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4	SB or SG	
ASM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Freshman standing; Maximum 25 hours

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ASM	201	Epidemics and Outbreaks	Covers epidemiologic methods for the control of conditions such as infectious and chronic diseases, mental disorders, community and environmental health hazards, and unintentional injuries. Other topics include quantitative aspects of epidemiology, including data sources, measures of morbidity and mortality, evaluation of association and causality, and study design. A background in basic biology and a basic understanding of the principles of human diseases helpful in succeeding in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Credit is allowed for only ASM 201 or SSH 201
ASM	246	Human Origins	History of discoveries and changing interpretations of human evolution. Earliest ancestors to emergence of modern humans. Humanity's place in nature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	
ASM	275	Forensic Anthropology	Discusses the role of the forensic anthropologist in medico-legal investigations involving skeletonized human remains. Includes forensic recovery techniques, identification of decedents through skeletal and dental analysis, and reconstructing the crime scene through analysis of trauma patterns. Covers the legal aspects of forensic practice and considers historical case studies and the contributions forensic anthropologists make to mass disaster investigations and human rights abuses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4	SB or SG	
ASM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASM	300	Anthropological Sciences Seminar	Focuses on the ways in which research findings are produced by diverse theories and methods in the anthropological sciences, usually in combination with other life and physical sciences, with a strong focus on combination anthropological conceptual frameworks with quantitative methodologies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: BS in Anthropology major; Two of the following: ASB 102, 222 (or 223), AML 100, ASM 104 with a C or better
ASM	301	Peopling of the World	Reviews all evidence for human dispersal during the last 100,000 years, origins of language, cultures, races, and beginnings of modern humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Pre-requisite: ASM 104
ASM	332	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only AFR 332 (or AFS 332) or ASM 332
ASM	338	Anthropological Field Session	Anthropological field techniques, analysis of data, and preparation of field reports.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	341	Human Osteology	Osteology, human paleontology, and osteometry. Description and analysis of archaeological and contemporary human populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: ASM 104 with C or better; 25 minimum hours
ASM	342	Evolution of Human Behavior	Examines how evolutionary theory informs our understanding of human behavior, psychology and culture. Explores evolutionary explanations of human behavioral variation and cultural diversity and the influence of natural selection on shaping human cognition. Topics include nepotism, economic decisions, behavioral strategies throughout the life course, mate choice and sexual behavior, perception and judgment, motivation and emotions, social learning and culture, cooperation and prosociality, interpersonal violence and warfare, and norms and moral sentiments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s) with C or better: ASM 104 (or BIO 181 or 282). Credit is allowed for only ASM 342 or BIO 327
ASM	344	Fossil Hominids	The fossil evidence for human evolution, emphasizing the concepts and methods for reconstructing the past.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisite: ASM 104
ASM	345	Disease and Human Evolution	Interaction of people and pathogens from prehistoric times to the present, with emphasis on disease as an agent of genetic selection.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): ASM 104 or BIO 100 or BIO 181 (or BIO 188) or BIO 182 (or BIO 187) or BIO 281 or BIO 282
ASM	348	Social Issues in Human Genetics	Moral and social implications of developments in genetic science, particularly as they affect reproduction, medicine, and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	
ASM	350	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASB 222 (or 223), or GLG 101 (or 103), or GPH 111, with C or better
ASM	365	Doing Archaeology	Using hands-on analysis of artifacts and a mock site, this advanced introduction to archaeology acquaints the student with the field and laboratory methods applied by archaeologists, the information archaeologists use, and how they construct knowledge of the past.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4		Prerequisite(s): ASB 222 (or ASB 223 or 335 or 337)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	401	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4		Pre-requisites: ASB 100 (or ASM 104); SSH 100; Credit is allowed for only ASM or SSH 401
ASM	414	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): ASB 100, 102, 222, 223, AML 100, ASM 104 or SSH 100 with C or better; minimum 45 hours; Credit is allowed for only ASM 414 or SOS 414 or SSH 414
ASM	424	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only SOS 424, BIO 424, or ASM 424
ASM	435	Archaeological Pollen Analysis	Theory, methodology, and practice of pollen analytic techniques. Compares uses in botany, geology, and archaeology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASM	443	Primateology	Evolution and adaptations of nonhuman primates, emphasizing social behavior. Includes material from fossil evidence and field and lab studies in behavior and biology which must be critically integrated with relevant competing theories concerning the evolution of primate behavior and biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASM 104 with C or better; Minimum 56 hours. Credit is allowed for only ASM 443 or 543
ASM	446	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	Prerequisite(s): ASM 301 or BIO 340 or LSC 347 or MBB 347 with C or better; Credit is allowed for only ASM 446 or ASM 546 or BIO 446 or BIO 546
ASM	450	Bioarchaeology	Surveys archaeological and physical anthropological methods and theories for evaluating skeletal and burial remains to reconstruct biocultural adaptation and lifeways.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: ASM 104
ASM	452	Dental Anthropology	Human and primate dental morphology, growth, evolution, and genetics. Within- and between-group variation. Dental pathology and behavioral-cultural-dietary factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4	SG	Pre-requisites: ASM 104. Credit is allowed for only ASM 552 or ASM 452
ASM	453	Human Behavior through Bone Chemistry	Focuses on the many ways that biogeochemical analyses of archaeological bone and teeth can inform our understanding of past human behavior. Topics include migration and residential mobility, paleodiet, post-depositional contamination and dating methods. Students will learn through lectures, discussions, student presentations, and hands-on laboratory projects.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASB 222 or 223 with C or better; ASM 104 with C or better; Minimum 56 hours; Credit is allowed for only ASM 453 or 553
ASM	454	Comparative Primate Anatomy	Functional anatomy of the cranial, dental, and locomotor apparatus of primates, including humans, emphasizing the relation of morphology to behavior and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		
ASM	455	Primate Behavior Laboratory	Instruction and practice in methods of observation and analysis of primate behavior. Discusses the relationship between class work on captive animals and field techniques for studying free-ranging groups.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	Pre-requisite: ASM 343
ASM	456	Infectious Disease and Human Evolution	Study of infectious disease and humanity, using evidence from anthropology, history, medicine, and ancient skeletons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: ASM 345
ASM	459	Forensic Anthropology	Applies anthropology, primarily human osteology, to legal questions, including individual identification, crime scenes, forensic reports, police work, and court testimony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: ASM 341; ASM 275; Credit is allowed for only ASM 459 or 559
ASM	460	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASM 104 with C or better; ASM 341, ASM 342, ASM 344, ASM 345 or ASM 348
ASM	465	Quantification and Analysis for Anthropologists	Statistical and quantitative strategies for envisioning and exploring archaeological, physical anthropological, bioarchaeological, and socialcultural data. Univariate and bivariate methods. A basic understanding of algebra is necessary to be successful in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	CS	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASM	472	Archaeological Ceramics	Analysis and identification of pottery wares, types, and varieties. Systems for ceramic classification and cultural interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Prerequisite(s): Barrett Honors student
ASM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
ASM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASM	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	506	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	6		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 506, ASM 506 or MCB 506
ASM	520	Agent-Based Modeling	Introduces agent-based modeling to simulate social and social-ecological systems. Topics include design, analysis, and empirical grounding of agent-based models to a variety of application domains including collective action, diffusion processes, resource use, health, and complex societies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	525	Primate Paleobiology	Seminar-based survey of primate evolution, focusing on comparative biology of the extant primates and the fossil record through the Miocene.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	530	Paleoanthropology	Seminar-based in-depth study of the fossil record of human evolution and its geological, environmental, and phylogenetic contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	543	Primateology	Advanced study of nonhuman primate behavioral adaptations, emphasizing comparative sociality, incorporating data on behavior and biology from field and captivity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit allowed for ASM 443 or 543
ASM	546	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); credit is allowed for only BIO 446, ASM 446, BIO 546 or ASM 546
ASM	548	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	552	Dental Anthropology	Evolutionary anthropology of non-human primate and human dentition and research from extant and extinct species of non-human primates and hominins.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 452 or ASM 552

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ASM	553	Human Behavior through Bone Chemistry	Focuses on the many ways that biogeochemical analyses of archaeological bone and teeth can inform our understanding of past human behavior. Topics include migration and residential mobility, paleodiet, post-depositional contamination and dating methods. Students will learn through lectures, discussions, student presentations, and hands-on laboratory projects.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking). Credit is allowed for only ASM 453 or 553
ASM	555	Advanced Human Osteology	Intensive lab course covers identification of human skeletal remains and bone fragments from archaeological contexts. Emphasizes skeletal biology, variation, anatomical landmarks, determinants of age, sex, and stature.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisite: ASM 341 or Anthropology graduate student
ASM	560	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	565	Quantitative Archaeology	Formal methods of structuring, codifying, and analyzing data for archaeological problems. Designing research to yield data amenable to productive analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	568	GIS and Spatial Technologies in Anthropological Research	In-depth survey of spatial technologies in anthropological research, including GIS, spatial modeling, remote sensing, and image analysis and classification.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	570	Fundamentals of CAS Science	Many phenomena of critical relevance to human society are dynamic systems that change over individual and evolutionary time scales, and are highly interactive, both within and between systems. That is, they are complex adaptive systems (CAS), and thus share isomorphic properties like near-decomposability, hierarchical organization, scale-free networks, self-organized criticality, and emergence. Fundamentals of CAS science explores the diverse, interdisciplinary applications of a complex adaptive systems across the social, behavioral, and life sciences.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Graduate student (degree or non-degree); Credit is allowed for only ASM, BIO, or SOS 570
ASM	573	Lithic Analysis	Analysis and interpretation of chipped stone artifacts. Focus on both techniques and underlying concepts and their application to real collections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	579	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ASM	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	611	Paleopathology	Explores patterns of disease manifested in the human skeleton and differential diagnosis of infectious, metabolic, neoplastic, congenital, and other conditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); ASM 555
ASM	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AST	111	Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	
AST		Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	
AST	112	Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	
AST		Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	
AST	113	Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SQ	Pre/Co-requisite: AST 111 or AST 321
AST		Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre/Co-requisite: AST 111 or AST 321
AST	114	Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SQ	Pre/Co-requisite: AST 111, 112, 321 or 322
AST		Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre/Co-requisite: AST 111, 112, 321 or 322
AST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisite: Maximum 25 hours
AST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
AST	321	Introduction to Planetary and Stellar Astrophysics	Physical laws; celestial mechanics; properties of planets, the sun, and other stars; formation and evolution of stars and planetary systems. Both AST 113 and 321 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	Pre-requisites: MAT 266 or 271 with C or better; PHY 121 and 122 (or PHY 150) with C or better
AST	322	Introduction to Galactic and Extragalactic Astrophysics	Evolved stars, introduction to relativity, galaxies and interstellar matter, structure and dynamics of galaxies, cosmology. Both AST 114 and 322 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	Pre-requisites: MAT 266 (or MAT 271), PHY 150 (or PHY 121/122) with C or better
AST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
AST	421	Astrophysics I	Selected astrophysical topics, including stellar evolution, star formation, interstellar medium, galactic structure, extragalactic astronomy, high-energy astrophysics, and cosmology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: AST 321 or AST 322 with C or better; PHY 252 with C or better
AST	422	Astrophysics II	Same range of astrophysical topics as for AST 421 but emphasizes different specific topics in a given year.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: AST 321 or AST 322 with C or better; PHY 252 with C or better
AST	460	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite with C or better: AST 112 (or BIO 182 or BIO 282 or GLG 102 or SES 122), one 300-level course in AST or BIO or CHM or GLG or MIC or PHY or SES. Credit is allowed for only AST 460 or GLG 460 or MIC 475
AST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Prerequisite(s): Barrett Honors student
AST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
AST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
AST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		
AST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
AST		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
AST	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	521	Stars and Interstellar Medium I	Radiative transfer, atomic and molecular properties, stellar atmospheres, line profiles, nonlocal thermodynamic equilibrium, interstellar gas and dust, star formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	522	Stars and Interstellar Medium II	Stellar structure, radiative transport, boundary conditions, equations of state, nuclear reactions, opacity, nucleosynthesis, chemical evolution of the galaxy, stellar evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	523	Stars and Interstellar Medium III	Structure of the interstellar medium, gaseous nebulae, recombination theory, ionization fronts and shock waves, galactic magnetic fields, magnetohydrodynamics, molecular clouds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	531	Galaxies and Cosmology I	Structure and evolution of the Milky Way, stellar properties, populations and associations/clusters, interstellar medium, dark matter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	532	Galaxies and Cosmology II	Structure of galaxies and the nearby universe, Hubble sequence, kappa-space, stellar populations, active galaxies, galaxy environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	533	Galaxies and Cosmology III	Issues in modern cosmology, the distance scale, cosmological parameters, cosmological tests, cosmic background radiation, early universe, galaxy formation and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST		Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AST	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ASU	10	Connect: ASU Orientation	Students enrolled in the Starbucks College Achievement Plan will learn about ASU's mission as the New American University, discover the value of a university degree from a research institution, discuss academic integrity, explore the tools used in online courses, and identify key components of a work/life/school balance plan.	N	LEC	N	NOG	Office of the Provost	Online & Extended Campus	0		
ASU	101-AEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Aerospace Engineering undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASU	101-BME	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering student
ASU	101-CEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1		Prerequisite(s): Fulton Schools of Engineering student
ASU	101-CHE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1		Prerequisite(s): Chemical Engineering major
ASU	101-CHS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	1		Prerequisite(s): College of Health Solutions major
ASU	101-CLS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1		Prerequisite(s): College of Letters and Sciences undergraduate student
ASU	101-CNE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1		
ASU	101-CON	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1		Prerequisite(s): Fulton Schools of Engineering student
ASU	101-CPP	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1		Prerequisite(s): College of Public Service and Community Solutions

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASU	101-CS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Prerequisite(s): Cronkite School of Journalism and Mass Communication student
ASU	101-CSE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): School of Computing, Informatics, and Decision Systems Engineering major
ASU	101-CTI	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): Ira A. Fulton Schools of Engineering -- Polytechnic School student
ASU	101-EEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1		Prerequisite(s): undergraduate Electrical Engineering student
ASU	101-FSE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): Fulton Schools of Engineering student
ASU	101-HDA	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Prerequisite(s): Herberger Institute of Design and the Arts student
ASU	101-HNR	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	1		Prerequisite(s): Barrett Honors student
ASU	101-IEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1		Prerequisite(s): School of Computing, Informatics, and Decision Systems Engineering major

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASU	101-LA	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1		Prerequisite(s): College of Liberal Arts & Sciences student
ASU	101-MAE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Mechanical Engineering students or Aerospace Engineering undergraduate student
ASU	101-MEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Mechanical Engineering undergraduate student
ASU	101-MSE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Prerequisite(s): Fulton Schools of Engineering student
ASU	101-NCIAS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Prerequisite(s): New College of Interdisciplinary Arts and Sciences undergraduate student
ASU	101-NH	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		
ASU	101-NU	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): Nursing and Healthcare Innovation or Nutrition student
ASU	101-SOS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	1		Prerequisite(s): School of Sustainability student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASU	101-TE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): Teacher Education and Leadership student
ASU	101-UC	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	University College	Dean, University College	1		Prerequisite(s): ASU Online students Prerequisite(s): College of Letters and Sciences OR University College student
ASU	101-WPC	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1		Prerequisite(s): W.P. Carey student
ASU	11	ASU Online Orientation	Students enrolled in ASU Online Orientation will learn about ASU and its mission as the New American University, discover the value of a university degree from a research institution, discuss academic integrity, explore the tools used in online courses, and identify key components of a work/life/school balance plan.	N	LEC	N	NOG	Office of the Provost	Online & Extended Campus	0		
ASU	140-CHS	ProMod	Project-based learning.	Y	PRO	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	0-18		
ASU	140-CLS	ProMod	Project-based learning.	Y	PRO	Y	GNA	College of Letters & Sciences	College of Letters and Sciences	0-18		
ASU	140-CPSCS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	0-18		
ASU	140-CS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	0-18		
ASU	140-FSE	ProMod	Project-based learning.	Y	PRO	Y	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	0-18		
ASU	140-HDA	ProMod	Project-based learning.	Y	PRO	Y	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	0-18		
ASU	140-HNR	ProMod	Project-based learning.	Y	PRO	Y	GNA	Barrett, The Honors College	Barrett, The Honors College	0-18		Prerequisite(s): Barrett Honors student
ASU	140-LA	ProMod	Project-based learning.	Y	PRO	Y	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	0-18		
ASU	140-NCIAS	ProMod	Project-based learning.	Y	PRO	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	0-18		
ASU	140-NU	ProMod	Project-based learning.	Y	PRO	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	0-18		
ASU	140-SOS	ProMod	Project-based learning.	Y	PRO	Y	GNA	School of Sustainability	School of Sustainability	0-18		
ASU	140-TB	ProMod	Project-based learning.	Y	PRO	Y	GNA	Thunderbird Sch of Global Mgmt	Dean, Thunderbird School of Global Management	0-18		
ASU	140-TE	ProMod	Project-based learning.	Y	PRO	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-18		
ASU	140-WPC	ProMod	Project-based learning.	Y	PRO	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	0-18		
ASU	150	The LEAD Project I	Students develop in academic areas while also gaining essential career skills in creativity, problem solving, and teamwork. Students learn how to think critically and manage a project from inception to completion. Through course discussions and assignments, students examine connections between their work in other courses and ASU 150. This is the first part of a two-part curriculum which continues into the spring semester. Separate grades will be issued for each semester.	N	LEC	N	GNA	University College	University Academic Success Programs	1		Credit is allowed for only ASU 150 or ASU 194 (The LEAD Project I) or UNI 120
ASU	151	The LEAD Project II	Students continue to develop in academic areas while gaining essential career skills in creativity, problem solving and teamwork. Students learn how to think critically and manage a project from inception to completion. Through course discussions and assignments, students examine connections between their work in other courses and this course. Second part of a two-part curriculum, which continues from the fall semester. Separate grades are issued for each semester.	N	LEC	N	GNA	University College	University Academic Success Programs	1		Credit is allowed for only ASU 151 or ASU 194 (The LEAD Project II)

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ASU	19	Jump Start	One-week program for incoming first-year students to ASU and is designed to set them up for academic success. Introduces the tools and processes that support their journey. Students learn how to connect with other students via collaborative environments.	N	LEC	N	YGB	University College	University Academic Success Programs	0		Prerequisite(s): Jump Start or SPIRIT student
ASU	194-CLS	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
ASU	194-LA	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	1-4		
ASU	194-NCIAS	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ASU	194-UC	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	University College	Dean, University College	1-4		
ASU	240-CHS	ProMod	Project-based learning.	Y	LEC	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	0-18		
ASU	240-CLS	ProMod	Project-based learning.	Y	LEC	Y	GNA	College of Letters & Sciences	College of Letters and Sciences	0-18		
ASU	240-CPSCS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	0-18		
ASU	240-CS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Cronkite School- Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	0-18		
ASU	240-FSE	ProMod	Project-based learning.	Y	LEC	Y	GNA	Ira A. Fulton Engineering	Ira A. Fulton Schools of Engineering	0-18		
ASU	240-HDA	ProMod	Project-based learning.	Y	LEC	Y	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	0-18		
ASU	240-HNR	ProMod	Project-based learning.	Y	LEC	Y	GNA	Barrett, The Honors College	Barrett, The Honors College	0-18		Prerequisite(s): Barrett Honors student
ASU	240-LA	ProMod	Project-based learning.	Y	LEC	Y	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	0-18		
ASU	240-NCIAS	ProMod	Project-based learning.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	0-18		
ASU	240-NU	ProMod	Project-based learning.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	0-18		
ASU	240-SOS	ProMod	Project-based learning.	Y	LEC	Y	GNA	School of Sustainability	School of Sustainability	0-18		
ASU	240-TB	ProMod	Project-based learning.	Y	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	Dean, Thunderbird School of Global Management	0-18		
ASU	240-TE	ProMod	Project-based learning.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-18		
ASU	240-WPC	ProMod	Project-based learning.	Y	LEC	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	0-18		
ASU	340-CHS	ProMod	Project-based learning.	Y	PRO	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	0-18		
ASU	340-CLS	ProMod	Project-based learning.	Y	PRO	Y	GNA	College of Letters & Sciences	College of Letters and Sciences	0-18		
ASU	340-CPSCS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	0-18		
ASU	340-CS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Cronkite School- Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	0-18		
ASU	340-FSE	ProMod	Project-based learning.	Y	PRO	Y	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	0-18		
ASU	340-HDA	ProMod	Project-based learning.	Y	PRO	Y	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	0-18		
ASU	340-HNR	ProMod	Project-based learning.	Y	PRO	Y	GNA	Barrett, The Honors College	Barrett, The Honors College	0-18		Prerequisite(s): Barrett Honors student
ASU	340-LA	ProMod	Project-based learning.	Y	PRO	Y	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	0-18		
ASU	340-NCIAS	ProMod	Project-based learning.	Y	PRO	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	0-18		
ASU	340-NU	ProMod	Project-based learning.	Y	PRO	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	0-18		
ASU	340-SOS	ProMod	Project-based learning.	Y	PRO	Y	GNA	School of Sustainability	School of Sustainability	0-18		
ASU	340-TB	ProMod	Project-based learning.	Y	PRO	Y	GNA	Thunderbird Sch of Global Mgmt	Dean, Thunderbird School of Global Management	0-18		
ASU	340-TE	ProMod	Project-based learning.	Y	PRO	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-18		
ASU	340-WPC	ProMod	Project-based learning.	Y	PRO	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	0-18		

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ASU	394-CLS	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
ASU	440-CHS	ProMod	Project-based learning.	Y	LEC	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	0-18		
ASU	440-CLS	ProMod	Project-based learning.	Y	LEC	Y	GNA	College of Letters & Sciences	College of Letters and Sciences	0-18		
ASU	440-CPSCS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	0-18		
ASU	440-CS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	0-18		
ASU	440-FSE	ProMod	Project-based learning.	Y	LEC	Y	GNA	Ira A. Fulton Engineering	Ira A. Fulton Schools of Engineering	0-18		
ASU	440-HDA	ProMod	Project-based learning.	Y	LEC	Y	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	0-18		
ASU	440-HNR	ProMod	Project-based learning.	Y	LEC	Y	GNA	Barrett, The Honors College	Barrett, The Honors College	0-18		Prerequisite(s): Barrett Honors student
ASU	440-LA	ProMod	Project-based learning.	Y	LEC	Y	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	0-18		
ASU	440-NCIAS	ProMod	Project-based learning.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	0-18		
ASU	440-NU	ProMod	Project-based learning.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	0-18		
ASU	440-SOS	ProMod	Project-based learning.	Y	LEC	Y	GNA	School of Sustainability	School of Sustainability	0-18		
ASU	440-TB	ProMod	Project-based learning.	Y	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	Dean, Thunderbird School of Global Management	0-18		
ASU	440-TE	ProMod	Project-based learning.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-18		
ASU	440-WPC	ProMod	Project-based learning.	Y	LEC	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	0-18		
ATC	230	Fundamentals of Air Traffic Management	Introduces the manuals, procedures, maps, charts, and regulations used by air traffic controllers in the National Airspace System (NAS).	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 201 with C or better
ATC	331	Tower Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in ATC towers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 201 and ATC 230 with C or better
ATC	332	TRACON Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA TRACONS.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 201 and ATC 230 with C or better
ATC	333	En Route Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA ATC En Route Centers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 201 and ATC 230 with C or better
ATC	431	Tower Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: ATC 331 with C or better
ATC	432	TRACON Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: ATC 332 with C or better
ATC	433	En Route Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: ATC 333 with C or better
ATC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): minimum junior standing
ATC	491	Air Traffic Management Capstone	Overview of problem solution tools, quality metrics, and current technology initiatives related to air traffic management and related industry problems in a project environment. Student projects focus on airport and airspace requirements. Student teams work with partners from industry, government, and academia to define project objectives and work toward a formal recommendation to help solve the specified problem. Class discussions focus on project management, organizational structures, strategic initiatives, strategy implementation and execution. Uses review and analysis of current industry problems and resolutions to provide examples of practical solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: ATC 331, 332 and 333 with C or better; Pre/Co-requisite: ATC 431, 432, 433 with C or better if completed
ATE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
ATE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ATE	361	Building Structures I	Introduces load distribution on structures. Static analysis of determinant beams, trusses, arches, and rigid frames. Computer applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Co-requisite: ADE 321

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ATE	362	Building Structures II	Strength of materials. Stresses in beams and columns. Thermal effects on structures. Analysis, design, and detailing of wood structural systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: ATE 361 with C or better
ATE	451	Building Systems I	Principles of solar radiation, heat and moisture transfer, and environmental control systems as form influences. Energy-conscious design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Co-requisites: ADE 421
ATE	452	Building Systems II	Architectural design implications of heating, ventilation, and air conditioning systems. Principles of lighting, daylighting, and acoustics, and their applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: ATE 451 with C or better; Co-requisite: ADE 422
ATE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
ATE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ATE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7		
ATE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
ATE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ATE	521	Building Environmental Science	Scientific principles relating to comfort and environmental control. Heat and moisture transfer. Solar/natural energies for heating, cooling, and lighting.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	550	Passive Heating and Cooling	Theory, analysis, and application of passive and low-energy systems in order to maximize comfort and minimize energy consumption in buildings.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	553	Building Systems III	Design and integration of building systems, including mechanical, electrical, plumbing, security, communications, fire protection, and transportation.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Master of Architecture student; Co-requisite: ADE 521; ATE 563
ATE	556	Building Development	Comprehensive design development through the understanding and integration of building materials and systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Co-requisites: ADE 522 and APH 505
ATE	560	Building Energy Analysis	Computer simulation of building thermal behavior. Software review. Detailed study of selected simulation models using case study projects.	N	LAB	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	562	Experimental Evaluation	Instrumentation, measurement and computational techniques for analysis of building components, and assessment of thermal and luminous performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	563	Building Structures III	Analysis, design, and detailing of steel buildings and frames. Lateral analysis of small rigid and braced frame systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Master of Architecture student
ATE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	582	Environmental Control Systems	Heating, ventilation, and air-conditioning systems. Loads, psychrometrics, refrigeration cycle, air/water distribution, controls, energy performance standards, and utility rates.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ATE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ATE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ATE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
AVC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AVC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AVC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AVC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
AVC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AVC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7		
AVC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
AVC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AVC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
BCH	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
BCH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
BCH	361	Advanced Principles of Biochemistry	Advanced consideration of the structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; principles and theory of the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. The course is recommended for pre-health students. No credit for Biochemistry majors.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): CHM 231 with C or better OR Pre-corequisite(s): CHM 234 or CHM 334 with C or better if completed
BCH	361	Advanced Principles of Biochemistry	Advanced consideration of the structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; principles and theory of the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. The course is recommended for pre-health students. No credit for Biochemistry majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 231 with C or better OR Pre-corequisite(s): CHM 234 or CHM 334 with C or better if completed
BCH	367	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	367	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	367	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisites: BIO 354 (or LSC 355); Pre- or Co-requisites: BCH 361 or LSC 366 (with C or better if completed)
BCH	371	Modern Concepts in Biochemistry	Detailed examination of the chemical structure, conformation, and function of proteins, carbohydrates, lipids, and nucleotides; analysis of the energetics, enzymes, and control of the metabolic pathways by which these molecules are degraded or synthesized.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: BIO 353; CHM 234; Credit is allowed for only BCH 371 or LSC 394 (Modern Concepts in Biochemistry)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BCH	372	Modern Concepts in Biochemistry Laboratory	Analyzes protein structure, purification, and function using spectroscopic, chromatographic, and electrophoretic methods.	N	LAB	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisite: BIO 354; Pre/Co-requisite: BCH 371; Credit is allowed for only BCH 372 or LSC 394 (Modern Concepts in Biochemistry Laboratory)
BCH	392	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects. May be repeated for total of 6 semester hours.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
BCH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
BCH	461	General Biochemistry	Structure, chemistry, and metabolism of biomolecules and their role in the biochemical processes of living organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 234 or CHM 334 with C or better; Corequisite(s): CHM 341 or CHM 346
BCH	462	General Biochemistry	Continuation of BCH 461.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: BCH 461 with C or better
BCH	463	Biophysical Chemistry	Principles of physical chemistry as applied to biological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: CHM 341 or CHM 346 with C or better
BCH	464	Biophysical Chemistry Laboratory	Introduces physical methods in modern biochemistry.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: BCH 467 with C or better; Pre/Co-requisite: BCH 463 with C or better if completed
BCH	465	Protein and Nucleic Acid Biochemistry	Structure and function of proteins and nucleic acids, including protein folding, enzymology, proteomics, DNA/RNA structure, replication, transcription, and genomics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: BCH 461 with C or better; Co-requisite: BCH 462
BCH	467	Analytical Biochemistry Laboratory	Quantitative analysis, separation and purification of biological molecules. Applies chemical and physical methods to the characterization of biological macromolecules.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	L	Pre/Co-requisite: BCH 462 with C or better if completed
BCH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		
BCH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-6		Prerequisite(s): Barrett Honors student
BCH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-6	L	Prerequisite(s): Barrett Honors student
BCH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
BCH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-7		
BCH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
BCH	501	Current Topics in Biochemistry		Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	520	Chemical Biology	Chemical biology, broadly defined, is the application of chemical tools toward the study biological problems. The purpose of this class is to provide the foundation for translational research involving cross-disciplinary approaches to tackling significant problems in the biosciences. This one-semester class will cover topics ranging from traditional molecular biology and biochemistry to state-of-the-art techniques in genomics and proteomics. Particular emphasis will be placed on modern concepts in enzymology. The class will be taught using a combination of current literature and text-based materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: Graduate students (degree and nondegree); Credit is allowed for only BCH or CHM 520
BCH	561	Advanced Topics in Biochemistry	Topics selected from emerging areas of biochemistry based primarily on current literature.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	564	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	568	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BCH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCS	101	Elementary Serbo-Croatian	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
BCS	102	Elementary Serbo-Croatian	See BCS 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
BCS	201	Intermediate Serbo-Croatian	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
BCS	202	Intermediate Serbo-Croatian	See BCS 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
BCS	311	Bosnian/Croatian/Serbian Composition and Conversation I	Develops writing ability and oral expression.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: BCS 202 with C or better; Credit is allowed for only BCS 311, 394 (Serbo-Croatian Conv & Comp I) or SLC 394 (Serbo-Croatian Comp/Conv)
BCS	312	Bosnian/Croatian/Serbian Composition and Conversation II	Develops writing ability and oral expression.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: BCS 311 with C or better; Credit is allowed for only BCS 312 or 394 (Bosnian/Croatian/Serbian Composition and Conversation II)
BCS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
BCS	495	Serbo-Croatian for Heritage Speakers	Generates professional proficiency by developing communicative and written competency in standard literary Serbo-Croatian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
BDE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	692	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		

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BDE	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	701	Fundamentals of Biological Design I	Training in the essentials of fields underlying interdisciplinary research in the biosciences and in the integration of multiple disciplines in use-inspired research. Modules concentrate on key concepts and current questions in the biological sciences, physical sciences, and engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	9		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	702	Fundamentals of Biological Design II	Emphasizes the integrative areas of computational bioinformatics, systems biology, and synthetic biology, and their application in biomedical research.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	721	Integrative Research	Develops comprehensive solutions to societal problems by small interdisciplinary teams of students, including a proposal for research in an integrated science area. Covers issues of intellectual property, commercialization, societal impact and value, project management, product design, and historical examples of disruptive technological innovations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	722	Research Design	Writing and presentation of a research proposal in the form of a grant application, peer review sessions to provide feedback, examination of the grant review and funding process.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	751	Teaching in Science	Guidance in teaching and exposition through assisting a faculty teaching mentor in the Biological Design core course and training in oral presentation skills, including instruction in how to effectively present posters and seminars and participation in outreach experiences in the community.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO		The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	SQ	
BIO	100	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SQ	
BIO		The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	
BIO	112	Discovery: Why Sex?	"Why?" is a question that animates the youngest of children to the most seasoned of scientists. The acts of asking and answering "Why?" highlight the integrated nature of scientific knowledge and discovery. Demonstrates scientific disciplines are not walled cities in which knowledge is neatly segregated from lines of inquiry and knowledge in other disciplines. Instead, scientific concepts weave throughout and between disciplines and scientists increasingly rely on colleagues from different scientific fields to find answers to scientific questions. So our journey to find responses to the question "Why Sex?" takes us not just to biology, but also to earth science and to physics. Along the way, scientists are linked together not only through concepts that crosscut the disciplines, but also in their reliance upon key scientific skills such as the ability to observe, think critically, measure, gather data and communicate their findings.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Life Sciences	4	SG	Credit is allowed for only BIO 112 or BIO 194 (Discovery: Why Sex?)
BIO	113	Dinosaurs	Principles of evolution, ecology, behavior, anatomy and physiology using dinosaurs and other extinct life as case studies. Geological processes and the fossil record. Cannot be used for major credit in the biological sciences.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Credit is allowed for only BIO 113 or LSC 294 t 2 (Dinosaurs)
BIO	130	Introduction to Environmental Science	Introduces the interconnected nature of Earth's hydrosphere, lithosphere (soils and rocks), atmosphere, and biosphere.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	Credit is allowed for only BIO 130 or ABS 130
BIO	140	Greek and Latin Roots in Bioscientific Terminology	Introduces students to the ancient Greek and Latin root words most commonly used in biological, medical, and other scientific terminology, and gives practice identifying them in context. The knowledge of these root words enables students to memorize with greater ease and increased retention the bioscientific terminology they encounter in other coursework as well as in their medical or scientific profession.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BIO	151	Biological Thinking	The science behind the science of life. Masters the core concepts of modern biology, understands the scientific discoveries that lie behind those concepts, and develops scientific reasoning skills so that students can contribute discoveries of their own.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SQ	Pre-requisite: Life Sciences student with a math placement score below 50; Credit is allowed for only BIO 100 or BIO 151
BIO		General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	SQ	Credit is allowed for only BIO 181 or BIO 281 or BIO 282
BIO	181	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SQ	Credit is allowed for only BIO 181 or BIO 281 or BIO 282
BIO		General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	Credit is allowed for only BIO 181 or BIO 281 or BIO 282
BIO		General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	SG	Credit is allowed for only BIO 182, 281, or 282
BIO	182	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SG	Credit is allowed for only BIO 182, 281, or 282
BIO		General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Credit is allowed for only BIO 182, 281, or 282
BIO	189	Life Sciences Career Paths	Overview of modern life sciences, including research trends, extracurricular opportunities, degree programs, and potential careers.	N	REC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): Freshmen School of Life Sciences majors
BIO	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing, Maximum 25 hours
BIO	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO		Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	SG	
BIO	201	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SG	
BIO		Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	
BIO		Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	SG	Pre-requisites: BIO 201 with C or better
BIO	202	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SG	Pre-requisites: BIO 201 with C or better
BIO		Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Pre-requisites: BIO 201 with C or better
BIO	281	Conceptual Approaches to Biology for Majors I	Covers the themes and concepts that underlie the molecular biology of cells and multicellular organisms as well as the biological processes that shape the diversity of organisms on our planet.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SQ	Prerequisite(s): School of Life Sciences student; Pre- or corequisite(s): STP 226 (or 231) with C or better if completed. Credit is allowed for only BIO 181, 182 or 281
BIO	282	Conceptual Approaches to Biology for Majors II	Builds upon established conceptual foundations, covers the themes and concepts underlying organismal biology, with an emphasis on physiology and ecology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): School of Life Sciences student; BIO 281 with C or better; Credit is allowed for only BIO 181 or BIO 182 or BIO 282

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BIO	289	School of Life Sciences Undergraduate Research Apprentice	Students gain exposure to contemporary issues in research excellence, mentoring skills, and professional development in this seminar. Enriches individual lab research experiences students by bringing them together in a peer-community environment. Introduces students to the resources they have at their disposal (e.g. on campus, online) to facilitate research productivity and career planning. Rigorously evaluates their research processes and products, in light of their eventual professional plans.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1		Co-requisite: BIO 310, or BIO 494 (Advanced Study Practicum), or BIO/HPS/MBB/MIC/PLB 484/492/493/495/496/499, or MIC 401
BIO	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	300	Natural History of Arizona	Plant and animal communities of Arizona. Cannot be used for major credit in the biological sciences. Both BIO 300 and BIO 301 must be taken to secure SG General Studies credit	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SG	
BIO	301	Field Natural History	Organisms and their natural environment. Cannot be used for major credit in the biological sciences. Both BIO 300 and BIO 301 must be taken to secure SQ General Studies credit	N	PRA	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SG	Pre/Co-requisites: BIO 300 or LSC 310 with C or better if completed
BIO	302	Cancer--Mother of All Diseases	History of cancer; disease statistics; pathogenesis; diagnosis, treatment and prevention; case studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Prerequisite(s): BIO 181 and 182 (or BIO 282) with C or better
BIO	305	Biology Behind the Crime Scene	Explores biological technology behind forensic techniques like fingerprinting, Polymerase Chain Reaction (PCR), and paternity testing.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Pre-requisites: Minimum Sophomore standing
BIO	306	Modes of Biological Thought	Involves students in the process of biological discovery to examine how we identify truth in biological science.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Pre-requisites: ENG101 or ENG 105 with C or better; BIO181 (or BIO188) and BIO182 (or BIO187) with C or better
BIO	307	Dinosaurs	Principles of evolution, ecology, behavior, anatomy, and physiology using dinosaurs and other extinct life as case studies. Geological processes and the fossil record. Weekend field trip required. Cannot be used for major credit in the biological sciences.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisite: Minimum sophomore standing; Credit is allowed for only BIO 307 or LSC 294 (Dinosaurs)
BIO	310	Special Problems and Techniques	Qualified undergraduates may investigate a specific biological problem under the direction of a faculty member.	N	IND	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO	311	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 188 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 311 or HPS 340
BIO	312	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only BIO 312, IAS 340, or PHI 320
BIO	314	Research Colloquium in Biology and Society I	Develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2	L	Pre-requisites: BS Biology and Society Concentration majors; BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	315	Science, Values, and the Public	Examines science, communication, and a range of public opinion to understand science as a discourse of profound social power.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite: ENG 102, 105, or 108 with C or better. Minimum 35 hours. Credit is allowed for only ENG 370 or BIO 315
BIO	316	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	H	Credit is allowed for only BIO 316 or HPS 330
BIO	318	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	H	Credit is allowed for only BIO 318 or HPS 331
BIO	319	Environmental Science (Nonmajor)	Environmental and biological concepts applied to ecological systems with specific focus on analysis of problems caused by humans. Cannot be used for major credit in the Biological Sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	G	Pre-requisite: Junior class standing; Credit is allowed for only BIO 319 or PLB 320

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BIO		Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 or 118 with C or better
BIO	320	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 or 118 with C or better
BIO		Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 or 118 with C or better
BIO	321	Introductory Ecology Laboratory	Lab and field observations and experiments to test current concepts and theories in ecology.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 320 with C or better if completed
BIO	322	Conservation of Biodiversity	Species-level approaches to the protection, management, and restoration of biological resources from scientific and policy perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	323	Ecosystem Restoration and Management	Ecosystem-level approaches to the protection, management, and restoration of biota and ecosystem processes from local to global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	324	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU	Credit is allowed for only BIO 324 or PHI 310
BIO	325	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s) with C or better: BIO 100 (or BIO 182 or 282 or GLG 101 or SES 121); CHM 101 (or CHM 113 or 114). Credit is allowed for only BIO 325 or CHM 385 or GLG 325
BIO	327	Evolution of Human Behavior	Examines how evolutionary theory informs our understanding of human behavior, psychology and culture. Explores evolutionary explanations of human behavioral variation and cultural diversity and the influence of natural selection on shaping human cognition. Topics include nepotism, economic decisions, behavioral strategies throughout the life course, mate choice and sexual behavior, perception and judgment, motivation and emotions, social learning and culture, cooperation and prosociality, interpersonal violence and warfare, and norms and moral sentiments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s) with C or better: ASM 104 (or BIO 181 or 282). Credit is allowed for only ASM 342 or BIO 327
BIO		Animal Behavior	Theories of evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO or LSC 331
BIO	331	Animal Behavior	Theories of evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO or LSC 331

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BIO		General Genetics	Science of heredity and variation.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Prerequisites with C or better: BIO 181 and 182 (or both PLB 200 and 201) OR BIO 181 (or BIO 281 or MBB 245) and MBB 247 OR BIO 281 and 282; non-Molecular Biosciences and Biotechnology majors only. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
BIO	340	General Genetics	Science of heredity and variation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisites with C or better: BIO 181 and 182 (or both PLB 200 and 201) OR BIO 181 (or BIO 281 or MBB 245) and MBB 247 OR BIO 281 and 282; non-Molecular Biosciences and Biotechnology majors only. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
BIO		General Genetics	Science of heredity and variation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisites with C or better: BIO 181 and 182 (or both PLB 200 and 201) OR BIO 181 (or BIO 281 or MBB 245) and MBB 247 OR BIO 281 and 282; non-Molecular Biosciences and Biotechnology majors only. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
BIO	342	General Genetics Laboratory	Explores general principles of inheritance with special reference to Mendelian, molecular, and computational genetics via lab experiments.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 340 (with C or better if completed)
BIO	343	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	L	Pre-requisite: MBB 347 or BIO 340 with C or better; Credit is allowed for only BIO or MBB 343
BIO	344	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
BIO		Organic Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better; CHM 113 or 114 with C or better
BIO	345	Organic Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better; CHM 113 or 114 with C or better
BIO		Organic Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better; CHM 113 or 114 with C or better
BIO	346	The Darwinian Revolution	Intellectual and cultural history of Darwinism and modern evolutionary theory and their impact on 19th- and 20th-century thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
BIO	347	Science and Social Change	Modern science and technology are rapidly and radically transforming our society in innumerable ways, from how we process food to altering the very core of what it means to be human. Explores historical, philosophical, sociological, ethical, economic and political topics and consequences of modern science in society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Credit is allowed for only BIO 347, BIO 394 (Science and Society) or HPS 347
BIO	349	MolecularGenetics:GenesProtein	Emphasizes molecular and cell biology and gene technology, both at the basic and applied research levels, in the growing areas of biotechnology and the molecular biosciences; focuses on molecular processes that allow genetic information to be expressed and regulated and by introducing applications to real-world situations.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 282 (or BIO 181 and 182); CHM 116. Credit is allowed for only BIO 340 or BIO 349 or MBB 347

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BIO	351	Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better
BIO		Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better
BIO	352	Laboratory in Vertebrate Developmental Anatomy	Morphology of representative embryonic and adult vertebrates.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; Pre/Co-requisite: BIO 351 with C or better
BIO		Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): BIO 181 and 182 (or PLB 200) with C or better OR BIO 281 and 282 with C or better OR MBB 245 and 247 with C or better; CHM 116 or 118 with C or better
BIO	353	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 and 182 (or PLB 200) with C or better OR BIO 281 and 282 with C or better OR MBB 245 and 247 with C or better; CHM 116 or 118 with C or better
BIO		Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181 and 182 (or PLB 200) with C or better OR BIO 281 and 282 with C or better OR MBB 245 and 247 with C or better; CHM 116 or 118 with C or better
BIO	354	Cell Biology Laboratory	Investigational lab using modern molecular and cellular techniques to analyze molecular, biochemical, and anatomical traits of cells.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre/Co-requisite: LSC 353 or BIO 353 (with C or better if completed)
BIO	355	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 or STP 231, or STP 226 with C or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
BIO		Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; CHM 116 or CHM 118 with C or better
BIO	360	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; CHM 116 or CHM 118 with C or better
BIO		Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; CHM 116 or CHM 118 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BIO	361	Animal Physiology Laboratory	Experimental lab studies of physiological mechanisms in animals and model systems.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 360 (with C or better if completed)
BIO	370	Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s) with C or better: BIO 181 and 182 OR BIO 281 and 282
BIO		Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisite(s) with C or better: BIO 181 and 182 OR BIO 281 and 282
BIO	385	Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO		Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	386	General Entomology	Specialized focus on form, activities, and classification of insects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	389	School of Life Sciences Undergraduate Researcher	While performing undergraduate research at ASU, students gain exposure to contemporary issues in research excellence, mentoring skills, and professional development. Goals include: enriching individual lab research experiences of each student by bringing them together in a peer-community environment; introducing students to the resources they have at their disposal (e.g., on campus, online) to facilitate research productivity and career planning; rigorously evaluating their research processes and products, in light of their eventual professional plans.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): School of Life Sciences majors; 3.00 GPA
BIO	390	Medical/Dental Field Placement	Field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
BIO	393	Careers in Natural and Health Sciences	This seminar course is designed to provide students with proficiency in analyzing career options and to help students explore the full range of careers that are open to those who major at the undergraduate level in the natural sciences. The course will include short presentations by professionals in a variety of fields, including environmental biology, biotechnology, business, education, and various health sciences. There will be ample opportunities for questions and personal interactions.	N	LEC	N	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisites: BIO 188 or BIO 182; Minimum 45 hours
BIO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	406	Computer Applications in Biology	Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	CS	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 406 or PLB 432
BIO	410	Techniques in Conservation Biology and Ecology	Lecture, field, and laboratory experience in techniques used in conservation biology and ecology. Course is modular, with each module instructed by a discipline-specific expert (e.g., plant ecologist, mammal conservationist, soil ecologist).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisites: ENG 101 (or 105 or 107); BIO 320; BIO 322 or BIO 323 with C or better
BIO		Techniques in Conservation Biology and Ecology	Lecture, field, and laboratory experience in techniques used in conservation biology and ecology. Course is modular, with each module instructed by a discipline-specific expert (e.g., plant ecologist, mammal conservationist, soil ecologist).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Pre-requisites: ENG 101 (or 105 or 107); BIO 320; BIO 322 or BIO 323 with C or better
BIO	411	Quantitative Methods in Conservation and Ecology	Quantitative methods in conservation ecology: develop mathematical models of ecological and natural resource systems and use the models to better understand and inform management of ecosystems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 320 or 322 with C or better; BIO 415 or STP 226 or STP 231 with C or better; MAT 210, 251, 265, or 270 with C or better

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BIO	412	Conservation in Practice	Global biodiversity patterns, processes, and conservation; global environmental change; sustainable use of natural resources; emphasizing international approaches to conservation biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 322 and BIO 323 with C or better
BIO		Conservation in Practice	Global biodiversity patterns, processes, and conservation; global environmental change; sustainable use of natural resources; emphasizing international approaches to conservation biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 322 and BIO 323 with C or better
BIO	414	Research Colloquium in Biology and Society II	Further develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1	L	Pre-requisites: BIO 314 with C or better
BIO	415	Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better, or a 200 level statistics course (STP 226, or 231) with C or better
BIO		Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better, or a 200 level statistics course (STP 226, or 231) with C or better
BIO	416	Biomedical Research Ethics	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only for BIO 416 or HPS 410
BIO	417	Experimental Design	Fixed random, mixed models; crossed and nested factorial designs; balanced and unbalanced data; completely randomized, blocked, repeated measure designs; ANCOVA.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 415 with C or better
BIO	418	Soil Ecology	Soils viewed in an ecosystem context, soil-plant relationships, nutrient budgets, and abiotic factors that influence soil processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: ABS 370 or BIO 320. Credit is allowed for only ABS 434 or BIO 418
BIO	419	Physiological Plant Ecology	Physiological and morphological responses and adaptations of plants to their environment, emphasizing mechanisms that influence carbon and water balance, growth, and population distributions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 320 or PLB 308 with C or better; Credit is allowed for only PLB 419, 519, BIO 419 or 519
BIO	420	Immunology: Molecular and Cellular Foundations	Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 353, BIO 360 or MIC 220 with C or better
BIO	421	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 320 with C or better. Credit is allowed for only BIO 421 or BIO 521 or SOS 421 or SOS 521
BIO	422	Ecosystem Ecology	Explores the structure, development and dynamics of ecosystems, with a focus on the exchange of energy and materials between the atmosphere, soils, water, biosphere, and anthro-sphere.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 320 with C or better. Credit is allowed for only BIO 422 or BIO 494 (Ecosystem Ecology)
BIO	423	Population and Community Ecology	Organization and dynamics of population and communities. Theoretical and empirical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO		Population and Community Ecology	Organization and dynamics of population and communities. Theoretical and empirical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO	424	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only ASM, BIO or SOS 424
BIO	425	Marine Conservation Ecology	Marine conservation biology is increasingly important for society, as evidenced by frequent media coverage and the recent report by the U.S. Commission on Ocean Policy. Expect exposure to multiple perspectives on important conservation issues in the marine environment and gain valuable experience in critical thinking, communication skills, and the use of science in effective debate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181, 182 with C or better OR BIO 281, 282 with C or better. Credit is allowed for only BIO 425 or BIO 494 (Marine Ecology and Conservation)
BIO	426	Limnology	Structure and function of aquatic ecosystems, with emphasis on freshwater lakes and streams.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3-4	L	Pre-requisites: BIO 320 with C or better

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BIO	420	Limnology	Structure and function of aquatic ecosystems, with emphasis on freshwater lakes and streams.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3-4	L	Pre-requisites: BIO 320 with C or better
BIO	427	Fire	A survey of fire on Earth--history, ecology, behavior, and management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	H	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	428	Biogeography	Environmental and historical processes determining distributional patterns of animals and plants, emphasizing terrestrial life.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisites: BIO 320 with C or better
BIO	429	Human Impacts on Ecosystem Functioning	Explores our current understanding of how humans are impacting the functioning of ecosystems and how changes in ecosystems would affect provisioning of ecosystem services and ultimately human well-being. The two primary drivers of ecosystem change are growth of the human population and increased consumption per capita. These drivers affect the Earth's cycles of carbon, nitrogen and water, as well as regional and global-scale changes in biodiversity and climate. Includes an in-depth discussion of scenarios for the next 50 and 100 years, which articulate costs and benefits of alternative development pathways in terms of climate change, food production, clean water and biodiversity. Scenarios of change in biodiversity lead to the topic of the consequences of biodiversity change for the functioning of ecosystems from the point of view of their productivity and stability. Human activities have disrupted several biogeochemical cycles including nitrogen and carbon cycles.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 320 (or SOS 326); Credit is allowed for only BIO 429, BIO 528, SOS 429, SOS 528, or SOS 494/598 (Human Impacts on Ecosystem Functioning), or BIO 494/598 (Human Impacts on Ecosystem Functioning)
BIO	431	Genes, Development, and Evolution	Contribution of genes, developmental processes, and evolution to pattern of phenotypic variation, including disease.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisites: BIO 181 (or BIO 188); BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	431	Genes, Development, and Evolution	Contribution of genes, developmental processes, and evolution to pattern of phenotypic variation, including disease.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Pre-requisites: BIO 181 (or BIO 188); BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	434	People and Nature: Ecosystem Services	Explores the drivers of biodiversity change and the consequences they have for human wellbeing, taking both an ecological and an economic perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: MAT 117 or higher or SOS 101; junior standing. Credit is allowed for only BIO 434, SOS 434, or BIO 494 (Ecosys Servcs:People&Nature)
BIO	435	Research Techniques in Animal Behavior	Experimental and field studies of animal behavior; description and quantification of animal behavior and interpretation of behavior within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 331 with C or better
BIO	436	Sociobiology and Behavioral Ecology	Surveys animal and human social behavior examined from ecological and evolutionary perspectives using theoretical and empirical constructs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 331 with C or better
BIO	437	Comparative Biomechanics and Motor Control	Guides students to critically evaluate how the physical and mechanical properties of organisms and their environment affect biological tissues, structures, and motor control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 with C or better; MAT 170 and PHY 111 with C or better; Credit is allowed for only BIO 437, 437, KIN 437, 537, KIN 494 (Comparative Biomechanics and Motor Control) or 598 (Comparative Biomechanics and Motor Control)
BIO	440	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better; Credit is allowed for only BIO 440 or CBS 540 or MBB 440 or MCB 540
BIO	443	Applied Molecular Genetics and Genomics	Nature and function of the gene; emphasizes the molecular genetic disease states; molecular biology; regulation of gene expression; genomics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: LSC 347 with C or better; CHM 233 or 331 with C or better; CHM 237 or 335 with C or better

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BIO	446	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Prerequisite(s): ASM 301 or BIO 340 or LSC 347 or MBB 347 with C or better; Credit is allowed for only ASM 446 or ASM 546 or BIO 446 or BIO 546
BIO	450	Advanced Developmental Biology	Current concepts and experimental methods involving differentiation and biosynthetic activities of cells and organisms, with examples from microorganisms, plants, and animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 351 with C or better
BIO	451	Cell Biotechnology Laboratory	Mammalian cell culture techniques, including mouse embryonic stem cells, the use of bioreactors, cell fractionation, and digital video imaging.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 353 (or MBB 245) with C or better
BIO	453	Animal Histology	Microscopic study of animal tissues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 201 or MIC 220 or BIO 353 or BIO 360 with C or better
BIO	453	Animal Histology	Microscopic study of animal tissues.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 201 or MIC 220 or BIO 353 or BIO 360 with C or better
BIO	455	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Credit is allowed for only BMI 465 or BIO 455
BIO	456	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better; Credit is allowed for only BMI 466 or BIO 456
BIO	461	Comparative Animal Physiology	A comparative approach to understanding the function of animal physiological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 360 with C or better
BIO	462	Endocrine Physiology	Mechanisms of action of hormones; endocrine control of homeostasis, growth, stress responses, and reproduction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 360 with C or better
BIO	464	Photobiology	Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 464 or PLB 440
BIO	465	Neurophysiology	Detailed treatment of cellular and organismal neurophysiology and nervous system function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 360 with C or better
BIO	467	Neurobiology	Introduces major areas of neurobiology, from fundamental cellular and molecular processes through systems neuroscience and neural bases of behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 360 with C or better
BIO	469	Computational Neuroscience: Case Studies in Neuroethology	Introduces the use of computational methods for understanding neural function at the cellular, circuit, and systems levels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 360 with C or better
BIO	471	Ornithology	Biology of birds.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and 182 (or BIO 187) OR BIO 281 and 282 with C or better
BIO	471	Ornithology	Biology of birds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and 182 (or BIO 187) OR BIO 281 and 282 with C or better
BIO	471	Ornithology	Biology of birds.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and 182 (or BIO 187) OR BIO 281 and 282 with C or better
BIO	472	Mammalogy	Classification, structure, habits, ecology, and distribution of mammals, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	473	Ichthyology	Systematics and biology of recent and extinct fishes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better

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BIO	474	Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO		Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO		Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	480	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO		Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	482	Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: BIO 480 with C or better
BIO		Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 480 with C or better
BIO	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	489	School of Life Sciences Undergraduate Research Fellow	While performing undergraduate research at ASU, students gain exposure to contemporary issues in research excellence, mentoring skills, and professional development. Goals include: enriching individual lab research experiences of each student by bringing them together in a peer-community environment; introducing students to the resources they have at their disposal (e.g., on campus, online) to facilitate research productivity and career planning; rigorously evaluating their research processes and products, in light of their eventual professional plans.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): School of Life Sciences majors; 3.50 GPA
BIO	490	Surgical Field Placement	Advanced field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 390 with C or better
BIO	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
BIO	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
BIO		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
BIO	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
BIO		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
BIO		Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		Pre-requisite: Junior or senior standing
BIO	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Junior or Senior standing; Credit is allowed for only BIO, MIC, MBB, HPS or PLB 496
BIO	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
BIO	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		

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BIO	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
BIO	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	502	Transmission Electron Microscopy	Theory, use, and methods of preparing biological materials for transmission electron microscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Pre/Co-requisites: BIO 504
BIO	503	Bioimaging Lab	Provides a fundamental understanding of light-based microscopy through the training and use of instruments contained within the SOLS Keck Bioimaging laboratory. Examines the use of bright field, contrast, epi-fluorescent, total internal reflective fluorescence (TIRF), confocal, multiphoton and atomic force microscopy and how they are applied to various research applications. Additional focus given toward image ethics, analysis, and presentation using programs such as Adobe Photoshop and ImageJ. During the second half of the semester, students propose and develop an experimental project, based on their graduate research, in which they collect data, do analysis, and prepare results for a final project presentation.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 504, MCB 504, or BIO 598 Special Topic: Bioimaging Current Techniques; Credit is allowed for only BIO or MCB 503
BIO	504	Bioimaging	Lecture survey of modern techniques for imaging tissues, cells, and macromolecules, including light microscopy (e.g. video, fluorescence, confocal, multiphoton, single molecule), electron microscopy (e.g. transmission, scanning, cryogenic, tomographic) and ancillary techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO or MCB 504
BIO	506	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6		Pre-requisites: Graduate student; Credit is allowed for only ASM, BIO or MCB 506
BIO	515	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 515 or GLG 547 or HSD 515 or PAF 547 or SOS 516
BIO	516	Foundations of Bioethics	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	517	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
BIO	518	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 518 or HPS or HST 516

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BIO	519	Physiological Plant Ecology	Physiological and morphological responses and adaptations of plants to their environment, emphasizing mechanisms that influence carbon and water balance, growth, and population distributions	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 519, PLB 419 or PLB 519
BIO	521	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 421 or BIO 521 or SOS 421 or SOS 521
BIO	522	Populations: Evolutionary Ecology	Principles of population biology and community ecology within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	527	Environmental Ethics and Policy Goals	Advanced seminar in applied environmental ethics, focusing on the most influential and policy-relevant approaches in the field of environmental ethics. Core topics include the historical and philosophical foundations of alternative understandings of environmental responsibility; the debate over utility and preservation in environmental policy argument; and the interplay of ethical principles, scientific knowledge and societal priorities in environmental decision making. Consideration of the ethical and value dimensions of biodiversity conservation, wilderness protection, environmental valuation, environmental activism, climate change and sustainability, among other challenges.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BIO 527 or SOS 527 or BIO 591 (Environ Ethics & Policy Goals)
BIO	528	Human Impacts on Ecosystem Functioning	Explores our current understanding of how humans are impacting the functioning of ecosystems and how changes in ecosystems would affect provisioning of ecosystem services and ultimately human well-being. The two primary drivers of ecosystem change are growth of the human population and increased consumption per capita. These drivers affect the Earth's cycles of carbon, nitrogen and water, as well as regional and global-scale changes in biodiversity and climate. Includes an in-depth discussion of scenarios for the next 50 and 100 years, which articulate costs and benefits of alternative development pathways in terms of climate change, food production, clean water and biodiversity. Scenarios of change in biodiversity lead to the topic of the consequences of biodiversity change for the functioning of ecosystems from the point of view of their productivity and stability. Human activities have disrupted several biogeochemical cycles including nitrogen and carbon cycles.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only BIO 429, BIO 528, SOS 429, SOS 528, or SOS 494/598 (Human Impacts on Ecosystem Functioning), or BIO 494/598 (Human Impacts on Ecosystem Functioning)
BIO	530	Scientific Teaching	Guides graduate students to better understand issues related to undergraduate learning in science courses, and prepares students to become more effective teachers. Topics focus on emerging research that supports active and student-centered learning activities as well as methods that include the 5Es, concept-mapping, and "backward" design. Students reflect on their own teaching philosophy, and begin building an ePortfolio documenting and validating their ability to teach effectively.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 530 or 591 (Scientific Teaching)
BIO	531	Advanced Scientific Teaching	Further develops the teaching abilities of graduate students by applying knowledge into the more advanced teaching activities including large class sizes, diverse student populations, online delivery, and technology-integrated teaching. Students have more in-depth practice fully developing lesson plans, assessments and other teaching activities based on the concepts of evidence-based teaching.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 531 or BIO 594 (Advanced Scientific Teaching)
BIO	532	Recent Papers in Discipline-Based Education Research	Discipline-based education research is a newly emerging scholarly field that combines the knowledge of teaching and learning with the deep knowledge of discipline-specific science content. Currently, discipline-based education research is being used to transform the way we teach undergraduate science courses. Readings in recent papers in the field of discipline-based education research, spanning the disciplines of physics, chemistry, geosciences and biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	537	Comparative Biomechanics and Motor Control	Guides students to critically evaluate how the physical and mechanical properties of organisms and their environment affect biological tissues, structures, and motor control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Credit is allowed for only BIO 437, 537, KIN 437, 537, KIN 494 (Comparative Biomechanics and Motor Control) or 598 (Comparative Biomechanics and Motor Control)
BIO	543	Molecular Genetics	Nature and function of the gene; emphasizes the molecular basis of inheritance and gene expression in prokaryotes and eucaryotes. Knowledge of general genetics recommended before registering for this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BIO	545	Populations: Evolutionary Genetics	Mathematical models in the description and analysis of the genetics of populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	546	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 446, 546, BIO 446 or 546
BIO	549	Phylogenetic Biology and Analysis	Basic theory and general concepts of phylogenetic inference as well as practical, hands-on experience with many of the commonly used methods for inferring and interpreting phylogenetic trees.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	552	Developmental Genetics	Genetic approaches to the analysis of development during the life cycle of eukaryotic organisms, and the role of genes in the unfolding of the differentiated phenotype.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	560	Ecological Modeling	Mathematical modeling of animal populations, food-web structural and ecological processes in space and time. May use modeling tools on computer clusters.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ABS, BIO 560 or MAT 561
BIO	564	Cellular Physiology and Signaling	Emphasizes the molecular basis for cell structure, function and intercellular signaling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	568	Stress and the Brain	Covers the fundamentals of stress and brain interactions. Presents a foundation from a historical perspective, then the basics of an organism's stress response, including the activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis. The stress response is highly conserved and allows organisms to respond and adapt to their environment. A highly effective and robust stress response facilitates adaptation and behavioral flexibility. However, a maladaptive stress response can produce detrimental outcomes. The ultimate goal is to understand the dynamic and reciprocal processes by which the stress response and brain interact to produce behavioral flexibility and resilience or detrimental outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	570	Fundamentals of CAS Science	Many phenomena of critical relevance to human society are dynamic systems that change over individual and evolutionary time scales, and are highly interactive, both within and between systems. That is, they are complex adaptive systems (CAS), and thus share isomorphic properties like near-decomposability, hierarchical organization, scale-free networks, self-organized criticality, and emergence. Fundamentals of CAS science explores the diverse, interdisciplinary applications of a complex adaptive systems across the social, behavioral, and life sciences.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM, BIO, or SOS 570
BIO	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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BIO	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	600	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	610	Introduction to Responsible Conduct of Research (RCR) in Life Sciences	Introduces ethical and regulatory issues in the nine core areas of responsible conduct of research. Discusses real and hypothetical cases that tie broad ethical considerations to current concern of scientists.	N	REC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	611	Current Topics in Responsible Conduct of Research (RCR) in Life Sciences	Explores a single topic in the responsible conduct of research in depth. Topic changes depending on current issues in responsible conduct of research as well as the interests of the instructor and students. Possible topics include: responsible authorship; conflicts of interest; human subjects research; and misconduct, data management, and academic integrity.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	614	Biometry	Fundamental concepts of statistics and how to apply a range of standard statistical tools to the analysis of biological data. Uses the software applications SPSS and R to carry out these tests, and how to identify the particular situations in which each test is appropriate. Topics include: basic probability, descriptive statistics, estimation, hypothesis testing, t-tests, analysis of variance, regression, correlation, chi-square analysis, randomization tests, and nonparametric statistics	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	615	Biology and Society Lab	This course brings together graduate students, postdocs, and faculty members in biology and society. Sessions include panel discussions of biology and society topics from multiple perspectives, student-led discussions of important literature, practice presentations of papers for national meetings, discussion of dissertation and thesis ideas, and other activities that help to forge an active intellectual lab group.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	620	Research Prospectus Writing	Workshop-style course where students develop and peer review graduate-level project prospectuses, such as those for NSF grant proposals, journal articles, theses, and dissertations. Appropriate for graduate students in Biology and Society, History and Philosophy of Science, the life sciences, and related programs.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking). Credit is allowed for only BIO or HPS 620
BIO	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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BIO	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
BIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
BIS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1-6		Prerequisite(s): Barrett Honors student
BIS	300	Theories and Applications of Organizational Studies	Critical analysis and application of organizational theory and conceptual perspectives to identify and solve problems, emphasizing personal and organizational application.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or SB	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum sophomore standing
BIS	301	Foundations of Interdisciplinary Studies	Introduces concepts and methods of interdisciplinary study by critically examining anticipated 21st-century workplace and civic trends.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): Interdisciplinary Studies major; minimum 2.00 GPA; ENG 102 or 105 or 108 with C or better; activation of BIS eligibility student group by a BIS advisor; one course meeting General Studies MA requirement
BIS	302	Interdisciplinary Inquiry	Explores interdisciplinarity and integration as applied to various approaches of human inquiry.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): Interdisciplinary Studies major; minimum 2.00 GPA; BIS 301 with C or better; ENG 102 or 105 or 108 with C or better; one course meeting General Studies MA requirement
BIS	340	Organizational Skills	Develops and enhances skills needed in effective organizations such as communication and the use of technology.	Y	LEC	Y	GNA	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): minimum junior standing or minimum 56 hours
BIS	343	Social Processes in Organizations	Examines the interdisciplinary nature of social processes and human interactions across a number of different organizational contexts.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	L or SB	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum junior standing or minimum 56 hours
BIS	345	Organizational Ethics	Explores and considers normative and applied ethics within a variety of organizations.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum junior standing or minimum 56 hours

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BIS	350	Diversity and Organizations	Critical interdisciplinary analysis of individual, cultural, and organizational diversity.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L & C	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 56 hours. Credit is allowed for only BIS 350 or OGL 350
BIS	353	Interdisciplinary Leadership	Offers interdisciplinary perspectives on the theory and practice of leadership in a range of organizational environments	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	SB	Prerequisite(s): minimum junior standing
BIS	355	Peace Corps Seminar	The Peace Corps: its mission, history, concerns and application process.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): minimum 45 hours
BIS	357	Assessment in Organizations	Considers the role and function of assessment in effective organizations. Provides the knowledge and tools required to identify, collect and analyze information to assess organizations.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): MAT 117 (or any course with General Studies MA designation); minimum junior standing or minimum 56 hours
BIS	360	Organizational Contexts	Explores how organizations function by analyzing in depth a specific organizational context like health care, family, education, government, community, religion or the economy.	Y	LEC	Y	GNA	College of Letters & Sciences	College of Letters and Sciences	3	SB	Prerequisite(s): minimum junior standing or minimum 56 hours
BIS	370	Dimensions of Liberal Studies	Critical analysis and application of concepts of liberal studies and its modes of inquiry. Prerequisite: BLS student; sophomore status; completion of first-year composition.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Pre-requisites: BLS student; Sophomore status; ENG 102, 105 or 108 with C or better
BIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
BIS	401	Applied Interdisciplinary Studies	Applies interdisciplinary problem-solving skills in internships, service-learning, or research; may involve individual or group projects combining both concentrations.	N	RSC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	402	Senior Seminar	Capstone course helps integrate classroom and experiential learning. Students choose among course topics that address their interests.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): Interdisciplinary Studies major; minimum 2.0 GPA; BIS 302 with C or better
BIS	470	Liberal Studies Seminar	Advanced analysis and application of theories and methods of human and social inquiry.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Pre-requisites: BLS student; BIS 370 with C or better; Senior status; ENG 102, 105 or 108 with C or better
BIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		
BIS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	OP4	College of Letters & Sciences	College of Letters and Sciences	1-6		Prerequisite(s): Barrett Honors student
BIS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6	L	Prerequisite(s): Barrett Honors student
BIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
BIS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-6		Prerequisite(s): Barrett Honors student
BIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-7		
BIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		
BLE	220	Foundations of Structured English Immersion	Examines current educational practices and historical legal issues. Prepares teacher candidates with a provisional Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		

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BLE	221	Theories for Acquiring and Learning Languages	Languages are tools people use and learn to use for a variety of purposes. While nearly all people naturally acquire at least one language in their lifetime, the construct of bilingualism or multilingualism can occur as either an elective or a forced process. The context or the decision that leads to second or multiple language learning can have profound effects on the way and the extent to which those languages are learned. Examines the variables affecting both language acquisition and language learning as well as some methods to better facilitate these processes.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
BLE	294	Special Topics		Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		
BLE	322	Reading Methods in BLE/ESL Settings	Instructional/assessment strategies, including systematic, research-based phonics, vocabulary, comprehension, spelling, writing, phonemic writing in Spanish/English.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
BLE	324	Social Studies for Diverse Language Classrooms	Social studies education standards, curriculum, and instructional strategies for English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
BLE	335	Language Diversity in Classrooms	Issues in sociolinguistics and language variation in schools with a focus on classroom interaction, instruction, curriculum, assessment, and language policy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
BLE	396	Clinical Experience I	Develops knowledge and skills for effective lesson planning. Introduces the TAP instructional rubric, the college professionalism rubric, backwards design of a direct instruction lesson plan, and strategies for co-teaching. Provides opportunities for students to engage as a teacher and learner in a pre-K-12 classroom setting. Emphasizes focused observation; co-planning with a placement teacher; and co-teaching lessons to a whole group, small group, and individual student.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Pre-requisites: BLE 220; Admission to Professional Teacher Preparation Program
BLE	397	Clinical Experience II	Develops knowledge and skills for effective classroom management, establishing a positive classroom environment, and effective lesson delivery. Continues use of the TAP instructional rubric, the college professionalism rubric, and strategies for co-teaching. Provides opportunities for students to engage as a teacher and learner in a pre-K-12 classroom setting. Emphasizes focused observation; co-planning with a placement teacher; and co-teaching lessons to a whole group, small group, and individual student.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Pre-requisites: BLE 396; Admission to Professional Teacher Preparation Program
BLE	400	Principles of Language Minority Education	Overview of philosophical and theoretical foundations of bilingual education and ESL models of instruction. Other topics include significant legislative and judicial measures.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	407	SEI for Secondary Students	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the 7-12 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
BLE	408	SEI for Linguistically Diverse Learners	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the K-8 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
BLE	411	Science Curriculum, Instruction and Assessment in BLE/ESL Settings	Methods, management strategies, and assessment procedures for teaching science to BLE/ESL students in elementary schools.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	412	Mathematics Curriculum, Instruction and Assessment in BLE/ESL Settings	Teaching, management, and assessment of mathematics in K-8 BLE/ESL settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	413	Language Arts in BLE/ESL Settings	Literacy and language arts instruction; assessment of reading and writing; transition literacy skills, particularly critical reading of content.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	478	Student Teaching in Diverse Language Classrooms	Student teaching in diverse language classrooms. Focuses on use of English language learning and bilingual strategies; integrates all previous course work. Synthesized experience in curriculum instruction and classroom management in a BLE/ESL setting.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-15		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	481	Reading Practicum	Applies concepts from BLE 414. Supervised school-based experiences in teaching reading to BLE/ESL students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Admission to Professional Teacher Preparation Program

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BLE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
BLE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
BLE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
BLE	496	Field Experience III	Applies course content in a bilingual/ESL school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Pre-requisites: Admission to Professional Teacher Preparation Program
BLE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-7		
BLE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
BLE	511	Introduction to Language Minority Education	Historical, philosophical, theoretical, and pedagogical foundations of language minority education in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	515	Instructional Methods for Bilingual Students	Introduces general dual language teaching approaches. Focuses on the effective teaching of limited English proficient populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	520	ESL for Children	Examines approaches to second-language development for children congruent with recent research in second-language acquisition in children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	522	Literacy/Billiteracy Development	Acquaints teachers with first- and second-language literacy research, practice, and assessment in elementary school settings (Spanish-English emphasis)	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	527	SEI for Middle and Secondary Schools	Prepares middle and secondary teachers and administrators in the areas required for Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BLE	529	Language Assessment and Evaluation of ESL/BLE Students	Assessment and evaluation of linguistic minorities; test theory, score interpretation; culturally responsive assessment; assessment of language and school achievement.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BLE	533	Literacy in Secondary BLE/ESL Settings	Examines first- and second-language literacy research, practice, and assessment across content areas in secondary school settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	535	Sociolinguistic Issues in Bilingual Education	Surveys major theoretical issues (e.g., language situations, communicative competence, language attitudes) interrelating language, social processes, and bilingual education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	537	Language Structure Acquisition	Introduces linguistics and language acquisition. Grammatical theory; language use in educational contexts; first, second, and simultaneous language acquisition.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Credit is allowed for only BLE 537 or LIN 510
BLE	541	Nature of Bilingualism/Second-Language Acquisition	Bilingual and second-language acquisition, with emphasis on children and adolescents. Stresses cognitive, social, and cultural aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BLE	561	Parent Involvement in Language Minority Education Programs	Examines issues, approaches, and strategies for improving parental and community involvement in the schooling of language minority children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	597	Capstone	Reflective, experience-based integration of theory and practice; professional development for individuals working with English language learners.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): MA English as a Second Language major
BLE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BLE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BMD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	501	Introduction to Biomedical Informatics	Overview of the field of biomedical informatics for use of computers and information in healthcare and the biomedical sciences.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate. Credit is allowed for only BMD 501 or BMI 501
BMD	502	Foundations of Biomedical Informatics Methods I	First semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate. Credit is allowed for only BMD 502 or BMI 502
BMD	507	Introduction to Digital Image Processing and Analysis	Core course with four sections for students seeking to concentrate in biomedical imaging informatics. The first section analyzes the concepts and terms of image processing and analysis. The second section evaluates key algorithms in image processing (e.g., image filtering, Fourier transform, image restoration). The third section examines advanced image analysis methods (e.g., image segmentation, mathematical morphology, image topology, shapes and boundaries, color processing, image coding and compression, wavelet, and special effects). The fourth section develops the practical applications of image processing and analysis in medicine and biology.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BMD 507 or BMI 507
BMD	510	Current Perspectives in Biomedical Diagnostics	Seminar course using external speakers who review the current state of the biomedical diagnostics industry in terms of technology, regulation or legal issues.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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BMD	511	Health Economics, Policy, and Payment Models	Economics provides a framework to understand and predict human decision making under scarcity, uncertainty and imperfect information. Examines concepts central to health care economics and their application to important decisions made by patients, families, practitioners, administrators and policy makers. Uses an individual family's scenario through a progressive case study to evaluate how incentives and information affect the health and health care of each family member. Each meeting integrates basic economic principles, existing facts and knowledge from economic research, and individual perspectives and experience regarding how these concepts apply to health care policy.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate. Credit is allowed for only BMD 511 or HCD 511
BMD	550	Translational Bioinformatics	Provides an introduction to bioinformatics methods and applications used in the field of translational medical research. Topics include bioinformatics data acquisition and management, analysis methodologies, and applications.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BMD 550 or BMI 550
BMD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Diagnostics MS student
BMD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Diagnostics MS student
BMD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	Biomedical Informatics Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	617	Genetics and the Law	Provides background on genetics and recent genetic advances; addresses the legal consequences and issues associated with such advances.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	2-3		Prerequisite(s): College of Law major or MS in Biomedical Diagnostics major. Credit is allowed for only BMD 617 or LAW 617
BMD	667	Regulation of Medical Diagnostics	Examines the regulation of drugs, medical devices, and biologics (e.g. vaccines) by the Food and Drug Administration.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate
BMD	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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BMD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	100	Introduction to Biomedical Engineering	Introduces engineering design methods, experimental practices, data gathering, presentation and statistical analysis. Lecture/labs focus on device design and application, including hands-on experience.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Pre-requisite: Biomedical Engineering major
BME	101	Introduction to Biomedical Engineering I: Belief Systems in Engineering	Biomedical engineering is a highly interdisciplinary field with a mixture of basic science, design, and application. Reviews the process of building a knowledge base, including how we form belief systems (both founded and unfounded). Understands how the scientific process works to generate "true" knowledge of the world and the dangers of denying fact. Teaches how BME uses science as a belief system to generate innovations that improve our quality of life.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student
BME	102	Introduction to Biomedical Engineering II	Guides the student through the transition from how knowledge is generated by the scientific process/method to how the bioengineer uses the engineering method, design tools, and interdisciplinary skill sets to translate relevant scientific and related knowledge to create new healthcare technological solutions, i.e., medical device solutions, to address unmet biomedical and health care needs for individuals, as well as for society as a whole.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Corequisite: BME 101
BME	103	Introduction to Biomedical Engineering III: Product Design & Development	Hands-on training in and implementation of selected product design skills necessary to successfully conduct engineering medical device product design using best industry practices. Runs concurrently with BME 101 and BME 102, which introduce the underlying theory that connects the principles of the scientific method with engineering design method in the practice of biomedical product research and development (R&D). Provides the beginning biomedical engineer with a hands-on design experience that connects product design theory with product development best practices via student exposure to the core elements of the engineering design process--specifically prototype conceptualization and realization.	N	LAB	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering major; Pre/Co-requisite: BME 101; Credit is allowed for only BME 103 or 194 (Introduction to BME III)
BME	111	Engineering Perspectives on Biological Systems	Biological concepts for the emerging engineer. Introduces biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Pre-requisite: Engineering student

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BME	112	Engineering Perspectives on Biological Systems Laboratory	Introduces biological concepts for the emerging engineer in a lab setting: biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Engineering student
BME	121	Programming in Biomedical Engineering	Introduces computer programming in the context of scientific and engineering problem solving. Topics include loops, functions, pointers, data structures, and algorithms in the context of a biomedical problem. Culminates in an introduction to object-oriented programming, with a look at modern wireless (iPad and iPhone) devices for biomedical applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite: Biomedical Engineering student; Pre/Co-requisite: MAT 265 or MAT 270
BME	182	Biomedical Engineering Product Design and Development I	Continuation of hands-on training and implementation of medical device product design and development skills; FDA-regulated U.S. and global medical device healthcare markets and opportunities, business development in regulated environments, medical product and project management planning, exempt and Class I medical devices, medical product component and device levels, identification and selection of customer needs, translation of customer needs, product specification development, virtual and physical prototypes, prototype product specification verification, product design and development process documentation, FDA regulatory best-industry practices.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering BSE major
BME	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	200	Conservation Principles in Biomedical Engineering	Applies bioengineering analysis and problem solving of mass, energy, and charge balances to medical and biological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): BIO 181, BIO 188 or BME 111 with C or better; CHM 114 (or CHM 116) with C or better; PHY 121 with C or better; Pre/Co-requisite: MAT 275
BME	201	Anatomy & Physiology: Cell & Tissue Physiology	Introduces the major structural and functional characteristics of individual cells and tissues in the mammalian body. Physiological principles in the context of biomedical problem solving. Describes the functions of basic cell and tissue systems in the body, describes how they interact in healthy and diseased tissues, and identifies how simple biomedical devices interface with these systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical engineering student; Pre/Co-requisites: BIO 181 with C or better if completed; CHM 114, 116 or 118 with C or better if completed
BME	202	Anatomy & Physiology: Organs & Systems	Introduces the fundamental structural and functional characteristics of the major organs and systems in the mammalian body. Physiological principles in the context of biomedical problem solving. Describes the functions of fundamental physiology of organs comprised of the five tissue types of the body, describes how they interact in healthy and diseased tissues, and identifies how simple biomedical devices interface with these systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 201 with C or better if completed; Credit is allowed for only BME 202 or 294 (A&P: Tissues)
BME	203	Anatomy & Physiology: Lab	Laboratory introduction to the fundamental structural and functional characteristics of the major physiological systems in the mammalian body. Physiological principles in the context of biomedical problem solving in a lab. Describes how these systems interact in healthy and diseased biological states, and identifies how simple biomedical devices interface with these systems.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisites: BME 201; BME 202; CHM 114, 116 or 118 with C or better if completed; Credit is allowed for only BME 203 or 294 (A&P: Systems)
BME	211	MATLAB & Mathcad in Biomedical Engineering	Introduces the basics of MATLAB and Mathcad programming in the context of biomedical engineering conservation of mass problem solving.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; CHM 114, 116 or 118 with C or better; BIO 181 with C or better; Pre/Co-requisites: PHY 131 or 151 with C or better if completed; MAT 274 or 275 with C or better if completed

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BME	212	Conservation Principles	Basics of conservation principles in complex biological applications. Subsystem approaches to render a simplified approach to solving complex system problems with known and unknown variables. Application of MATLAB and Mathcad for solving conservation problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 211 (with C or better if completed)
BME	213	Biomedical and Bioengineering Ethics	Explores ethical issues in biomedical and medical sciences and engineering practices and includes professional ethics, medical ethics, engineering ethics and the Biomedical Engineering Society (BMES) Code of Ethics, the ethics of human and animal tissue and subjects use in biomedical science and engineering research, responsible conduct for research, ethical issues in the design and manufacture of medical devices for developing and developed countries, and the impact of biomedical engineering solutions on society and the environment.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student
BME	214	FDA Regulatory Processes and Technical Communications	Develops writing skills to factually and effectively communicate all facets of biomedical product design and development activities that are required to successfully conceive, develop, and launch a medical device into the market place using the FDA quality systems best practices that are utilized by the health care technology industry.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering major; Pre- or corequisite(s): ENG 102, 105, or 108 with C or better if completed
BME	235	Physiology for Engineers	Physiology of the nervous, muscular, cardiovascular, endocrine, renal, and respiratory systems. Emphasizes use of quantitative methods in understanding physiological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4		Pre-requisites: Biomedical Engineering major; BIO 181, BIO 188 or BME 111 with C or better, CHM 114 or 116 with C or better; Pre/Co-requisites: PHY 131 and 132
BME	282	Biomedical Engineering Product Design and Development II	Hands-on training and implementation of product design skills that combine virtual analytical model prototype development with component and sub-assembly integration to develop both virtual and physical prototypes of a medical device product at the product architecture level and verify selected product architecture specifications from design input and earlier design process verification steps.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering major; BME 182 with C or better
BME	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		Prerequisite(s): Barrett Honors student
BME	300	Bioengineering Product Design	The fundamentals of financial and organizational structure of business and how it influences bioengineering analysis, design, and decision making; biomedical ethics and device and drug regulation; and fundamentals of business and technical management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Pre-requisites: Biomedical Engineering Junior, Senior or Post-Bac; BME 100 (or BME 101 and 102 and 103 OR BME 194 Introduction to BME I and II and III) with C or better; ENG 102, 105 or 108 with C or better
BME	301	Numerical Methods in Biomedical Engineering	Applications of numerical methods to biomedical engineering problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	2		Pre-requisites: Biomedical Engineering student; MAT 274 (or MAT 275) with C or better
BME	302	Biomaterials/Physicochemical Properties	Introduces the science and engineering of biomaterials; addresses material properties of natural and artificial biomaterials.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; PHY 121 (or PHY 150) with C or better; Pre/Co-requisite: BME 203 (with C or better if completed)
BME	303	Biological Response to Implanted Biomaterials	How biomaterials interact with surrounding tissue; biocompatibility. Also discusses specific clinical problems that are treated using implants.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 302 (with C or better if completed)
BME	311	Basic Concepts of Signals and Systems in Biomedical Engineering	Applies principles of calculus and ordinary differential equations to analysis and computer processing of biosignals and linear modeling of biosystems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; EEE 202 with C or better; Pre/Co-requisite: MAT 342 or MAT 343 (with C or better if completed)

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BME	312	Transforms for Biomedical Engineering Applications	Introduces properties of discrete and continuous transforms for the purpose of analyzing signals and applying the transforms to solve biomedical engineering problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student. Pre/Co-requisite: BME 311 (with C or better if completed)
BME	313	Preclinical and Clinical Trials in Biomedical Engineering	Explores the rationale and the tools required to evaluate the safety and efficacy of medical devices designed and developed using best industry practices for human consumption. Introduces the design and conduct of pre-clinical trials (in vitro, ex vivo or in vivo systems other than humans), as well as clinical trials that are required for FDA approval to market medical devices in the U.S. Covers the following topics: an overview of medical device development; FDA regulatory affairs and practices; ethics concerns in animal and human trials; experimental design and biostatistics for medical device preclinical and clinical studies; preclinical (IACUC) and clinical trial (IRB) approval; informed consent best practices; medical device preclinical and clinical trial management; recruitment of clinical study participants and populations; ethics of preclinical and clinical trials; and alternatives to animal and human trials.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 213 or BME 294 (Biomedical and Bioengineering Ethics) with a C or better
BME	318	Biomaterials	Material properties of natural and artificial biomaterials. Tissue and blood biocompatibility. Uses of materials to replace body parts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4		Pre-requisites: Biomedical Engineering BSE student; CHM 114, 116, or BIO 181 (or BME 111 or BIO 188) with C or better; MAT 274 (or 275) with C or better
BME	321	Probability for Biomedical Engineering	Introduces probability distributions in the context of basic biological phenomena and biomedical engineering.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: MAT 342 or MAT 343 (with C or better if completed)
BME	322	Statistics for Biomedical Engineering	Introduces parametric and nonparametric statistics tests in the context of common biomedical experiments.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering major; MAT 274 (or 275) with C or better
BME	331	Transport Phenomena for Biomedical Engineering	Transport phenomena with emphasis on momentum, energy, and mass transport in living systems, medical devices, and other therapeutic/diagnostic applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Pre-requisites: Biomedical Engineering student; BME 200, 212 or 294 (Conservation Principles) with C or better; MAT 274 (or 275) with C or better; PHY 121 with C or better
BME	341	Engineering Design Method	Covers the engineering design method, a collection of valuable design tools, and the application of the method and tools to address current problems in the field of biomedical engineering.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 100, 101, 103 or BME 194 (Introduction to Biomedical Engineering) with C or better; ENG 102, 105 or 108 with C or better
BME	342	3D Spatial Modeling	3D spatial modeling tools applied in the context of biomedical engineering to create computational models of idealized and anatomical biological structures (e.g., blood vessels).	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 100, 101, 103 or BME 194 (Introduction to Biomedical Engineering) with C or better; BME 203 or 294 (Cell Tissue Physiology) or 294 (A&P: Tissues) or 294 (A&P: Systems) with C or better
BME	350	Signals and Systems for Bioengineers	Applies principles of calculus and ordinary differential equations to analysis and computer processing of biosignals and linear modeling of biosystems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Biomedical Engineering major. Pre- or corequisite(s): MAT 274 (or MAT 275) with C or better

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BME	351	Circuits for Biomedical Engineering Instrumentation	Circuits is a specialized skill that is developed for students interested in building devices which serve as electrical interfaces to the body. These are interfaces which have very specialized requirements. Students who have been familiarized with the basics of electrical circuit design as well as physiology learn some of the issues that arise and solutions that have been generated to provide for these interfaces.	N	LEL	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 312 or BME 394 (Transforms For BME Apps) with C or better
BME	352	Filtering of Deterministic and Stochastic Signals	Introduces properties of deterministic and stochastic signals and their use in biomedical signal processing.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 312 or BME 394 (Transforms For BME Apps) with C or better if completed
BME	353	Microcomputing & Embedded Systems for Biomedical Engineering	Introduces the use of microcontrollers to analyze biological signals.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 352 (with C or better if completed)
BME	361	Design of Experiments and Clinical Trials	Explores advanced techniques in trial and experimental design in biomedical engineering, including testing new products or drugs, or even generation of new methods and treatments, designed to provide statistical confirmation at the end of trials. Design of trials, experiments, and measures, so that efficacy can be properly evaluated using statistical tests. Although this course makes reference to regulatory procedures, emphasizes the proper application of statistical techniques in the design of experiments.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; BME 322 or BME 394 (Statistics For BME) with C or better
BME	370	Microcomputer Applications in Biomedical Engineering	Uses microcomputers for real-time data collection, analysis, and control of experiments involving actual and simulated physiological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Biomedical Engineering major; EEE 202 with C or better; BME 350 with C or better
BME	382	Biomedical Engineering Product Design and Development III	Continuation of hands-on training and implementation of medical device product design and development skills; experimental practices, data gathering, presentation, and statistical analysis in regards to demonstration of validation and verification tools and testing, identification and selection of customer needs, translation of customer needs, product specification development, virtual and physical prototypes, prototype product specification verification, product design and development process documentation, FDA regulatory best industry practices.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: BME 282, or BME 213 and 214; credit is allowed for only BME 382 or BME 494 OR 598; Prototyping Dsn to Mkt
BME	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	401	Biomedical Engineering Product Design & Development: Capstone	Introduces global biomedical engineering design factors that affect the selection and implementation of medical device product innovation, design, and development using best industry practices. These include technical, regulatory, economic, legal, business, entrepreneurial, social, and ethical aspects of medical device systems engineering design.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 313, BME 331, BME 341, BME 342, BME 353 and BME 361 with C or better
BME	402	Biomedical Engineering Product Design & Development: Capstone II	Introduces project management and product innovation, design and development processes and their best practices.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 401 (with C or better if completed)
BME	403	Biomedical Engineering Product Design & Development: Capstone III	Introduces conceptual product design and development best practices using three-dimensional modeling and other design tools for the determination of product specifications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	2		Pre-requisite: Biomedical Engineering student; Pre/Co-requisites: BME 401 and 402 (with C or better if completed)
BME	404	Biomedical Engineering Product Design & Development: Capstone IV	Introduces entrepreneurial biomedical product development business practices for successful quality systems premarket submission of a verified detailed medical device design of a capstone project.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 403 or BME 494 (Capstone III) with C or better
BME	405	Biomedical Engineering Product Design & Development: Capstone V	Introduces prototyping of the capstone device and begins experiments of the device prototype.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 404 (with C or better if completed)

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BME	406	Biomedical Engineering Product Design & Development: Capstone VI	Addresses prototype device verification and validation methods to achieve a robust design; the conclusion of the capstone project.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	2		Pre-requisite: Biomedical Engineering student; Pre/Co-requisites: BME 404 and 405 (with C or better if completed)
BME	413	Biomedical Instrumentation	Principles of medical instrumentation. Studies of medical diagnostic instruments and techniques for the measurement of physiologic variables in living systems. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3	L	Pre-requisites: Biomedical Engineering major; BIO 201 and 202 (OR BME 201 and 202 and 203 or BME 235) with C or better; BME 350 with C or better
BME	416	Biomechanics	Mechanical properties of bone, muscle, and soft tissue. Static and dynamic analysis of human movement tasks such as locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Pre-requisites: Bioengineering or Pre-Med Engineering BSE student; BME 318 and MAE 212 with C or better
BME	417	Biomedical Engineering Capstone Design I	Technical, regulatory, economic, legal, social, and ethical aspects of medical device systems engineering design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4	L	Pre-requisite: BME 300, 318, 331 and 370 with C or better; IEE 380 (or BME 322) with C or better
BME	419	Biocontrol Systems	Applies linear and nonlinear control systems techniques to analysis of neuromusculoskeletal, cardiovascular, thermal, and mass transfer systems of the body.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; BME 350 and BME 370 with C or better
BME	421	Biomedical Instrumentation I	Introduces principles of biomedical instrumentation and techniques of physiologic measurement as used in medicine and biology.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 341 and 353 with C or better
BME	422	Biomedical Instrumentation II	Principles of biomedical instrumentation and techniques as used in medicine and biology with an emphasis on medical diagnostic imaging.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering major; Pre- or corequisite(s): BME 421 with C or better if completed
BME	423	Biomedical Instrumentation Laboratory	Lab experience with problems, concepts, and techniques of biomedical instrumentation in static and dynamic environments. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit.	N	LAB	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1	L	Pre-requisite: Biomedical Engineering student; Co-requisite: BME 413
BME	434	Applications of Bioengineering Transport Phenomena	Develops mathematical models of transport phenomena in physiological systems, medical devices, and pharmacokinetic analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; BME 331 with C or better
BME	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	490	Biomedical Engineering Capstone Design II	Individual projects in medical systems or medical device design and development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4		Prerequisite(s): Fulton Engineering undergraduate student; BME 417 with C or better
BME	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		Prerequisite(s): Barrett Honors student
BME	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6	L	Prerequisite(s): Barrett Honors student
BME	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-7		Pre-requisite: Bioengineering or Pre-Med Engineering BS or BSE student

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BME	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	520	Bioelectric Phenomena	Study of the origin, propagation, and interactions of bioelectricity in living things; volume conductor problem, mathematical analysis of bioelectric interactions, and uses in medical diagnostics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	521	Neuromuscular Control Systems	Overview of sensorimotor brain structures. Application of nonlinear, adaptive, optimal, and supervisory control theory to eye-head-hand coordination and locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	522	Biosensor Design and Application	Theory and principles of biosensor design and application in medicine and biology. Principles of measurements with biosensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	524	Fundamentals of Applied Neural Control	Fundamental concepts of electrical stimulation and recording in the nervous system with the goal of functional control restoration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	525	Surgical Techniques	Principles of surgical techniques, standard operative procedures, federal regulations, guidelines, and state-of-the-art methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	2		Pre-requisites: Graduate Engineering students only
BME	526	Introduction to Neural Engineering	Introduces the field of neural engineering. Neural engineering, as with all engineering fields, can be thought of as applied scientific understanding, in this case, applied neuroscience. Covers aspects of neurophysiology, neuroanatomy, neurosurgery, biophysics, electronics and signal processing; integrates these knowledge areas into neural engineering applications. Covers an entire process for conducting research in neural engineering: surgical implantation of electrodes, data acquisition, processing neural signals, decoding neural data, and controlling prosthetic devices. Provides foundation for working with neural engineering applications and conducting research in neural engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BME 526 or BME 598 (Intro to Neural Engineering)
BME	533	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only BME 533 or CHE 533 or MAE 533
BME	544	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	556	Human Systems Neuroscience	Systems-level neuroscience course focusing on human diseases. Classes involve lectures and/or other activities such as observations of clinical procedures and tours of clinical facilities (e.g., the neurosurgical suite, imaging facilities).	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4		Pre-requisite: Neuroscience PhD major. Credit is allowed for only BIO 598 (Human Sys Neuroscience), BME 556 or NEU 556
BME	561	Clinical Neuroscience	Fundamental mechanisms that underlie diseases and disorders of the central and peripheral nervous systems. Introduces assessment and pharmacological, surgical and rehabilitative management of nervous systems disorders. Prior knowledge of neural systems is helpful. Identifies the mechanisms by which key disease and trauma states impact neural systems and how clinicians identify the locus and type of damage based on clinical and imaging criteria.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	566	Medical Imaging Instrumentation	Design and analysis of imaging systems and nuclear devices for medical diagnosis, therapy and research.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BME	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		Pre-requisites: Graduate Bioengineering students only
BME	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	101	Introduction to Bioinformatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Introduces topics in translational bioinformatics, such as sequence alignment, the Human Genome Project, gene expression analysis, genome-wide association studies, next-generation sequencing.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	102	Introduction to Public Health/Imaging Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Second course in a three-semester series focusing on biomedical informatics applications in public health, including population studies and outbreak detection, and medical imaging, including telemedicine.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Pre-requisite: BMI 101 with B or better
BMI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
BMI	201	Introduction to Clinical Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Provides an introduction to biomedical informatics techniques and applications used in clinical environments. Includes searching and organizing free text information, decision analysis techniques and clinical decision support systems, and clinical applications including physician order entry used in electronic medical records. Also covers challenges in clinical informatics, including sociotechnical and cognitive issues in implementation and use.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		

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BMI	211	Modeling Biomedical Decisions	First semester of a three-semester course sequence surveying the methods and theories underlying the field of biomedical informatics. Explores models of medical decision making, including classical decision theory, Bayesian, and cognitive models. Also includes a component discussing evaluation methods in biomedical informatics.	N	PRA	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	221	Knowledge Representation for Biomedical Informatics	Introduces topics in knowledge representation and modeling, including frame-based systems, logic-based systems, rule-based systems, inference, and reasoning. Overview of history and present state of the field.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
BMI	301	Clinical Environments	Designed for medical informatics students who have no significant clinical experience in the U.S. Introduces medical terminology and exposes students to the clinical environments in which health care providers create, manage, and use clinical information. Students attend lectures and spend a significant portion of time examining and reporting on different clinical settings throughout the semester.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	311	Modeling Biomedical Knowledge	Introduces concepts of artificial intelligence and knowledge modeling using medical informatics examples. Historical foundations and motivations of AI in medical applications; problem solving, reasoning, knowledge management, and planning as applied to medical informatics problems.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	312	Modeling Biomedical Data	Third semester of a three-semester course surveying the methods and theories underlying the field of biomedical informatics. Explores methods of use in the design and maintenance of biomedical databases, machine learning techniques, information retrieval in biomedicine and other methods specific to bioinformatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	330	Topics in Translational Bioinformatics	Provides an introduction to bioinformatics methods and applications used in the field of translational medicine research. Topics include bioinformatics data acquisition and management, including microarrays, database modeling and integration; analysis methodologies, including statistics and data mining; and applications.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	332	Team Dynamics for Healthcare IT Projects	Teaches the fundamentals of leadership, management, and team dynamics in a project-focused software engineering environment, and with a focus on informatics and healthcare applications. Teaches students about team and group dynamics, recognizing dysfunctional teams, and helping to fostering productive group and leadership skills.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
BMI	461	Advanced Topics in Biomedical Informatics I	Covers current trends and cutting-edge research areas of clinical, public health, and consumer health informatics. Particular emphasis on research that is of relevance to patients, and the healthy public, covering such topics as outbreak detection and the personal health record. Also covers research on the use of technology in medical education, and the ways in which clinical decision support systems are applied in contemporary medical practice.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	462	Advanced Topics In Biomedical Informatics II	Covers current trends and cutting-edge research areas of bioinformatics, imaging informatics, and translational science. Emphasizes informatics approaches to the novel data sources that are supplied by the next generation of methods for affordable gene sequencing, and initiatives underway to accelerate the integration of novel research findings into everyday clinical practice. Includes a series on modeling and simulation, current approaches to computer-aided diagnosis of medical images, ways in which technology can support the discovery of new knowledge, and the application of telemedicine to remotely facilitate clinical care.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	465	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Credit is allowed for only BMI 465 or BIO 455
BMI	466	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better; Credit is allowed for only BMI 466 or BIO 456
BMI	482	Capstone I	First course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of a research project in biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3	L	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BMI	483	Capstone II	Second course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of an applied project in biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3	L	Pre-requisite: BMI 482 with C or better
BMI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		
BMI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-6		
BMI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-6	L	
BMI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
BMI	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-7		
BMI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-3		
BMI	501	Introduction to Biomedical Informatics	Overview of the field of biomedical informatics for use of computers and information in healthcare and the biomedical sciences.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate. Credit is allowed for only BMD 501 or BMI 501
BMI	502	Foundations of Biomedical Informatics Methods I	First semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate. Credit is allowed for only BMD 502 or BMI 502
BMI	504	Introduction to Clinical Environments	Course is divided into three sections. The first section covers medical and health care concepts and terms, and discuss observational techniques. In the second portion, students investigate a variety of different clinical environments and report back to the class on their findings. The final portion summarizes the key points of information technology in these clinical environments.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): graduate BME or BMI major
BMI	505	Foundations of Biomedical Informatics Methods II	Second semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 502 with C or better
BMI	506	Clinical Decision Support	The course will provide an in-depth analysis of computer-based approaches to supporting clinical decision making for providers and patients (as well as healthy individuals, for disease prevention/health maintenance). The history of the field of clinical decision support (CDS) and the spectrum of methodologies will be reviewed. Practical issues involved in successful implementations of CDS will be discussed. The roles of standards and infrastructure will be examined. Current research topics and foci will be explored.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	507	Introduction to Digital Image Processing and Analysis	Core course with four sections for students seeking to concentrate in biomedical imaging informatics. The first section analyzes the concepts and terms of image processing and analysis. The second section evaluates key algorithms in image processing (e.g., image filtering, Fourier transform, image restoration). The third section examines advanced image analysis methods (e.g., image segmentation, mathematical morphology, image topology, shapes and boundaries, color processing, image coding and compression, wavelet, and special effects). The fourth section develops the practical applications of image processing and analysis in medicine and biology.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BMD 507 or BMI 507
BMI	515	Applied Biostatistics in Medicine and Informatics	Comprehensive treatment of the statistical methods used most often to analyze quantitative data collected in medical and biomedical informatics studies, including clinical trials, epidemiologic studies, studies of the accuracy and performance of screening and diagnostic tests, and studies to develop predictive models. Students learn to use SAS statistical software to analyze biomedical data.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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BMI	516	Advanced Biomedical Data Analysis	Acquisition, conversion and organization of biological data into relevant diagnostic, therapeutic, and research information using information extraction and data mining.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 501 with C or better
BMI	520	Modeling Gene Regulatory Networks	Computational and mathematical modeling used to approximate gene regulatory networks as well as signaling pathways and inference of model parameters.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 505 with C or better; BMI 516 with C or better
BMI	540	Problem Solving in Biomedical Informatics	Theory and practice of software engineering principles as they apply to large- and medium-scale clinical systems from bench to bedside.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 501 with C or better
BMI	550	Translational Bioinformatics	Provides an introduction to bioinformatics methods and applications used in the field of translational medical research. Topics include bioinformatics data acquisition and management, analysis methodologies, and applications.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BMD 550 or BMI 550
BMI	555	Statistical Learning for Data Mining	Surveys data analysis methods for massive data sets and provides experience in analysis with computer software.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 515 or IEE 572 or IEE 578; Credit is allowed for only BMI 555 or IEE 520
BMI	560	Teaching in Biomedical Informatics	Student serves as a teaching assistant with a faculty member who is teaching either a required or elective course in the Biomedical Informatics curriculum. Such courses will generally be BMI courses but with the approval of the student's faculty program advisor may include a course that is an approved elective in the BMI program but is offered in another department within the university. The experience provides a significant teaching role, either lecturing or moderating small group sessions or laboratories. Grading class homework assignments and designing/grading examinations will also typically be part of the experience. Assisting other students outside of class and being available during office hours will also generally be part of the student teacher's role. A student may also receive 1 hour of credit for participating substantively in the design of a new course, working closely with a faculty member. Generally in such circumstances the student should then serve as course teaching assistant when it is offered for the first time (separate enrollment in this course).	N	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1		Pre-requisite: Biomedical Informatics PhD student
BMI	570	BMI Symposium	Students attend the BMI Symposium Speaker Series twice a month and the student journal club discussion on alternate weeks. During the journal club weeks, each student leads a discussion on a current topic pertinent to the field of biomedical informatics.	N	SEM	Y	YGB	College of Health Solutions	Biomedical Informatics Program	1		Pre-requisite: BMI Graduate student
BMI	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Pre-requisite: BMI Graduate student
BMI	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Pre-requisite: Biomedical Informatics Masters student
BMI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Informatics MS student
BMI	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Informatics MS student

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BMI	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	Biomedical Informatics Program	1		Prerequisite(s): graduate Biomedical Informatics student
BMI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	Biomedical Informatics Program	1-12		Pre-requisite: Biomedical Informatics Masters student
BMI	601	Fundamentals of Health Informatics	Offers an overview of the field of health informatics. Combines perspectives from medicine and computer science for use of computers and information in health care and the health sciences. Includes an overview of health information literacy and data standards. Covers specific applications and general methodology in health informatics using current topics in the field. Discusses evaluations of health systems.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	602	Programming in a Health Care Domain	Intensive introduction to object-oriented programming concepts focused on the unique challenges such as those related to data volume, complexity, and uncertainty inherent to applications in a health care domain. Also covers the fundamentals of algorithm analysis and data structure design. Stresses a software engineering approach to abstraction for problem decomposition and solution formulation, with object-oriented and reusability concepts introduced early. Emphasizes the use of generic data structures and abstractions from template libraries for reusability, as well as modular design. In addition, also covers basic concepts of algorithms and data structures.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	603	Health Informatics Database Modeling and Applications	Thorough coverage of the foundations of database systems and their specific use and modeling in healthcare and biomedical environments. Students learn through hands-on experience with the modeling and implementation of health-related databases using the relational approach. Topics include an overview of database models and architecture, database design, SQL, XML, and data warehousing as they are applied in clinical domains. Students are encouraged to explore database-related topics of their own, choosing ones that are relevant to a bioinformatics or clinical domain.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	604	Health Information Literacy	Students learn to locate, retrieve, and store information with an emphasis on electronic search, retrieval, and storage. They also learn to assess the validity and quality of information, improve the quality of information, and how to improve the quality of, protect, and effectively communicate health information.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	2		Pre-requisite: Health Informatics MAS student
BMI	605	Health Information Systems and Applications	Explores the use of information systems in different health care settings, analyzing operational and strategic objectives for their deployment. Emphasizes the analysis of the different factors that influence decision making during the process of design and deployment of systems, including human factors, hardware, software, policy, communications, and the successful management of such systems. Also covers guidelines for the design and successful deployment of systems to meet those objectives and includes discussion of architectures, components, and models. Analyzes specific case studies of successfully and unsuccessfully deployed systems.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	606	Health Data Standards	The cost-effective delivery of high quality, safe healthcare requires access to multiple data sources and systems and applications responsible for data acquisition and management, the ability to aggregate, integrate, and analyze data from multiple sources, and the ability to communicate the results of such analyses or the knowledge resulting from those analyses to users in a timely fashion at points where they are needed. A variety of standards are required, at the data and communication level. Reviews the state of these standards, and the multiple entities that have a stake in them, and enables the student to navigate this complex process in selecting, implementing, or extending health systems in a variety of settings.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	1		Pre-requisite: Health Informatics MAS student

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BMI	607	Effective Professional Communications	To be able to work in the field of biomedical informatics or health information technology requires an understanding of not only science and technology but also biomedicine and healthcare. This requires both familiarity with the basic concepts of these fields, as covered in other courses, as well as the ability to present ideas clearly in both written and oral communication. Also requires the ability to work effectively in groups, with shared understanding of group and individual roles, assignments, and responsibilities. Provides experience with oral, written, and group communication tasks, and uses critique and feedback as a method for highlighting issues and areas for improvement.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	2		Pre-requisite: Health Informatics MAS student
BMI	608	Project Management for Interdisciplinary Teams	Introduces students to the health care team and explores tools and techniques for establishing effective interdisciplinary teams in a health care setting, emphasizing collaborative clinical decision-making and patient management. By working in small teams, the course puts into practice these techniques, allowing students to collaborate with other health professionals to solve specific problems, provide services, or develop new understandings. Also covers the concepts, skills, tools, and techniques involved in the management of information system projects, providing an introduction to the established discipline of project management, with a specific focus on how they apply to managing information systems for a biomedical setting.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	609	Capstone	This course assists students in preparing their capstone project, which represents the culmination of their study for the MAS in Health Informatics focusing on development process, technical skills, and communication.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Pre-requisite: Health Informatics MAS student
BMI	610	Clinical Culture and the Health Care Environment	Designed for medical informatics students who have no significant clinical experience in the U.S. Introduces medical terminology and reviews clinical environments in which health care providers create, manage and use clinical information. Students perform observations in a variety of clinical environments.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Health Informatics MAS student
BMI	611	Applied Data Analysis	Students learn what statistical methods are used most widely in the analysis of data from studies of disease risk factors, health interventions, and health care improvements, and what statistical methods should be used to analyze data from various types of studies. They learn how to estimate the number of subjects needed for studies of various designs. They learn to conduct and interpret multiple linear, multiple logistic, and multivariate lifetable analysis. Hands-on experience in the use of statistical software to conduct analysis of health data.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	612	Applied Data Mining	Comprehensive introduction to data mining methods and algorithms used most often to analyze data collected in biomedical informatics studies, including genomics and proteomic disease association studies, clinical trials, clinical image analysis and studies of the accuracy and performance of screening and diagnostic tests. Emphasizes assessing data quality, understanding how to select an overall approach to analysis, and presenting and interpreting the results of data mining analysis. Students learn to use Excel to effectively display data collected in biomedical research studies and Weka software to analyze data using approaches that are used commonly in biomedical studies.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	613	Workflow Analysis and Redesign in Health Systems Engineering	Provides an overview of workflow analysis and process redesign and their use in quality improvement activities, including specification. Uses case examples to highlight key concepts and measurement concepts and covers techniques. Includes the links of systems engineering to fundamentals of decision theory, statistics and optimization. Includes discussion of current successful techniques for systems engineering. System engineering seeks to enable the successful design, implementation, deployment and maintenance of successful systems. Emphasizes gathering and analysis of customer needs for the specification and documentation of required functionality early in the system's lifecycle.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	614	Health Systems Engineering	Focuses on the links of systems engineering to fundamentals of decision theory, statistics, and optimization, and includes discussion of current successful techniques for systems engineering. System Engineering seeks to enable the successful design, implementation, deployment, and maintenance of successful systems. Emphasizes gathering and analysis of customer needs for the specification and documentation of required functionality early in the system's lifecycle.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	2		Prerequisite(s): Health Informatics MAS student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BMI	615	Human Factors Engineering for Biomedical Applications	Fundamental principles of human-computer interaction and human factors and how to apply them to real-world problems through class projects, homework, and real-world design. Focuses on learning why user-friendly interfaces can greatly improve work productivity and enhance the quality of healthcare without radically changing the underlying technology.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	616	Clinical Decision Support and Evidence-Based Medicine	Focuses on the major problems of human decision making in health care including causes of errors, decreased quality and increased costs. Explores the role of information technology, primarily through computer-based clinical decision support (CDS), to address these problems. Explores key methods used to provide CDS, the capabilities and limitations of current approaches, and the challenges for managing and updating the knowledge needed to deliver CDS in an enterprise setting. Origins of evidence-based decision making and policy formulation; how to use the tools and approaches that have been developed to support evidence-based decision making and policy formulation; and the history and evolution of systematic review and meta-analysis as a tool to inform decisions and policies based on evidence. Students gain hands-on experience by conducting a systematic review and a meta-analysis and using the results to draw conclusions and formulate health policy.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	617	Principles of Evidence-based Medicine	The origins of evidence-based decision making and policy formulation; how to use the tools and approaches that have been developed to support evidence-based decision making and policy formulation. The history and evolution of systematic review and meta-analysis as a tool to inform decisions and policies based on evidence. Hands-on experience by conducting a systematic review and a meta-analysis and using the results to draw conclusions and formulate policy.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	2		Prerequisite(s): Health Informatics MAS student
BMI	618	Leadership and Change in Clinical Environments	Covers core concepts related to leadership and specific methodologies used by effective leaders, including running meetings, negotiation, and conflict management. Also reviews change management as a structured approach to transitioning individuals, teams, and organizations from a current state to a desired future state. Provides exposure to various models and processes related to change management and the tradeoffs between these different approaches. Includes case examples related to health information.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Informatics PhD student
BMI	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-15		Prerequisite(s): Biomedical Informatics PhD student
BMI	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	Biomedical Informatics Program	1-15		Prerequisite(s): Biomedical Informatics PhD student
BMY	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BMY	501	Essentials of Biomimicry	Offered as a sampler of the various topics (discipline, emulate, ethos, (re)connect and iSites, human-nature connection, biomimicry thinking, and life's principles) within the discipline of biomimicry. Each week is devoted to a specific topic and is led by a different instructor. Provided a basic overview of each aspect of the discipline with ample opportunity for conversation and dialogue around the specific components, with an understanding that greater depth into each topic can be learned by taking the advanced BMY courses.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	502	Life's Principles	Life's principles are nature's universal design guidelines based on 3.8 billion years of successful strategies across all life. With instruction by Dr. Dayna Baumeister, this 16-week online course takes participants on a deep dive of life's principles, including the review and study of life's operating conditions, the six primary principles and their related sub-principles. Gives participants the experience necessary to bring these design guidelines into practice.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BMY	503	Biology Taught Functionally	Biomimicry teaches biology through the lens of function, thereby providing a core understanding in biology for all students, no matter their background. Explores how biologists gather and research information and how that knowledge can inform other disciplines. Also introduces the art of translating biological concepts into strategies for application, which is then carried throughout all the courses. Students learn how to work with biologists on a biomimicry team and how to weave biology and biomimicry together. The biologists in the cohort not only learn to look at nature through the function lens, but also act as subject matter experts for their interdisciplinary teams and teaching assistants.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	504	Biomimicry Thinking	Biomimicry thinking is the practice of biomimicry from a methodology-based approach. 16-week intensive in the methodology of biomimicry reviews how biology and biomimicry can be incorporated into the four major phases of any design process: scoping, discovering, creating and evaluating. Covers the art of translating biological concepts into strategies for application and building a taxonomy of design principles.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	511	Biomimicry and Design	Biomimicry is innovation inspired by nature, or the conscious emulation of nature's genius. Prepares participants to design sustainable innovations using the biomimicry philosophy and methodology. Participants complete a 16-week series of lectures and assignments to demystify the design thinking process, understand how to harness the potential of approaching challenges with a design mind, distill a design challenge, understand user needs, build a bridge between biology and design, use a methodology for discovering models from nature, abstract design principles from bio-inspired strategies, and translate those principles into sustainable innovations. Participants both with a design background and without equally experience a deep immersion into the world of biomimetic design.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	512	Biomimicry and Engineering	Prepares participants to understand the field of engineering; identify the types of engineers and what each one does; what constrains engineers' work under, materials selected by engineers, how to present biological ideas to engineers and how to integrate ideas from their discipline into sustainable engineering designs using biomimicry principles. Most examples used are of large engineered structures. These structures play critical functions in human systems, have a significant impact on the environment and last for over a 100 years, so it is important to imbue as much sustainability into their design as possible. Requires a final team project designed to put these ideas into practice.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	516	Biomimicry and Business	Addresses business topics from the biomimicry point of view; explains mechanisms and tools for comparing and contrasting business and nature. Challenges participants to question conventional ways of conducting business and come up with new approaches based on a different point of view.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	517	Human-Nature Connection	Grounds the emerging discipline of biomimicry as a continuation of our ancestral connection with nature. Human-Nature Connection (HNC) engages participants in an exploration of the meaning and value of connecting with nature. Topics include defining humans, nature, and our connection with nature; establishing the evolutionary, personal, and socio-cultural influences on the different expressions of this connection; and illustrating the relevance of biomimicry to the human-nature connection.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	2		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	530	Virtual Design Lab Practicum	Practicum designed to allow participants to dive deep into the biomimicry tools and resources presented during the program and to apply them selectively to a specific and unique opportunity of the student's choosing. Projects should have a meaningful outcome achievable within the semester, and should engage the scoping, discovering, creating and evaluating phases of biomimicry thinking. Deliverables are milestone based, and the final deliverable should have application in a real-world setting.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	2		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BMY	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BMY	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BMY	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BUA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
BUA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
BUA	330	Organizational Leadership	Strategies, skills, and techniques that promote successful leadership within organizations. Practice leadership skills and self-discovery in preparation for leadership positions.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
BUA	380	Small Business Leadership	Develops leadership skills needed to form, lead, and operate a small business. Emphasizes creating a vision, research, and problem solving.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	381	Small Business Accounting and Finance	Accounting and finance skills needed by small business owners to acquire, allocate, and track monetary resources and evaluate performance.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student. Must not have earned credit in ACC 382.
BUA	383	Small Business Working Relationships	Addresses communication and the people in a business--clients, employees, suppliers, competitors, governments, family, and self development.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BUA	384	Small Business Operations and Planning	Planning and executing plans--the what, when, where, how, and who from product/service/project idea to pay back or completion.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
BUA	440	Strategic Management	Strategic formulation and administration of the total organization, including integrative analysis and strategic plan; interrelationship of business functional areas.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Agribusiness senior; FIN 300 with C or better; MGT 300 with C or better; MKT 300 with C or better; SCM 300 with C or better; Credit is allowed for only AGB 414, BUA 440 or 441
BUA	441	Entrepreneurship and Feasibility	Assessment of the opportunities, risks, and challenges associated with business start-up and continued operation.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Agribusiness senior; FIN 300 with C or better; MGT 300 with C or better; MKT 300 with C or better; SCM 300 with C or better; Credit is allowed for only AGB 414, BUA 440 or 441
BUA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-6	L	Prerequisite(s): Barrett Honors student
BUA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
BUA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-7		
BUA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
BUE	480	Teaching Business Subjects	Organization and presentation of appropriate content for business subjects in the secondary school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
BUE	481	Technology in Business and Vocational Education	Emerging curricula and instructional technology in business and vocational education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
BUE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): Admission to Professional Teacher Preparation Program
BUE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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BUE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-3		
BUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
BUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		
BUS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-6		Prerequisite(s): Barrett Honors student
BUS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-6		Prerequisite(s): Barrett Honors student
BUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-7		
BUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-3		
BUS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	0.5-12		Prerequisite(s): W.P. Carey degree-seeking graduate student
BUS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	0.5-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Prebusiness Office	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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BUS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Prebusiness Office	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Prebusiness Office	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Prebusiness Office	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
CBS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CBS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
CDE	232	Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
CDE		Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
CDE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
CDE	312	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: Minimum 24 hours; SOC 101, PSY 101(PGS 101), FAS 101 or FAS 330 with C or better; Credit is allowed for only CDE 312 or SOC 312
CDE	337	Early Childhood Intervention	Explores how child development theory affects practice with children and families, emphasizing development of young children and early intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
CDE	338	Child Development Practicum	Supervised practicum in the Child Development Lab preparing students for work in child care centers and agencies serving young children and families. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	2-4		
CDE	350	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
CDE	356	Race and Child Development	Reviews the current research and literature about the particular role of race in child development. Even though race is not a valid biological construct, it has significant social implications as it shapes how children interact and are treated by others. Through primarily class discussions/activities, presentations and papers, addresses: (1) What are the research and theoretical issues in studying race? (2) What does race and racism mean? (3) How does race influence developmental processes?	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): APA 200 or APA 210 or 30 hours. Credit is allowed for only APA 356 or CDE 356 or APA 394 (Race and Child Development)
CDE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
CDE	418	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & H	Pre-requisites: FAS 101 or FAS 330 or PGS 101 or SOC 101 with C or better; Minimum 30 hours. Credit is allowed for only CDE 418 or SOC 418
CDE		Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & H	Pre-requisites: FAS 101 or FAS 330 or PGS 101 or SOC 101 with C or better; Minimum 30 hours. Credit is allowed for only CDE 418 or SOC 418
CDE	430	Infant/Toddler Development in the Family	Examines the development of infants/toddlers, the socialization processes of families, and the interactions of these processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
CDE	450	Child Dysfunction in the Family	This course will provide a focused study of the development of dysfunction within the family context. Other contextual influences will also be considered.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: CDE 232, PGS 101, or SOC 101 with C or better; Minimum Junior standing
CDE		Child Dysfunction in the Family	This course will provide a focused study of the development of dysfunction within the family context. Other contextual influences will also be considered.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: CDE 232, PGS 101, or SOC 101 with C or better; Minimum Junior standing

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CDE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
CDE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6	L	Prerequisite(s): Barrett Honors student
CDE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
CDE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
CDE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-7	L	
CDE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		
CDE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	501	Social Statistics	Understands and uses statistics for applications in the social sciences.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only CDE 501, SOC 501 or SOC 598 (Statistics for Social Sciences)
CDE	531	Theoretical Issues in Child Development	Major developmental theories, related research, and their application to family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	533	Research Issues in Child Development	In-depth exploration and critique of research focusing on child development in a family setting.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	534	Risk and Resilience in Children and Adolescents	Integrates child development, family theory, and research to understand risk and resilience in children and adolescents.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: CDE 531; FAS 500
CDE	570	Child Development for Infant Family Practice	Examines development during infancy and early childhood with an emphasis on social and emotional development, mental health, and early parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	571	Infant Mental Health for Infant Family Practice	Surveys the biological and environmental risk factors that jeopardize the mental health of infants and young childre; overview of prevention and intervention strategies.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	572	Assessment of Infants, Toddlers, and Families for Infant Family Practice	Developmentally appropriate assessment of mental disorders and developmental disabilities in infants, toddlers, and preschool children and parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	573	Cultural Competence for Infant Family Practice	Examines cultural issues impacting parent-child relationships and child rearing and the effectiveness of infant mental health and early intervention services on families of various ethnic and cultural backgrounds.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	574	Observation and Reflection for Infant-Family Practice	Strategies for observing infant behavior and parent-child relationships and skills for reflective, relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	575	Advanced Observation and Reflection for Infant-Family Practice	Advanced strategies for observing infant behavior and parent-child relationships and skills for reflective relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	576	Applied Research Methods for Infant Family Practice	Survey and critical examination of child development, parent-child relationships, family relationships, and early intervention research and the application to IFP.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CDE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	610	Gender Development	Examines current theories and research concerning the various aspects of gender and developmental change.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	612	Children's Peer Relationships	Studies scientific theory, research, and evidence on peer relationships and social competence from early childhood through adolescence.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: CDE 531 with C or better
CDE	634	Prevention and Child Development	Advanced training in research and theory-based approaches to developing and evaluating prevention programs for children at risk.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite: CDE 534
CDE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CDH	501	Digital Humanities: Critical Theory and Methods	Digital technologies are now intricately woven into our lives--whether it's in terms of authoring a paper in a text editor, sending texts and emails, or doing data analysis. Popular narratives of the "big" and the "new" celebrate and sometimes bemoan the ways that these tools shape our communication, access to information, habits and even our physical bodies. Focuses on the histories of these technologies, their operations, popular conceptions about such tools, and their affordances and limits for humanities scholarship. Students learn how to leverage digital technologies, but also how to critically read them. Broad ranging; in addition to surveying the "big tent," students are encouraged to utilize their final projects to engage with specific disciplinary digital tools and methods relevant to their scholarly work.	N	LEL	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): enrolled in Digital Humanities certificate program

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CDH	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDH	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDH	598	Special Topics	Topical courses not offered in regular course rotation (e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand).	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-3		
CED	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
CED	250	Career Development	Covers models of the individual, the world of work, and decision making with emphasis on individual application.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	
CED	294	Special Topic	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
CED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
CED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		
CED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6	L	Prerequisite(s): Barrett Honors student
CED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
CED	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-7		
CED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		
CED	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	501	Intro to Research and Evaluation in Counseling	Introduction to the basic models of research and evaluation in the field of counseling.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking).; Credit is allowed for only CED 501 or 591 (Res. & Eval. in Counseling)
CED	502	Counseling Research Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate counseling research problems using statistical software.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CED 502 or CED 591 (Counseling Research Data Analysis)
CED	522	Theories of Counseling and Psychotherapy	Presents major theories of psychological intervention as well as underlying personality theory upon which they are based.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	523	Psychological Tests	Standardized tests in the study of the individual, with emphasis on test score interpretation in counseling.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	525	Educational Evaluation	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: COE 501

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CED	527	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	528	School Counseling	Introduces counseling within multicultural settings. Emphasizes counseling, consultation, and coordination skills needed for schools' comprehensive developmental guidance programs.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	529	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	534	Occupations and Careers	The world of work, career development, education, and training for occupational entry and mobility.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	545	Analysis of the Individual	Theory and methods commonly used in studying the individual. Observational methods, diagnostic interviews, structured, and semi-structured methods for assessing personality.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	567	Group Dynamics and Counseling	Group process factors, theory, and diversity issues determining effective interaction in small groups. Emphasis placed on lecturettes, self awareness, and experiential components.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	577	Counseling Prepracticum	Focus on racial, social, and cultural factors in the development of helping relationships through integration of cognitive and affective self-awareness with counseling skills.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Counseling Psychology MC or PhD student
CED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Letters & Sciences	College of Letters and Sciences	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	672	Marriage and Family Counseling	Introduces marriage and family counseling theories. Emphasizes a systems-communication model utilizing cocounseling.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Counseling Graduate student
CED	685	School Counseling Internship	Structured practical experience in school counseling following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	YGB	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Masters of Counseling major
CED	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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CED	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Letters & Sciences	College of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CEE	181	Technological, Social, and Sustainable Systems	Introduces the importance and role of technological, social, and sustainable systems in the modern world. Provides a framework for the theory and practice of sustainable engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3	HU	Credit is allowed for only CEE 181, FSE 181, or SOS 181
CEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		
CEE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	210	Engineering Mechanics I: Statics	Force systems, resultants, equilibrium, distributed forces, area moments, fluid statics, internal forces, friction, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: FSE 100 with C or better; MAT 266 (or MAT 271) with C or better; PHY 121 with C or better; PHY 122 with C or better; Credit is allowed for only CEE or CNE 210
CEE	212	Engineering Mechanics II: Dynamics	Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: CEE 210 (or CNE 210) and MAT 275 (or MAT 274) completed with C or better; Credit is allowed for only CEE or CNE 212
CEE	213	Introduction to Deformable Solids	Strain-displacement and stress-strain-temperature relations. Stresses and deformations due to axial, shear, torsional and bending moments. Buckling, stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: CEE 210 (or CNE 210) with C or better; MAT 274 (or MAT 275) with C or better; Credit is allowed for only CEE or CNE 213
CEE	281	Surveying	Theory and fieldwork in construction and land surveys.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): MAT 170 or higher with C or better; Credit is allowed for only CEE 281, CNE 241 or CON 241
CEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		

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CEE	300	Engineering Business Practice	Engineering economic principles, cost/benefit analysis, project financing and delivery, management of engineering design, business practices, ethical and professional responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3	L	Pre-requisites: Engineering BSE student; Junior or Senior standing; MAT 267 with C or better
CEE	321	Structural Analysis and Design	Statically determinate and indeterminate structures (trusses, beams, and frames) by classical and matrix methods. Introduces structural design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Prerequisite(s): Civil Engineering BSE or Construction Engineering BSE major; CEE 212 or CNE 212 or MAE 212; CEE 213 or CNE 213 with C or better; Credit is allowed for only CEE 321 or CNE 321
CEE	341	Fluid Mechanics for Civil Engineers	Fundamental principles and methods of fluid mechanics forming the analytical basis for water resources engineering. Conduit and open channel flow.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Pre-requisites: BSE Civil Engineering student; CEE 212 (or CEE 211 or MAE 212) and CEE 213 with C or better; Pre/Co-requisite: CEE 384 or MAE 384 (with C or better if completed)
CEE	351	Geotechnical Engineering	Index properties and engineering characteristics of soils. Compaction, permeability and seepage, compressibility and settlement, and shear strength.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Prerequisite(s): CEE 213 (or CNE 213) with C or better; BSE Civil Engineering or Construction Engineering major; Credit is allowed for only CEE or CNE 351
CEE	353	Civil Engineering Materials	Structure and behavior of civil engineering materials, including steel, aggregate, concrete, masonry, asphalt, wood, composites. Atomic structure and engineering applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): CEE 213 (or CNE 213) with C or better; BSE Civil Engineering or Construction Engineering major; Credit is allowed for only CEE or CNE 353
CEE	361	Introduction to Environmental Engineering	Concepts of air and water pollution; environmental regulation, risk assessment, chemistry, water quality modeling, water and wastewater treatment systems designs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Prerequisite(s): Fulton Engineering undergraduate student; CEE 213 with C or better; CHM 114 or CHM 116; Pre- or corequisite(s): IEE 380
CEE	372	Transportation Engineering	Fundamental background of highway and traffic engineering in the areas of planning, design, and operations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Pre-requisites: Civil Engineering BSE student; CEE 213 with C or better; Pre/Co-requisite: IEE 380
CEE	384	Numerical Methods for Engineers	Numerical methods and computational tools for selected problems in engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3	CS	Prerequisite(s): Fulton Engineering undergrad; MAT 274 or 275 with C or better; MAT 242 or 343 (or 342 for non-MAE student) with C or better; Pre- or corequisite(s): MAT 267 or 272 with C or better if complete; Credit allowed for only MAE 384 or CEE 384
CEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	400	Earth Systems Engineering and Management	Introduces earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3	(L or HU) & H	Pre-requisites: BSE Civil Engineering major; CEE 300 with C or better OR Non-CEE Juniors or Seniors; Credit is allowed for only CEE or CNE 400
CEE	412	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 351 and 353 with C or better; Credit is allowed for only CEE 412 or 511

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CEE	420	Steel Structures	Behavior of structural components and systems. Design of steel members and connections. Load and resistance factor design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: BSE Civil Engineering or Construction Engineering major; CEE 321, or CNE 321 with C or better. Credit is allowed for only CEE 420 or CNE 420
CEE	421	Concrete Structures	Behavior of concrete structures and the design of reinforced and prestressed concrete members, including footings. Partial design of concrete building system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: BSE Civil Engineering or Construction Engineering major; CEE 321 or CNE 321 with C or better; Credit is allowed for only CEE or CNE 421
CEE	423	Structural Design	Analysis and design of reinforced concrete steel, masonry, and timber structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 421 with C or better; Pre/Co-requisite: CEE 420 (with C or better if completed)
CEE	432	Developing Software for Engineering Applications	Matrix and computer applications to structural engineering and structural mechanics. Stiffness and flexibility methods, finite elements, and differences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; Credit is allowed for only CEE 432 or 532
CEE	440	Hydrology	Descriptive and quantitative hydrology; hydrologic cycle, models, and systems. Rain-runoff models. Hydrologic design. Concepts, properties, and basic equations of groundwater flow. Emphasizes quantitative methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): CEE 341 (or MAE 340) or GLG 362 with C or better; Credit is allowed for only CEE 440 or CEE 545 or CEE 598 (Hydrology) or GLG 471
CEE	441	Water Resources Engineering	Applies the principles of hydraulics and hydrology to the engineering of water resources projects; design and operation of water resources systems; water quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 341 with C or better
CEE	452	Foundations	Applies soil mechanics to foundation and retaining wall systems, including bearing capacity, settlement, and lateral earth pressure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): Civil Engineering BSE or Construction Engineering major; CEE 351 or CNE 351 with C or better; Credit is allowed for only CEE 452 or CNE 452
CEE	462	Unit Operations in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 361 with C or better
CEE	466	Urban Water System Design	Capacity; planning and design of water supply; domestic and storm drainage; and solid waste systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 341 and 361 with C or better
CEE	467	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 361 or MIC 220 with C or better; Credit is allowed for only CEE 467 or 567
CEE	470	Sustainable Environmental Biotechnologies	Introduces principles of green chemistry and green engineering and their integration in the design of sustainable bioengineering and biotechnology applications that protect environmental quality and human health.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: CEE 361; Credit is allowed for only CEE 470, 494 (Sustainable Environmental Biotechnologies), 570 or 598 (Sustainable Environmental Biotechnologies)
CEE	474	Transportation Systems Planning	Transportation systems modeling procedures, travel characteristics analysis, traffic predictions, transportation systems management, and transit planning methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 372 and 384 with C or better

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CEE	475	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 372 with C or better; Credit is allowed for only CEE 475 or 576
CEE	481	Civil Engineering Project Management	Civil engineering project management and administration, planning and scheduling, cost estimating and bidding strategies, financial management, quality control and safety, and computer applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; CEE 351 with C or better; CEE 372 with C or better; Credit is allowed for only CEE 481 or 585
CEE	483	Highway Materials, Construction, and Quality	Properties of highway materials, including aggregates, asphalt concrete, and portland cement concrete; construction practice; material delivery, placement, and compaction; quality control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 351 and CEE 372 and CEE 353 with C or better. Credit is allowed for only CEE 483 or 583
CEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	485	Sustainable Civil and Environmental Systems Engineering	Provides working knowledge of operations research methodologies, both the traditional and more modern metaheuristic techniques, to evaluate sustainable civil engineering systems and quantitatively evaluate project alternatives involving single or multiple goals.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 300; MAT 242 with C or better
CEE	486	Integrated Civil Engineering Design	Requires completion of a civil engineering design in a simulated practicing engineering environment. Limited to undergraduates in their final semester.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4	L	Pre-requisites: Civil Engineering BSE student; CEE 321; CEE 341; CEE 351; CEE 361; CEE 372 with C or better OR Construction Engineering student: CEE or CNE 321; CEE or CNE 351 with C or better. Credit is allowed for only CEE or CNE 486
CEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6		Prerequisite(s): Barrett Honors student
CEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6	L	Pre-requisite: Barrett Honors Engineering student
CEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-7		
CEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		
CEE	506	Life Cycle Assessment for Civil Systems	Covers fundamental and advanced concepts of the life cycle assessment framework exploring products, services, activities and infrastructure systems. Examines key concepts for system boundary selection, functional unit selection, inventorying, impact assessment and interpretation stages with a focus on energy and environmental assessment. Advanced concepts include allocation of effects, problem formulation for assessing footprints versus decisions or policies, and assessment of infrastructure interdependencies and supply chains. Exposes tools and data sources and presents approaches for evaluation of sensitivity and uncertainty of results. Encourages students with broad sustainability interests to enroll and explore how life cycle assessment can aid their work by shifting their views from direct to cradle-to-grave effects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CEE 506 or CEE 598 (Lifecycle Assessment) or SOS 546 or SOS 598 (Lifecycle Assessment)

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CEE	507	Urban Infrastructure Anatomy and Sustainable Development	Understanding how built environment infrastructure systems interact with ecosystem services is critical for policies and decisions directing urban sustainability. Brings together students from several disciplines to develop a semester-long research project focused on a particular urban sustainability problem in Phoenix. During the semester, students are given background on how infrastructure systems work and are interdependent, and explore tools and methods for urban sustainability assessment with peers from several disciplines. As a class, students evaluate a particular urban sustainability problem for Phoenix, interact with local policy and decision makers in developing solutions, and present their findings at the end of the semester to the ASU community.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): degree-or nondegree-seeking graduate. Credit for only CEE 507 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or PUP553 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or SOS547 or SOS598 (Urban Infrastruct Anatomy & Sustain Dev)
CEE	511	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Graduate Civil Engineering student; Credit is allowed for only CEE 412 or 511
CEE	512	Pavement Performance and Management	Pavement management systems, including data collection, evaluation, optimization, economic analysis, and computer applications for highway and airport design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Graduate Civil Engineering student
CEE	513	Pavement Evaluation, Maintenance, and Rehabilitation	Provides the necessary information for pavement engineers to evaluate, identify, and select reliable and cost-effective rehabilitation alternatives for existing Hot Mix Asphalt (HMA) and Portland Cement Concrete (PCC) pavements.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	514	Bituminous Materials and Mixture	Types of bituminous materials used in pavement mixtures. Chemical composition, physical properties, desirable aggregate characteristics, optimum asphalt contents, superpave asphalt binder, mixture design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Graduate Civil Engineering student
CEE	515	Properties of Concrete	Materials science of concrete. Cement chemistry, mechanisms of hydration, interrelationships among micro- and macro-properties of cement-based materials. Mechanical properties, failure theories, fracture mechanics of concrete materials. Cement-based composite materials and the durability aspects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate tudent
CEE	516	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	521	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods: applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	522	Experimental Stress Analysis	Specification and analysis of stress and strain at a point, stress-strain relationships. Mechanical, optical, and electrical strain gages and circuits, digital data acquisition and analysis, closed loop mechanical testing, fracture mechanics, optical methods and photoelasticity, and introduction to nondestructive testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	526	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): graduate Engineering student; APM 505 or MAE 501 with C or better; Credit is allowed for only CEE 526 or MAE 527
CEE	527	Advanced Concrete Structures	Ultimate strength design. Combined shear and torsion. Serviceability. Plastic analysis. Special systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	530	Prestressed Concrete	Materials and methods of prestressing. Analysis and design for flexure, shear, and torsion. Prestress losses due to friction, creep, shrinkage, and anchorage set. Statically indeterminate structures. Design of flat slabs, bridges, and composite beams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	532	Developing Software for Engineering Applications	Fundamentals of engineering software development and object-oriented programming. Programming in C++. Development of matrix toolbox. Introduces finite element method. Computer graphics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 432 or 532
CEE	533	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	536	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Engineering CEE Graduate student; Credit is allowed for only CEE 536, MAE 494 (Structural Dynamics) or 515

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CEE	540	Groundwater Hydrology	Physical properties of aquifers, well pumping, subsurface flow modeling, unsaturated flow, numerical methods, land subsidence, and groundwater pollution.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	541	Surface Water Hydrology	Hydrologic cycle and mechanisms, including precipitation, evaporation, and transpiration; hydrograph analysis; flood routing; statistical methods in hydrology and hydrologic design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	543	Water Resources Systems	Theory and application of quantitative planning methodologies for the design and operation of water resources systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	545	Hydrology	Descriptive and quantitative hydrology; hydrologic cycle, models and systems. Rain-runoff models. Hydrologic design. Concepts, properties and basic equations of groundwater flow. Emphasizes quantitative methods.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental and Sustainable Engineering MS, MSE or PhD student; Credit is allowed for only CEE 440, 545 or 598 (Hydrology)
CEE	550	Soil Behavior	Physicochemical aspects of soil behavior, stabilization of soils, and engineering properties of soils.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	551	Advanced Geotechnical Testing	Odometer, triaxial (static and cyclic) back pressure saturated and unsaturated samples, pore pressure measurements, closed-loop computer-controlled testing, in-situ testing, and sampling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	553	Advanced Soil Mechanics	Applies theories of elasticity and plasticity to soils, theories of consolidation, failure theories, and response to static and dynamic loading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	554	Shear Strength and Slope Stability	Shear strength of saturated and unsaturated soils strength-deformation relationships, time-dependent strength parameters, effects of sampling, and advanced slope stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	555	Advanced Foundations	Deep foundations, braced excavations, anchored bulkheads, reinforced earth, and underpinning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	557	Geoenvironmental Engineering	Environmental site assessment, solid waste management, waste containment system design, soil and groundwater remediation, soil erosion control, brownfields development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	558	Unsaturated Soil Mechanics	Advanced unsaturated soil mechanics theory, including introduction of stress-state variables and constitutive relationships for unsaturated flow and stress-strain applications. Knowledge of CEE 351 or equivalent material is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	559	Earthquake Engineering	Characteristics of earthquake motions, selection of design earthquakes, site response analyses, seismic slope stability, and liquefaction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	560	Soil and Groundwater Remediation	Presents techniques for remediation of contaminated soils and groundwaters with basic engineering principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	561	Physical-Chemical Treatment of Water and Waste	Theory and design of physical and chemical processes for the treatment of water and wastewaters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	562	Environmental Biochemistry and Waste Treatment	Theory and design of biological waste treatment systems. Pollution and environmental assimilation of wastes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	563	Environmental Engineering Chemistry	Analyzes water, domestic and industrial wastes, lab procedures for pollution evaluation, and the control of water and waste treatment processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	564	Contaminant Fate and Transport	Fate and transport processes with emphasis on governing equations and parameters relevant to the migration of chemicals in the environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	565	Advanced Environmental Biotechnology	Emerging topics in environmental biotechnology and related problem-solving techniques.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); CEE 562 and 567; Credit is allowed for only CEE 565 or 598 (Advanced Environmental Biotechnology)
CEE	567	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Engineering CEE Graduate student; Credit is allowed for only CEE 467 or 567
CEE	568	Unit Processing in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student

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CEE	569	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): graduate Engineering major; Credit is allowed for only CEE 469 or CEE 569 or CHE 469 or CHE 569
CEE	570	Sustainable Environmental Biotechnologies	Introduces principles of green chemistry and green engineering and their integration in the design of sustainable bioengineering and biotechnology applications that protect environmental quality and human health.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil, Environmental and Sustainable Engineering MS, MSE or PhD student; Credit is allowed for only CEE 470, 494 (Sustainable Environmental Biotechnologies), 570 or 598 (Sustainable Environmental Biotechnologies)
CEE	571	Advanced Environmental Chemistry	Applied water quality and water treatment aquatic chemistry. Knowledge of environmental chemistry topics is necessary to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental and Sustainable Engineering MS, MSE or PhD major
CEE	572	Life Cycle Assessment for Civil Systems	Concepts of the life cycle assessment (LCA) framework exploring products, services, activities and infrastructure systems. Examines key concepts for system boundary selection, functional unit selection, inventoring, impact assessment and interpretation stages with a focus on energy and environmental assessment. Advanced concepts include allocation of effects, problem formulation for assessing footprints versus decisions or policies, and assessment of infrastructure interdependencies and supply chains. Exposure to tools and data sources occur throughout the course; presents approaches for evaluation of sensitivity and uncertainty of results.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): graduate Civil Engineering or Construction Engineering major
CEE	573	Transportation Operations	Driver, vehicle, and roadway characteristics; traffic control devices; traffic engineering studies; and transportation system management measures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	576	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 475 or 576
CEE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student
CEE	581	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student; Credit is allowed for only CEE 581 or SOS 552
CEE	582	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student; Credit is allowed for only CEE 483 or 583
CEE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	585	Civil Engineering Project Management	Civil engineering project management and administration, planning and scheduling, cost estimating and bidding strategies, financial management, quality control and safety, and computer applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): MS, MSE or PhD Civil, Environmental and Sustainable Engineering major. Credit is allowed for only CEE 481 or CEE 585

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CEE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student
CEE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1		Pre-requisite: Civil Engineering MS or MSE student
CEE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		Pre-requisite: Engineering CEE Graduate student
CEE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering PhD student
CEE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Pre-requisite: Civil Engineering PhD student
CEE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	IND	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1		Pre-requisite: Civil Engineering PhD student
CEE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Prerequisite(s): Civil Engineering PhD student
CEN	501	Computer Systems I	Introduces digital CMOS circuit and logic design and signal processing and analysis. Design of digital CMOS logic gates, combinational and sequential logic circuits, arithmetic logic unit; register-transfer-level design; Fourier and z transforms, filters, sampling, random variables, distribution and density functions.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisites: Computer Engineering Graduate student; Credit is allowed for only CEN 501 or 591 (Computer Systems I)

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CEN	502	Computer Systems II	Covers fundamentals of computer architecture and focuses on basic principles of systems programming, operating systems, compilers and networking topics that cover the computer science to computer engineering interface.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Engineering Graduate student; Credit is allowed for only CEN 502 or 591 (Computer Systems II)
CEN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CEN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CEN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CEN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CHE	100	Introduction to Chemical Engineering	Introduces design in chemical engineering, teaming, chemical engineering profession, computer models, communication skills, quality and customer satisfaction. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	2		Pre-requisite: Ira A. Fulton School of Engineering and University College student
CHE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHE	211	Introduction to Chemical Processing	Applies chemical engineering analysis and problem solving to chemical processes material and energy balance methods and skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): CHM 116 with C or better; MAT 266 or 271 with C or better
CHE	231	Introduction to Transport Phenomena I: Fluids	Transport phenomena, with emphasis on fluid systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s) with C or better: CHE 211; MAT 266 or 271; PHY 121; Corequisite(s): MAT 274 or 275; Credit is allowed for only CHE 231 or 501
CHE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Prerequisite(s): Barrett Honors student
CHE	334	Introduction to Transport Phenomena II: Heat and Mass Transfer	Applies heat and mass transport principles. Design of heat exchangers and continuous contactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Chemical Engineering BSE major; CHE 231 with C or better
CHE	342	Introduction to Applied Chemical Thermodynamics	Applies conservation and accounting principles with nonideal property estimation techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Biomedical Engineering BSE major with BME 200 with C or better OR Chemical Engineering BSE major with CHE 211 with C or better; Pre- or corequisite(s): MAT 267 or 272 with C or better if completed
CHE	352	Chemical Engineering Lab I	Introduces engineering lab equipment, data collection, and analysis; strengthens ability to generate written reports and oral presentations; reinforces teamwork skills; strengthens and extends the understanding of earlier technical contents in the curriculum.	N	LAB	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3	L	Prerequisite(s): Chemical Engineering BSE major; CHE 334 with C or better
CHE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	432	Principles of Chemical Engineering Design	Multicomponent distillation, engineering economics, equipment sizing and costs, plant operation economics, and simulation and optimization techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; CHE 334, 342, 442, and 433 with C or better
CHE	433	Modern Separations	Design of modern separation equipment in chemical engineering other than fractionation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; CHE 334 and CHE 342 with C or better
CHE	442	Introduction to Chemical Reactor Design	Applies kinetics to chemical reactor design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; CHE 334 and CHE 342 with C or better; Credit is allowed for only CHE 442 or CHE 505
CHE	451	Chemical Engineering Laboratory II	Operation, control, and design of experimental and industrial process equipment; independent research projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; CEE 384 or MAE 384 with C or better; CHE 334 and 342 with C or better
CHE	461	Process Dynamic Control	Process dynamics, instrumentation, and feedback applied to automatic process control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3	CS	Prerequisite(s): Fulton Engineering undergraduate student; CEE 384 or MAE 384 with C or better; CHE 211 with C or better
CHE	462	Process Design	Applies economic principles to optimize equipment selection and design; development and design of process systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3	L	Prerequisite(s): Fulton Engineering undergraduate student; CHE 432, 433, and 442 with C or better

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CHE	469	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Chemical Engineering BSE major: CHE 342, or Civil Engineering BSE major: CEE 361, or Materials Science and Engineering BSE major: MSE 330; Credit is allowed for only CEE 469 or CEE 569 or CHE 469 or CHE 569
CHE	475	Biochemical Engineering	Applies chemical engineering methods, mass transfer, thermodynamics, and transport phenomena to industrial biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Pre-requisite: CHE 334 and 442
CHE	476	Bioreaction Engineering	Principles of analysis and design of reactors for processing with cells and other biologically active materials; applies reaction engineering in biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Pre-requisites: Engineering BS or BSE student OR Graduate Engineering student
CHE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Prerequisite(s): Barrett Honors student
CHE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
CHE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		Prerequisite(s): Fulton Engineering undergraduate student
CHE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-7		Prerequisite(s): Fulton Engineering undergraduate student
CHE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	518	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only MSE 518, EEE 518, MAE 518, MSE 475, or CHE 518
CHE	533	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only BME 533 or CHE 533 or MAE 533
CHE	543	Thermodynamics of Chemical Systems	Classical and statistical thermodynamics of nonideal physicochemical systems and processes; prediction of optimum operating conditions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Pre-requisites: Graduate Engineering student
CHE	544	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
CHE	561	Advanced Process Control	Dynamic process representation, linear optimal control, optimal state reconstruction, and parameter and state estimation techniques for continuous and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
CHE	569	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): graduate Engineering major; Credit is allowed for only CEE 469 or CEE 569 or CHE 469 or CHE 569
CHE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
CHE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): graduate Chemical Engineering student
CHE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
CHE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student
CHE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): graduate CHE major
CHE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
CHE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
CHE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		Pre-requisite: Graduate Engineering student
CHE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student
CHE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
CHE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
CHE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student
CHE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
CHE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student
CHI	101	First-Year Chinese I	Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills. Standard dialect. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Credit is allowed for only CHI 101 or MND 101
CHI	102	First-Year Chinese II	Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills. Standard dialect. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Prerequisite(s): CHI 101; Credit is allowed for only CHI 102 or MND 102
CHI	110	Intensive Chinese I	Adopts different pedagogical approaches to help students acquire basic skills in listening, speaking, reading and writing in Modern Standard Chinese. While linguistic elements are the focus of this course, appropriate cultural information related to language use is also an important component of instruction. Trains students to be able to function successfully in Chinese culture. Students don't simply learn to "speak Chinese" or read and write characters as some form of party trick. Teaches a practical skill set that allows students to communicate and behave appropriately in Chinese culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		

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CHI	120	Introduction to Chinese Culture	Introduces geographical, historical, literary, and intellectual premises of Chinese culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre/Co-requisites: ENG 101, 105, or 107; Credit is allowed for only SLC 120 or CHI 120
CHI	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Maximum 25 hours
CHI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	201	Second-Year Chinese I	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Prerequisite(s): CHI 102; Credit is allowed for only CHI 201 or MND 201
CHI	202	Second-Year Chinese II	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Prerequisite(s): CHI 201; Credit is allowed for only CHI 202 or MND 202
CHI	205	Chinese Calligraphy	Introduces styles and techniques of Chinese writing. Requires no knowledge of Chinese or Japanese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1		
CHI	210	Intensive Chinese II	Intensive 2nd-year college-level Modern Standard Chinese designed for students who are highly motivated and have successfully completed at least 1st-year college-level Modern Standard Chinese language course or equivalent. Reviews and reinforces 1st-year Chinese grammatical patterns and introduces new ones in order to further develop students' communicative competence in listening, speaking, reading and writing in modern Chinese. Introduces over 500 new characters and presents and expands an equal number of spoken vocabulary items. Students increase their vocabulary, consolidate their grammar, describe objects and express ideas more accurately and fluently.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		Prerequisite(s): CHI 102 or 110 with C or better
CHI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	301	Third-Year Chinese I	Expansion of proficiency in listening comprehension, speaking, reading, and writing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: CHI 202 with C or better
CHI	302	Third-Year Chinese II	Continuation of CHI 301.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: CHI 301 with C or better
CHI	307	Introduction to Literary Chinese I	Reading in various genres of pre-20th century literature (wen-yen), with analysis of the structure of the classical writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: CHI 302, JPN 202, or KOR 202 with C or better
CHI	308	Introduction to Literary Chinese II	Continuation of CHI 307.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: CHI 307 with C or better
CHI	321	Chinese Literature	Masterworks of the tradition from the 7th century BCE through the 13th century. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	
CHI	322	Chinese Literature	Masterpieces from the later tradition and its transition to modern times. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	
CHI	333	China	Political, economic, social, and cultural history of the Chinese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 333, HST 383 or SLC 333
CHI	335	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only CHI 335, HPS 325, HST 385 or SLC 335
CHI	336	Interpreting China's Classics	Study of selected Confucian and/or Taoist classics and ways they have been read in both Asian and Western scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 336, HST 386 or SLC 336
CHI	338	The Daoist Bible: The Daode jing	At 5,000 words, the Daode Jing (Tao-te ching) is arguably the shortest religious book in the world. It is also the most widely translated, after the Christian Bible. Introduces the wisdom of the Old Boy, Laozi himself, and to some of the startlingly wide variety in which his short, gnomic utterances have been interpreted. No knowledge of Chinese required; all readings and lectures in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101, 105 or 107 with C or better; Credit is allowed for only CHI 338, 394 (Daoist Bible: The Dao De Jing) or REL 338

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CHI	343	Daoism	Introduces the history, doctrines, and practices of Taoism from the mid-second century CE up to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G & H	Pre-requisites: ENG 102, 105 or 108 with C or better; 24 or more hours; Credit is allowed for only CHI or REL 343
CHI	345	Chinese Film and Civilization	Screening and discussion of recent films from China, Taiwan, and Hong Kong in the context of modern Chinese civilization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
CHI	348	Pathways into Chinese Culture	Introduces some important aspects of China's cultural history and traditions. Provides an overview of Chinese history and culture and reviews major developments in science and technology. Incorporates current social and cultural topics and reviews through the lens of historical context. Classroom activities enable students to gain a better understanding of traditional Chinese culture with respect to both elite and popular culture. Conducted in Mandarin and is designed for the students who are currently enrolled in CHI 301 and CHI 401 or whose Chinese proficiency level in all four skills (speaking, listening, reading and writing) are at the intermediate mid to intermediate high level according to ACTFL guidelines.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): CHI 202 with C or better. Credit is allowed for only CHI 348 or CHI 394 (Pathways into Chinese Culture)
CHI	380	The Chinese Language	Introduces the Chinese languages from linguistic perspectives. Topics include the linguistic structure and characteristics (phonetics, phonology, morphology and syntax) of the Chinese language; linguistic history and dialects of Chinese; and its relationship with culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
CHI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	401	Fourth-Year Chinese I	Focuses on solidifying and improving students' knowledge of modern Mandarin. Emphasizes learning strategies to increase reading and listening comprehension, as well as further strengthening oral fluency and written skills. Surveys a wide variety of original text and media materials, in both full-form and simplified characters. Conducted in Chinese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: CHI 302 with C or better
CHI	402	Fourth-Year Chinese II	Continuation of CHI 401.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: CHI 401 with C or better
CHI	407	Chinese for Academic and Professional Purposes I	Part of the Chinese Flagship program; course has a three-fold objective: (1) to improve language proficiency in all four language skills; (2) to support other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; and (3) to develop the use of explicit language learning strategies that support professional-level literacy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: CHI 402 with C or better
CHI	408	Chinese for Academic and Professional Purposes II	Part of the Chinese Flagship Program. Improves language proficiency in all four language skills; supports other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; develops the use of explicit language learning strategies that supports professional level literacy. All course work in Mandarin Chinese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: CHI 407 with C or better
CHI	430	Readings in Chinese Religions	Readings in Chinese religious texts, including Buddhism, Daoism, local religious cults, and others. May be repeated once for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 308 (CHI 414) with C or better
CHI	450	Classical Prose	Readings in classical prose forms, including guwen, sanwen, pianwen, fu, and incidental writings. Course content varies with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 308 with C or better
CHI	451	Chinese Cultural History I	China's classics in translation studied both for their intrinsic ideas and for the origins of Chinese thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(HU or SB) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 451, HST 451 or SLC 451
CHI	452	Chinese Cultural History II	Evolution of Confucian thought, its synthesis with Taoism and Buddhism, and modern reactions against, and uses of, Confucian traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & G & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 452 or HST 452 or SLC 452
CHI	461	Classical Vernacular Performance Literature	Readings in performance literature in colloquial Chinese. Bianwen, zhugongdiao, baojuan, zaju, chuanqi drama.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 302; CHI 307 with C or better
CHI	462	Readings in Traditional Xiaoshuo	Readings in the shorter and longer fiction of the late imperial period written in classical vernacular language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 302; CHI 308
CHI	470	Modern Chinese Literature and Culture	Readings in modern Chinese literary texts, including prose, fiction, and poetry. Course content changes with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: CHI 302 with C or better

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CHI	482	History of the Chinese Language	Introduces the history of the Chinese language. Graduate/advanced undergraduate-level introductory course on the historical changes of the sounds, writing system, grammar, and other aspects of the Chinese language. Topics include the historical phonology of Chinese, development of graphs (Hanzi), some topics of syntactic changes in texts, morphology, lexicography, cultural implication of language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 302; CHI 308
CHI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
CHI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
CHI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
CHI	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	509	Methods of Research in Chinese Applied Linguistics	Offers an overview of issues in applied linguistics, specifically related to the teaching and learning of Chinese as a second language. Divided according to broad topics and may vary depending on interests and background of class participants.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student. Credit is allowed only for CHI 509 or 591 (Chinese Applied Linguistics)
CHI	514	Advanced Classical Chinese	Close readings in selected premodern texts, with focus on special grammatical features, and increased vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	520	Teaching of Chinese as a Second Language	Theory and practice of teaching Chinese, including presentation, interaction, and evaluation, with consideration given to cultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	561	Readings in Traditional Xiaoshuo	Introduces major issues, texts, and resource materials for the study of narrative forms, including short stories and longer works of fiction. Focuses on the period from 1400 to 1900. One year of university-level classical Chinese or equivalent proficiency; three years of university-level modern Chinese recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHI	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
CHI	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHM		Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	SQ	
CHM	101	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4	SQ	
CHM		Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	
CHM		Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This lecture course may be combined with the laboratory CHM 108 for those interested in lab course credit. Cannot be used for major credit in chemical or biochemical sciences. Both CHM 107 and CHM 108 must be taken to secure SQ credit.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SQ	
CHM	107	Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This lecture course may be combined with the laboratory CHM 108 for those interested in lab course credit. Cannot be used for major credit in chemical or biochemical sciences. Both CHM 107 and CHM 108 must be taken to secure SQ credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	SQ	
CHM		Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1	SQ	
CHM	108	Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	SQ	Pre/Co-requisite: CHM 107
CHM	111	General Chemistry Laboratory for Majors I	Laboratory course in general chemistry for chemistry and biochemistry majors intended to complement CHM 117 lecture course. Covers a diverse range of laboratory experiments appropriate to chemistry and biochemistry majors designed to reinforce chemical principles and to develop a broad range of chemical synthesis skills. Uses modern analytic and characterization techniques to study the physical and chemical properties of substances. Suitable for students who have completed introductory chemistry at the high school level. Both CHM 117 and CHM 111 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	SQ	Pre- or corequisite(s): CHM 117 with C or better if completed; Biochemistry, Biophysics or Chemistry major
CHM	112	General Chemistry Laboratory for Majors II	Continuation of CHM 111 laboratory course in general chemistry for chemistry and biochemistry majors intended to complement CHM 118 lecture course. Covers a diverse range of laboratory experiments appropriate in chemistry and biochemistry majors designed to reinforce chemical principles and to develop a broad range of chemical synthesis skills. Uses modern analytic and characterization techniques to study the physical and chemical properties of substances. Both CHM 118 and CHM 112 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	SQ	Prerequisite(s): CHM 111 with C or better; Biochemistry, Biophysics or Chemistry major. Pre- or corequisite(s): CHM 118 with C or better if completed
CHM		General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	SQ	Prerequisite(s): CHM 101 with C or better, Mathematics Placement Test score of 50% or higher, or Pre/Corequisite(s): MAT 170, 171, 210, 251, 265 or 270 with C or better if completed
CHM	113	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4	SQ	Prerequisite(s): CHM 101 with C or better, Mathematics Placement Test score of 50% or higher, or Pre/Corequisite(s): MAT 170, 171, 210, 251, 265 or 270 with C or better if completed

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHM		General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	Prerequisite(s): CHM 101 with C or better, Mathematics Placement Test score of 50% or higher, or Pre/Corequisite(s): MAT 170, 171, 210, 251, 265 or 270 with C or better if completed
CHM	114	General Chemistry for Engineers	Chemical principles with emphasis toward engineering. Students without high school chemistry or are chemical engineering majors must enroll in the CHM 113, 116 sequence instead of CHM 114.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4	SQ	Prerequisite(s): CHM 101 with C or better, or Mathematics Placement Test score of 50% or higher, or Pre- or corequisite(s): MAT 170, 171, 210, 251, 265, or 270 with C or better if completed
CHM		General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	SQ	Prerequisite(s): CHM 113 or 114 or 117 with C or better
CHM	116	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4	SQ	Prerequisite(s): CHM 113 or 114 or 117 with C or better
CHM		General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	Prerequisite(s): CHM 113 or 114 or 117 with C or better
CHM	117	General Chemistry for Majors I	Lecture course in general chemistry for chemistry and biochemistry majors and is complemented by the CHM 111 laboratory course. Covers electronic structure of atoms and molecules, intermolecular forces, bonding models, molecular geometry, physical states of matter, gas laws, and chemistry of condensed matter and modern materials. Highlights chemical reactivity, periodic trends and descriptive chemistry. Suitable for students who have completed introductory chemistry at the high school level. Both CHM 117 and CHM 111 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	SQ	Prerequisite(s): Biochemistry, Biophysics, or Chemistry major; minimum Math Placement Test score of 60% and minimum Advanced Placement Test of 38% or Pre- or corequisite(s): MAT 265 or 270 with C or better if completed
CHM	118	General Chemistry for Majors II	Continuation of CHM 117 lecture course in general chemistry for chemistry and biochemistry majors and is complemented by the major's CHM 112 laboratory course. Topics include thermodynamics, properties of solutions, chemical equilibrium, aqueous chemistry, acids and bases, electrochemistry, chemical kinetics, nuclear chemistry, coordination chemistry. Both CHM 118 and CHM 112 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	SQ	Prerequisite(s): Biochemistry, Biophysics, or Chemistry major; CHM 117 with C or better; MAT 270 with C or better; Pre- or corequisite(s): MAT 266 or 271 with C or better if completed
CHM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-3		Pre-requisites: Biochemistry or Chemistry major; Maximum 45 hours
CHM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
CHM		Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SQ	Prerequisite(s): CHM 101, 114, 116, or 118 with C or better
CHM	231	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	SQ	Prerequisite(s): CHM 101, 114, 116, or 118 with C or better
CHM		Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	Prerequisite(s): CHM 101, 114, 116, or 118 with C or better
CHM		General Organic Chemistry I	Chemistry of organic compounds.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): CHM 116 or CHM 118 with C or better
CHM	233	General Organic Chemistry I	Chemistry of organic compounds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 116 or CHM 118 with C or better
CHM		General Organic Chemistry I	Chemistry of organic compounds.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): CHM 116 or CHM 118 with C or better
CHM		General Organic Chemistry II	Continuation of CHM 233.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: CHM 233 or CHM 333 with a C or better; Credit is allowed for only CHM 234 or 334

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CHM	234	General Organic Chemistry II	Continuation of CHM 233.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites:CHM 233 or CHM 333 with a C or better; Credit is allowed for only CHM 234 or 334
CHM		General Organic Chemistry II	Continuation of CHM 233.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites:CHM 233 or CHM 333 with a C or better; Credit is allowed for only CHM 234 or 334
CHM		Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	REC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1	SQ	Pre- or corequisite(s): CHM 231 with C or better if completed
CHM	235	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	SQ	Pre- or corequisite(s): CHM 231 with C or better if completed
CHM		Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre- or corequisite(s): CHM 231 with C or better if completed
CHM		General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity.	N	REC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1		Pre/Co-requisites: CHM 233 with C or better if completed; Credit is allowed for only CHM 237 or 337
CHM	237	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre/Co-requisites: CHM 233 with C or better if completed; Credit is allowed for only CHM 237 or 337
CHM		General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre/Co-requisites: CHM 233 with C or better if completed; Credit is allowed for only CHM 237 or 337
CHM		General Organic Chemistry Laboratory II	Continuation of CHM 237.	N	REC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1		Prerequisite(s): CHM 237 or 337 with C or better; Pre- or corequisite(s): CHM 234 with C or better if completed; Credit is allowed for only CHM 238 or 338
CHM	238	General Organic Chemistry Laboratory II	Continuation of CHM 237.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): CHM 237 or 337 with C or better; Pre- or corequisite(s): CHM 234 with C or better if completed; Credit is allowed for only CHM 238 or 338
CHM		General Organic Chemistry Laboratory II	Continuation of CHM 237.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): CHM 237 or 337 with C or better; Pre- or corequisite(s): CHM 234 with C or better if completed; Credit is allowed for only CHM 238 or 338
CHM	240	Mathematical Methods in Chemistry	Introduces mathematical/computational methods in chemical kinetics, thermodynamics, quantum chemistry. Mathematical-based computer lab.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Molecular Sciences	3	CS	Pre-requisite: CHM 116 (or 118) with C or better; Pre/Co-requisites: MAT 272 or MAT 267 with C or better if completed
CHM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
CHM		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
CHM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-6		Prerequisite(s): Barrett Honors student
CHM		Environmental Chemistry	Explores major environmental issues, problems, and solutions from analytical and chemistry perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 114 or 116 or 118 with C or better; CHM 231 or 233 or 333 with C or better

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CHM	302	Environmental Chemistry	Explores major environmental issues, problems, and solutions from analytical and chemistry perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 114 or 116 or 118 with C or better; CHM 231 or 233 or 333 with C or better
CHM	303	Environmental Chemistry Laboratory	Lab in environmental chemistry to complement CHM 302. First-hand experience with sampling methods, analytical techniques, and environmental lab methods. Both CHM 303 and CHM 348 must be taken to secure L General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	2	L	Pre/Co-requisites: CHM 302 with C or better if completed
CHM		Analytical Chemistry	Advanced principles and theory of quantitative analysis, including stoichiometry, equilibria, photometric methods, electrochemistry, separation processes, statistical data analysis, and applications to advanced topics in analytical chemistry.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	325	Analytical Chemistry	Advanced principles and theory of quantitative analysis, including stoichiometry, equilibria, photometric methods, electrochemistry, separation processes, statistical data analysis, and applications to advanced topics in analytical chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM		Analytical Chemistry	Advanced principles and theory of quantitative analysis, including stoichiometry, equilibria, photometric methods, electrochemistry, separation processes, statistical data analysis, and applications to advanced topics in analytical chemistry.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM		Advanced Analytical Chemistry Laboratory	Practical methods of quantitative analysis for chemistry majors, including titrimetric, gravimetric, and photometric analysis, and analytical separation processes, statistical data analysis, and applications to advanced topics in chemical analysis.	N	REC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1		Pre- or co-requisite(s): CHM 325 with C or better if completed
CHM	326	Advanced Analytical Chemistry Laboratory	Practical methods of quantitative analysis for chemistry majors, including titrimetric, gravimetric, and photometric analysis, and analytical separation processes, statistical data analysis, and applications to advanced topics in chemical analysis.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre- or co-requisite(s): CHM 325 with C or better if completed
CHM		Advanced Analytical Chemistry Laboratory	Practical methods of quantitative analysis for chemistry majors, including titrimetric, gravimetric, and photometric analysis, and analytical separation processes, statistical data analysis, and applications to advanced topics in chemical analysis.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre- or co-requisite(s): CHM 325 with C or better if completed
CHM		Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 325 and CHM 326 with C or better; Pre/Co-requisite: CHM 346 with C or better if completed
CHM	327	Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 325 and CHM 326 with C or better; Pre/Co-requisite: CHM 346 with C or better if completed
CHM		Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	2		Pre/Co-requisite: CHM 327 with C or better if completed
CHM	328	Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	2		Pre/Co-requisite: CHM 327 with C or better if completed
CHM	333	Organic Chemistry for Majors I	Structures, reaction mechanisms and kinetics, and systematic syntheses of organic compounds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Biochemistry or Chemistry major; CHM 116 or 118 with C or better; Credit is allowed for only CHM 231, 233 or 333
CHM	334	Organic Chemistry for Majors II	Continuation of CHM 333.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Biochemistry or Chemistry major; CHM 333 with C or better; Credit is allowed for only CHM 234 or 334
CHM	337	Organic Chemistry Laboratory for Majors I	Emphasizes mechanisms, kinetics, and products of organic reactions.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre-requisites: Biochemistry or Chemistry major; Pre/Co-requisite: CHM 333 with C or better if completed; Credit is allowed for only CHM 237 or 337

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CHM	338	Organic Chemistry Laboratory for Majors II	Continuation of CHM 337.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre-requisites: Biochemistry or Chemistry major; CHM 337 with C or better; Pre/Co-requisites: CHM 334; Credit is allowed for only CHM 238 or 338
CHM	341	Elementary Physical Chemistry	Thermodynamics, equilibrium, states of matter, solutions, and chemical kinetics. For students in premedical, biological, and educational curricula.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 114, 116, or 118 with C or better; CHM 231, 233, or 333 with C or better; MAT 251, 265, or 270 with C or better; PHY 101, 112, or 131 with C or better
CHM	343	Elementary Physical Chemistry Laboratory	Physical chemistry experiments.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre/Co-requisite: CHM 341 with C or better if completed; Credit is allowed for only CHM 343 or 348 and 349
CHM	345	Physical Chemistry I	Introduces quantum chemistry with application to electronic structure and dynamics of atoms and molecules.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 116 or 118 with C or better; CHM 240 OR PHY 201 OR both MAT 274 (or MAT 275) and MAT 242 (or MAT 342 or 343) with C or better; MAT 267 or 272 with C or better; PHY 131 or 151 with C or better
CHM	346	Physical Chemistry II	Introduces equilibrium and statistical thermodynamics. Laws of thermodynamics, equations of state, multicomponent chemical and phase equilibria, and electrochemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: CHM 345 with C or better
CHM	348	Physical Chemistry Laboratory I	Lab experiments in spectroscopy and computational chemistry. To secure L General Studies credit the following must be taken: CHM 303 & CHM 348 or CHM 348 & CHM 349 & CHM 452.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	L	Pre/Co-requisite: CHM 345 with a C or better if completed
CHM	349	Physical Chemistry Laboratory II	Lab experiments in thermodynamics, electrochemistry, and computational chemistry. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	L	Pre/Co-requisites: CHM 346 with C or better if completed
CHM	385	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s) with C or better: BIO 100 (or BIO 182 or 282 or GLG 101 or SES 121); CHM 101 (or CHM 113 or 114). Credit is allowed for only BIO 325 or CHM 385 or GLG 325
CHM	392	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
CHM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
CHM		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
CHM	424	Separation Science	Basic theory and practical aspects of gas, liquid, ion-exchange, and gel-permeation chromatographies, and other important industrial and research techniques.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 234, or 334, or 346, with C or better
CHM	433	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 234 or 334 with C or better; CHM 341 or 346 with C or better; Credit is allowed for only CHM 433 or 531
CHM	434	Advanced Organic Chemistry II	Continuation of CHM 433.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: CHM 433 or CHM 531 with C or better
CHM	435	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s) with C or better: BCH 361 or BCH 461 or CHM 460; BIO 353; CHM 234 or CHM 334. Credit is allowed for only CHM 435 or CHM 535
CHM	452	Inorganic Chemistry Laboratory	Preparation and characterization of typical inorganic substances, emphasizing methods and techniques. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	L	Pre/Co-requisite: CHM 453 with C or better if completed

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CHM	453	Inorganic Chemistry	Principles and applications of inorganic chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 341 or CHM 346 with C or better
CHM	460	Biological Chemistry	Structure and function of macromolecules and their involvement in the processing of energy and information by living cells.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 234 (or 334) with C or better; CHM 346 with C or better
CHM	471	Solid-State Chemistry	Crystal chemistry, thermodynamics and electrochemistry of solids, nonstoichiometric compounds, diffusion and solid-state reactions, crystal growth, and selected topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre/Co-requisite: CHM 346 with C or better if completed; Credit is allowed for only CHM 471 or 571
CHM	480	Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		
CHM		Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		
CHM	481	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: CHM 341, CHM 346 or GLG 321 with C or better. Credit is allowed for only CHM or GLG 481
CHM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		
CHM		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
CHM	485	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 341, CHM 346, or GLG 321 with C or better; Credit is allowed for only GLG 485 or CHM 485
CHM	489	Field Geochemistry	Explores basic field measurements and sampling techniques for environmental systems, with a focus on carbon cycling in the Colorado River. Surveys a variety of geochemical principles, including: equilibrium aqueous speciation, acid-base chemistry, solution-mineral equilibrium systems, oxidation-reduction reactions, organic and environmental geochemistry and biogeochemical cycles. Applies chemical principles and analytical techniques to answer questions about environmental systems and processes.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Molecular Sciences	3	L	Prerequisite(s): CHM 302 or GLG 321 or GLG 481 with C or better; Credit is allowed for only CHM 489 or GLG 489 or GLG 490 (Field Geochemistry)
CHM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-6		Prerequisite(s): Barrett Honors student
CHM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-6	L	Prerequisite(s): Barrett Honors student
CHM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
CHM		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
CHM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-6		Prerequisite(s): Barrett Honors student
CHM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-7	L	
CHM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
CHM		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
CHM	501	Current Topics in Chemistry		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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CHM	520	Chemical Biology	Chemical biology, broadly defined, is the application of chemical tools toward the study biological problems. The purpose of this class is to provide the foundation for translational research involving cross-disciplinary approaches to tackling significant problems in the biosciences. This one-semester class will cover topics ranging from traditional molecular biology and biochemistry to state-of-the-art techniques in genomics and proteomics. Particular emphasis will be placed on modern concepts in enzymology. The class will be taught using a combination of current literature and text-based materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Graduate students (degree and non-degree); Credit is allowed for only BCH 520 or CHM 520
CHM	523	Advanced Analytical Chemistry	Theoretical principles of analytical instrumentation and measurements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	524	Separation Science	Addresses principles and applications for all areas of chemical separations. Emphasizes separations principles in microfluidics and its interface with nanotechnology and traditional electronic materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	531	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, molecular orbital theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: degree- or nondegree-seeking graduate. Credit is allowed for only CHM 433 or CHM 531
CHM	532	Advanced Organic Chemistry II	Organic mechanisms, thermodynamic and kinetic control, structure/activity relationships, isotope effects, multistep reactions, reactive intermediates, radical reactions, electron transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	535	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Graduate degree or non-degree seeking students; Credit is allowed for only CHM 435 or 535
CHM	540	Integrated Physics and Chemistry	Collaborative inquiry methods for teaching and coordinating physics and chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CHM 540 or PHS 540
CHM	541	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CHM 541 or MSE 524
CHM	543	Computational Chemistry	Provides basic concepts and practical experience in computational chemistry as applied to molecules and solids. Systematically covers theoretical background and applied aspects of electronic structure methods/simulation, and related visualization techniques. Provides weekly laboratory session will provide hands-on experience with state-of-the-art molecular and solid-state simulation/visualization packages, with an emphasis on their reliability, predictive capability and practical limitations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking). Pre/Co-requisite: CHM 545
CHM	544	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CHM 544, NAN 544, PHY 444 or PHY 544
CHM	545	Quantum Chemistry	Wave and matrix formulation of quantum mechanics applied to the vibrational, rotational, and electronic states of polyatomic molecules. Hartree-Fock, electron correlation, and molecular orbital theory. Selection rules and introduction to group theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	546	Molecular Spectroscopy and Group Theory	Applies quantum mechanics to the general problem of the interaction of light with molecular systems. Angular momentum and group theory. Symmetry classifications. Overview of the formalism and experimental techniques in different resonant-based spectroscopies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	549	Advanced Topics in Physical Chemistry	Various advanced and special topics in physical chemistry. Previous topics included: supercooled liquids and the glass transition, vibrational spectroscopy of solids, phase transitions and critical phenomena.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	553	Advanced Inorganic Chemistry	Principles of modern inorganic chemistry applied over the entire periodic system. Bonding theory, chemical reactivity, spectroscopic and magnetic properties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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CHM	571	Structure, Bonding, and Symmetry in Materials	Principles of structural and materials chemistry, emphasizing crystal chemistry. Symmetry of periodic structures (space groups), factors determining bond lengths and coordination geometries, and the role of structure in determining physical properties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking). Credit is allowed for only CHM 471 or 571
CHM	581	Structure of Matter and its Properties	Models of matter and its properties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CHM 581 or PHS 581
CHM	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Molecular Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CHS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	College of Health Solutions	College of Health Solutions	1-4		
CHS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		

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CHS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-6		
CHS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	College of Health Solutions	1-6		
CHS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
CIM	105	Introduction to the Concrete Industry	Overview of the history, career opportunities, job functions, and professional organizations in the concrete industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2		
CIM	106	Fundamentals of Concrete: Properties and Testing	Examines effects of concrete-making materials on the properties of fresh and hardened concrete. Concrete mixture proportioning calculations and analysis.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4		Pre-requisite: CIM 105 with C or better; Co-requisite: STP 226
CIM	205	Concrete Construction Methods	Forming, shoring, placing and reinforcing operations. Transporting, placing, consolidating, finishing, jointing, and curing concrete for foundations and other structural members.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: CIM 106 with C or better; CON 252
CIM	206	Application of Concrete in Construction	Detailed study of the many uses of concrete in the construction of buildings, pavements, and other facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: CIM 205 with C or better; CON 243 with C or better
CIM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CIM	305	Management of Concrete Products: Ordering and Delivering	Basic understanding of managing the order and delivery process common to all concrete products.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: Construction BS student; CIM 206 with C or better; CON 221 with C or better
CIM	306	Management of Concrete Products: Production Facilities	Detailed study of the many uses of concrete in the construction of buildings, pavements, and other facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: Construction BS student; CIM 305 and CON 251 with C or better; CON 271
CIM	405	Concrete Problems: Diagnosis, Prevention, and Dispute	Diagnose and prevent problems related to concrete production, testing, construction, and performance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: Construction BS student; CIM 206 with C or better
CIM	406	Concrete Industry Management Capstone	Intensive study of a problem appropriate to the major and the student's career interests. Lecture, student presentations.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4		Pre-requisites: Construction BS student; CIM 405 with C or better; COM 225
CIM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CIM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CIS	105	Computer Applications and Information Technology	Introduces business information systems from a business intelligence perspective and the uses of application software with emphasis on database and spreadsheet packages for efficient and effective problem solving.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3	CS	
CIS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-3		
CIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		
CIS	235	Introduction to Information Systems	Survey course introducing the competitive and strategic uses of information systems, how information systems are transforming organizations and their management, and the issues, difficulties, and opportunities facing the technology professional and business manager today.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: CIS 105, 200 or 220 with C or better; MAT 210, 270, 211 or 271 with C or better; Credit allowed for only CIS 235 or CIS 236
CIS	236	Honors Introduction to Information Systems	Introduces strategic leveraging of IS solutions and surveys different facets of IS in order to gain an understanding of how business problems are addressed and opportunities realized.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3	CS	Prerequisite(s): Barrett Honors student
CIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Accountancy or Computer Information Systems BS or PRE student

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CIS	300	Web Design and Development	Focuses on Web site development, including target audience, image presentation, page/content topic organization, site navigational functionality, implementation needs, and future needs. Web site design and development practice using business software products.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: Minimum 2.0 ASU cumulative GPA AND minimum 56 earned hours, OR be post-bacc undergraduate, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
CIS	308	Advanced Excel in Business	Covers advanced Excel skills using an applied focus on different types of decisions one may analyze using spreadsheet capabilities; graphs and charts to communicate complex analytics; pivot tables to slice and dice data for reporting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): CIS 105 or CIS 236 with C or better; minimum 45 hours. credit is allowed for only CIS 308 or CIS 394 (Advanced Excel in Business)
CIS	309	Business Process Management	Flow charting, swimlane diagramming, process simulation using modern tool suites. Teaches the types of process evaluation decision analytics most commonly used and covers applied process analysis in a variety of contexts.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): CIS 105 or 236 with C or better; minimum 45 hours. credit is allowed for only CIS 309 or CIS 394 (Process Management)
CIS	311	Business Project Management	Overview of project management emphasizing the fundamentals and analytics that can support project decision making. Covers project planning, resource and disruption management and problem resolution skills. Leverages widely available project management computer tools.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): CIS 105 or 236 with C or better; minimum 45 hours. Credit is allowed for only CIS 311 or CIS 394 (Project Management - Information Systems)
CIS	315	Introduction to Business Data Analytics	Overview of analytics in the business context; concepts of strategic and operational analytics; overview of concepts like dimensional modeling, the Model Lifecycle, data mining, big data, KPIs and metrics, ERP and analytics, in-database/memory analytics; real-time analytics and data stream analysis.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisites(s) with C or better: CIS 235 (or CIS 236); ECN 221; MAT 211; BS Business Data Analytics major
CIS	340	Business Information System Development I	Systems Development Life Cycle (SDLC) tools, techniques, and methodologies used to plan and analyze the needs of modern business information system development.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey CIS BS student; ACC 241, 242 or 271 with C or better; CIS 235 or 236 with C or better; ECN 221 with C or better; MAT 211 with C or better.
CIS	345	Business Information System Development II	Provides a clear understanding of the Systems Development Life Cycle (SDLC) tools, techniques, and methodologies used to design, implement, and support modern business information systems development.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey Computer Information Systems BS student; CIS 340 with C or better
CIS	355	Business Data Warehouses and Dimensional Modeling	SQL, stored procedures and data warehouse architectures; data warehouse requirements definition, design and analysis; overview of the steps in building information-enabled business models; role of data warehousing in data mining and analytics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): BS Business Data Analytics major. Corequisite(s): CIS 315
CIS	360	Business Database Concepts	Database theory, design, and application, including the entity-relationship model; the relational, hierarchical, and network database models; and query languages.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey Accountancy BS student and CIS 105 or 236; ACC 231, 232 or 261; ACC 241, 242 or 271 with C or better
CIS	365	Business Database Systems Development	Focuses on business database and data warehousing systems, development and management. Topics include capturing business requirements using data modeling, SQL, data security, operational and analytical data stores and data integrity.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): Computer Information Systems BS major; CIS 235 or 236 with C or better
CIS	375	Business Data Mining	Building predictive analytics (e.g., SEMMA, KDD); exposure to logistic regression, machine learning and decision tree methods; Understanding lift factors, ROC curves; hands-on use of mining software; business case studies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): CIS 315 with C or better; BS Business Data Analytics major
CIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Minimum 2.0 ASU cum GPA and minimum 56 earned hours, OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CIS	405	Business Intelligence	Business intelligence (BI) is a term describing a broad category of applications, technologies, architectures and processes for gathering, storing, accessing and analyzing data to provide business users with timely information to enable better insights into project and process management and evidence-based decision making. BI is based on techniques for data decision capture, cleansing, validation, warehousing and analytics to help decision makers improve decision outcomes. Provides a capstone understanding of the concepts of managing data resources and the development of business intelligence capabilities using data visualization, data warehousing, data mining, online analytical processing decision support systems and other advanced BI topics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s) CIS 105 or 236 with C or better; minimum 45 hours. Credit is allowed for only CIS 394 (Business Intelligence) or 405
CIS	415	Big Data Analytics and Visualization in Business	Text and stream mining, visualizations for big data, Hadoop, cloud-based solutions, fundamentals of big data programming, social media and big data, NoSQL, software tool support for visualizations; GIS, business case studies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisites(s): CIS 315 with C or better; BS Business Data Analytics major
CIS	425	Electronic Commerce Strategy	Key business strategies and technology elements of contemporary electronic commerce. Covers Web design and interactions between Web pages and databases.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey Accountancy BS or Computer Information Systems BS student; CIS 360 or 365 with C or better
CIS	430	Networks and Distributed Systems	Advanced topics such as communications protocols, distributed systems, network security and client-server systems; applications based on platforms such as.NET and networked UNIX.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey Computer Information Systems student; ACC 330 or 444; CIS 340 or 410 with C or better; Pre/Co-requisite: CIS 360 or 365
CIS	440	Systems Design and Electronic Commerce	Systems design for organizational and electronic commerce systems; use of project management and systems analysis and design tools.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3	L	Pre-requisites: W.P. Carey Computer Information Systems BS student; CIS 360 or 365 with C or better; CIS 430 with C or better
CIS	450	Enterprise Analytics	Model lifecycle analysis, analytics governance, aligning governance, aligning firm and analytics strategy, big data security issues, enterprise search, applied projects.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisites(s) with C or better: CIS 355, 375, 415; BS Business Data Analytics major
CIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey CIS BS student
CIS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-6		Prerequisite(s): Barrett Honors student
CIS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Information Systems	1-6	L	Prerequisite(s): Barrett Honors student
CIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: W.P. Carey ACC BS or CIS BS student
CIS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-6		Prerequisite(s): Barrett Honors student
CIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-7	L	Pre-requisites: W.P. Carey CIS BS student
CIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-3		Pre-requisites: W.P. Carey CIS BS student
CIS	502	Information Systems	Organizational, strategic, and technical issues of the management of information. Evaluation, design, and use information systems as competitive advantage.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: W.P.Carey MBA student
CIS	505	Introduction to Enterprise Analytics	Ensuring the foundational understanding of contextualized analytics within the business enterprise continuum by covering how data flows and is managed across the landscape of enterprise business processes.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate student

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CIS	506	Information Management	Addresses central issues in managing information to achieve competitive advantage and support innovation. Specific topics covered include data quality, data modeling using both entity relationship models and star schemas, data governance, document management, document search, enterprise performance management and visualization techniques.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Prerequisite(s): graduate W. P. Carey major
CIS	508	Data Mining I	Charting a roadmap for data-driven decision making and getting a practical understanding of how IT tools and techniques can allow managers to extract predictive analytics and patterns from primarily numeric data.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate student
CIS	509	Data Mining II	Uses tools and techniques to analyze unstructured data that are applied to business problems to support informed decision making and the extraction of predictive analytics and patterns from primarily nonnumeric data.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-req for CIS 509
CIS	510	Business Process and Workflow Analysis	Builds foundations for process analysis by focusing on information, documents, people, roles and business rules. Provides an introduction to various techniques and tools of process analysis, including an understanding of organizational issues in rolling out change initiatives.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major. Credit is allowed for only CIS 510 or CIS 591 (Business Process Workflow Analysis)
CIS	512	Business Intelligence	Understanding how organizations make use of Business Intelligence (BI) to gain a sustainable competitive advantage. Builds the foundations for evidence-based managerial decision making. Covers technologies for data warehousing and data mining from a managerial perspective. Covers contemporary topics such as real-time BI, business analytics, and business performance management with the help of case studies, audio-video content, guest speakers, online forums to generate creative thinking and discussion.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Prerequisite(s): W.P. Carey graduate major
CIS	515	Business Analytics Strategy	Evaluating, strategically aligning, planning for and directing investments in and governance of processes for continuous renewal of analytics deployments in business.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisite: W.P. Carey graduate major
CIS	525	Strategic Value of Information Technology	Instills balanced and disciplined view of IT and business with their interplay. Assigns cases and assignments involving the symbiotic relationship of IT and business to provide real-world exposure for critical thinking and engaging discussion.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major; Credit is allowed for only CIS 525 or CIS 591 (Strategic Value of Information Technology)
CIS	540	Enterprise Information Security and Controls	Provides a broad survey of information security and controls, utilizing the COBIT framework to illustrate how information security and controls contribute to effective IT governance. Develops an understanding of the issues associated with information security and effective IT governance, with particular emphasis on how management contributes to the effectiveness of an organization's information security program.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major. Credit is allowed for only CIS 540 or CIS 591 (Information Security & Controls)
CIS	545	Managing Enterprise Systems	Investigates major categories of enterprise systems, factors driving software adoption and keys for successful implementation. Pays special attention to evaluating the potential impact of emerging technologies on business environments.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major; Credit is allowed for only CIS 545 or CIS 591 (Enterprise Systems)
CIS	560	IT Services and Project Management	Provides an overview of the project management process groups and knowledge areas (defined by the PMBOK) and focuses on the application of key concepts, tools and techniques for delivering on-time, on-budget IT project and services that meet end-user needs.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major; Credit is allowed for only CIS 560 or CIS 591 (IT Services and Project Management)
CIS	575	Emerging Technologies	Explores decision models and frameworks applied to assess, evaluate and implement emerging technologies. Explains the principles of sustaining and disruptive technological innovation on the adoption and diffusion of emerging technologies. Discusses the technical, industrial and legal parameters that enable convergence and commoditization of technologies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major; Credit is allowed for only CIS 575 or CIS 591 (Emerging Technologies in IT)
CIS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: Specific W.P. Carey Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CIS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: Specific W.P. Carey Graduate student
CIS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey Info Systems PhD student
CIS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CMN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student

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CMN	502	Theory and Practice in Communication and Persuasion	Theoretical exploration of communicative and persuasive practices as applied in various contexts. Surveys classical, modern, and contemporary theories of persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	505	Methods in Applied Communication Research	Examines the intellectual, practical, and ethical dimensions of engaging in applied research. Emphasizes empirical and quantitative methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	506	Humanistic Inquiry and Field Research in Communication	Examines interpretive, critical, and rhetorical approaches to communication and advocacy, including hermeneutics, ethnography, and cultural studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	515	Ethical Issues in Communication Advocacy	Examines the ethical issues or concerns related to communication advocacy. Variable topics; examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	516	Mediation and Dispute Resolution	Examines advocacy's role in fair negotiation and effective and successful dispute resolution. Examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	520	Communication Campaigns	Explores public communication strategies aimed at advocating for general or specific audiences and/or for particular issues and causes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better
CMN	522	Argumentation and Advocacy	Introduces various models of argumentation and their applications to various spheres of advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts students
CMN	531	Communication and Social Change	Examines human communication and technologies of communication as agents of social change within groups, communities, organizations, and/or cultures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	532	Advocacy in Interpersonal Settings	Examines particular relational contexts in which advocacy plays a pronounced role (e.g., personal, family, and service provider relationships).	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	550	Advocacy in Organizational Settings	Examines issues of upward influence, the expression of dissent, and grievance systems within organizational contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	551	Democracy and Power in Organizations	Examines structural, historical, relational, and symbolic dimensions of organizational communication and discourses that foster or impede communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better
CMN	557	Communication and Technology	Assesses technology's role in the social dynamics of human interaction. Emphasizes the impact of technology with regard to communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	565	Globalization and Advocacy	Explores the forces leading to increased intergroup contact and their impact on social, economic, and political dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	570	Communication and Advocacy in Social Context	Variable topics course exploring the intersection of communication and advocacy in specific contexts not addressed in other elective courses.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student

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CMN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
CMN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Pre-requisite: Communication Studies Master of Arts student
CMN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CMN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
CNE	210	Engineering Mechanics I: Statics	Force systems, resultants, equilibrium, distributed forces, area moments, fluid statics, internal forces, friction, and stability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: FSE 100 with C or better; MAT 266 (or MAT 271) with C or better; PHY 121 with C or better; Credit is allowed for only CEE or CNE 210
CNE	212	Engineering Mechanics II: Dynamics	Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: CEE 210 (or CNE 210) and MAT 275 (or MAT 274) completed with C or better; Credit is allowed for only CEE or CNE 212
CNE	213	Introduction to Deformable Solids	Strain-displacement and stress-strain-temperature relations. Stresses and deformations due to axial, shear, torsional and bending moments. Buckling, stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: CEE 210 (or CNE 210) with C or better; MAT 274 (or MAT 275) with C or better; Credit is allowed for only CEE or CNE 213
CNE	241	Surveying	Theory and fieldwork in construction and land surveys.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): MAT 170 or higher with C or better; Credit is allowed for only CEE 281, CNE 241 or CON 241
CNE	243	Heavy Construction Equipment, Methods and Materials	Emphasizes Horizontal construction. Fleet operations, maintenance programs, methods, and procedures to construct tunnels, roads, dams, and the excavation of buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Credit is allowed for only CON 243 or CNE 243
CNE	271	Construction Safety	Safety procedures and equipment. OSHA requirements for construction. Biological aspects of construction safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; Credit is allowed for only CNE 271 or CON 271
CNE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CNE	296	Field Internship	Participation as interns on construction projects to observe and experience the daily activities.	N	PRA	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CON 271 or CNE 271; Credit is allowed for only CON 296 or CNE 296
CNE	321	Structural Analysis and Design	Statically determinate and indeterminate structures (trusses, beams, and frames) by classical and matrix methods. Introduces structural design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4		Prerequisite(s): Civil Engineering BSE or Construction Engineering BSE major; CEE 212 or CNE 212 or MAE 212; CEE 213 or CNE 213 with C or better; Credit is allowed for only CEE 321 or CNE 321
CNE	351	Geotechnical Engineering	Index properties and engineering characteristics of soils. Compaction, permeability and seepage, compressibility and settlement, and shear strength.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4		Prerequisite(s): CEE 213 (or CNE 213) with C or better; BSE Civil Engineering or Construction Engineering major; Credit is allowed for only CEE or CNE 351
CNE	353	Civil Engineering Materials	Structure and behavior of civil engineering materials, including steel, aggregate, concrete, masonry, asphalt, wood, composites. Atomic structure and engineering applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): CEE 213 (or CNE 213) with C or better; BSE Civil Engineering or Construction Engineering major; Credit is allowed for only CEE or CNE 353
CNE	383	Construction Estimating	Analyzes construction drawings and specifications. Utilizes advanced technical and ethical practices in estimating process. Quantity surveying techniques for CSI divisions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4		Prerequisite(s): Construction Management BS major; CON 243 and CON 252 OR Construction Engineering BSE major; CNE 243 or CON 243; Credit is allowed for only CNE 383 or CON 383
CNE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CNE	400	Earth Systems Engr & Mgmt	Introduces earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	(L or HU) & H	Prerequisites: BSE Civil Engineering major; CEE 300 with C or better OR Non-CEE Juniors or Seniors; Credit is allowed for only CEE or CNE 400
CNE	420	Steel Structures	Behavior of structural components and systems. Design of steel members and connections. Load and resistance factor design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: BSE Civil Engineering or Construction Engineering major; CEE 321, or CNE 321 with C or better. Credit is allowed for only CEE 420 or CNE 420
CNE	421	Concrete Structures	Behavior of concrete structures and the design of reinforced and prestressed concrete members, including footings. Partial design of concrete building system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: BSE Civil Engineering or Construction Engineering major; CEE 321 or CNE 321 with C or better; Credit is allowed for only CEE or CNE 421
CNE	450	Geotechnical Applications for Construction	Soil formation, engineering properties and use as building materials. Soil's influence on construction of built environment, including specifications and biological aspects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS major; CON 223 with C or better; CON 310; Credit is allowed for only CNE 450 or CON 450

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CNE	452	Foundations	Applies soil mechanics to foundation and retaining wall systems, including bearing capacity, settlement, and lateral earth pressure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Civil Engineering BSE or Construction Engineering major; CEE 351 or CNE 351 with C or better; Credit is allowed for only CEE 452 or CNE 452
CNE	453	Construction Project Management I	Building information modeling, including current computer programs and LEED methodologies for advanced project deliveries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CON 271 or CNE 271 with C or better; CON 383 or CNE 383; Pre-or Corequisite(s): CON 495 or CNE 495; Credit is allowed for only CON 453 or CNE 453
CNE	455	Construction Project Management II	Advanced topics in administrative procedures, planning processes, and coordination required to successfully complete construction projects on time and budget.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CNE 453 or CON 453; Pre or corequisite(s): CNE 495 or CON 495; Credit is allowed for only CNE 455 or CON 455
CNE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): Construction Management BS major with CON 296 or CNE 296 OR Construction Engineering BSE major with CON 271 or CNE 271; Credit is allowed for only CON 484 or CNE 484
CNE	486	Integrated Civil Engineering Design	Requires completion of a civil engineering design in a simulated practicing engineering environment. Limited to undergraduates in their final semester.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4	L	Pre-requisites: Civil Engineering BSE student: CEE 321; CEE 341; CEE 351; CEE 361; CEE 372 with C or better OR Construction Engineering student: CEE or CNE 321; CEE or CNE 351 with C or better. Credit is allowed for only CEE or CNE 486
CNE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CNE	495	Construction Planning and Scheduling	Various network methods of project scheduling, such as AOA, AON Pert, bar-charting, line-of-balance, and VPM techniques. Microcomputers used for scheduling, resource allocation, and time/cost analysis.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	CS	Prerequisite(s): Construction Management BS major or Construction Engineering BSE major; CON 383 or CNE 383; Credit is allowed for only CON 495 or CNE 495
CNE	496	Construction Contract Administration	Surveys administrative procedures of general and subcontractors. Studies documentation, claims, arbitration, litigation, bonding, insurance, and indemnification. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	L	Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CNE 453 or CON 453; Credit is allowed for only CNE 496 or CON 496

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COE	501	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
COE	502	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	503	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	100	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
COM		Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	
COM		Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
COM	110	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Pre-requisite: Minimum 2.25 GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	110	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisite: Minimum 2.25 GPA
COM	124	Media and Culture	Introduces contemporary intercultural issues as expressed through various media in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	C	
COM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Maximum 24 earned hours
COM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
COM		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
COM	207	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: COM 100 with C or better; Minimum 2.50 GPA
COM		Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: COM 100 with C or better; Minimum 2.50 GPA
COM		Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 100 with C or better; Minimum 2.50 GPA
COM	222	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM		Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM		Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	225	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM		Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM		Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	230	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
COM		Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	
COM		Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
COM	235	Disability, Justice and Advocacy	Overarching history of the disability rights movement and how it is similar to and different from other civil and rights movements. Examines how policies and activism are interconnected within this movement, in addition to looking at other human categories related to disabilities such as gender, sexuality, race and socioeconomic status.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	C	Credit is allowed for only COM 235, JUS 235, SST 235, WST 235 or SST 294 (Disability Justice and Advocacy)
COM	241	Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better
COM		Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better
COM	250	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Pre-requisite: Minimum 2.25 GPA
COM		Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisite: Minimum 2.25 GPA
COM		Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: Minimum 2.25 GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	259	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): non-Communication student; minimum 25 hours
COM		Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): non-Communication student; minimum 25 hours
COM		Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 25 hours
COM	263	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM		Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM		Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	281	Communication Activities	Nongraded participation in forensics or interpretation cocurricular activities. Maximum 3 semester hours each semester.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		
COM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
COM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	PRA	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Prerequisite(s): Barrett Honors student
COM	300	Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: BIS student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM		Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: BIS student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM	308	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum 2.50 GPA
COM		Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum 2.50 GPA
COM		Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum 2.50 GPA
COM	309	Rhetorical, Interpretive, and Critical Methods in Communication	Examines humanistic and qualitative approaches to communication. Introduces textual, interactional and ethnographic methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: COM 207 with C or better; Minimum GPA of 2.0
COM	310	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM		Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM		Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	312	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: COM 100 with C or better; Minimum GPA of 2.50
COM		Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: COM 100 with C or better; Minimum GPA of 2.50
COM		Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: COM 100 with C or better; Minimum GPA of 2.50
COM	314	Inner-City Families: The Cycle of Poverty	Examines issues and concerns that confront inner-city families. Blends theory and application. From a theoretical perspective, examines issues that affect families who live in the inner city (e.g., race and poverty), as well as specific skills and programmatic elements that are needed to work with families in an urban setting. In terms of application, provides an intensive service-learning-based experience. Engages students in specific service to an embedded inner-city organization for a minimum of 3 hours per week. Students work with the professor to determine appropriate service placements.	N	PRA	Y	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 100 OR Junior standing; Credit is allowed for only COM 314 or 498 (Inner City Family)
COM	316	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & C	Pre-requisite: Minimum 2.50 GPA
COM		Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB & C	Pre-requisite: Minimum 2.50 GPA
COM		Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Pre-requisite: Minimum 2.50 GPA
COM		Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: Minimum 2.50 GPA; Minimum 45 hours; Credit is allowed for only COM 317 or CMN 475
COM	317	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; Minimum 45 hours; Credit is allowed for only COM 317 or CMN 475
COM		Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 2.50 GPA; Minimum 45 hours; Credit is allowed for only COM 317 or CMN 475
COM	319	Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319
COM		Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319
COM	320	Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisite: Minimum 2.50 GPA
COM		Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: Minimum 2.50 GPA
COM		Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & H	Prerequisite(s): minimum 2.50 GPA; COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Prerequisite(s): COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	321	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	(L or HU) & H	Prerequisite(s): minimum 2.50 GPA; COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better Prerequisite(s): COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM		Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(L or HU) & H	Prerequisite(s): minimum 2.50 GPA; COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better Prerequisite(s): COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	323	Communication Approaches to Popular Culture	Critical analysis of popular culture within social and political contexts; emphasizes multicultural influences and representations in everyday life.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	C	Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM		Communication Approaches to Popular Culture	Critical analysis of popular culture within social and political contexts; emphasizes multicultural influences and representations in everyday life.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	C	Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	324	Rhetoric and Media Criticism	Critical examination of media arts, including cinema, television, and video. Applies rhetorical, textual, and interpretive methods of criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.0 GPA
COM	325	Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM		Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM	326	Court Room Oratory	Increases knowledge and appreciation of the role of communication in the development of legal and public policies.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		
COM		Court Room Oratory	Increases knowledge and appreciation of the role of communication in the development of legal and public policies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		
COM	327	Civil Communication	Offers a theoretical understanding of civil communication and methods for applying civil communication practices in a variety of contexts.	N	LEC	N	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): minimum 2.50 GPA; junior standing
COM	341	Social Contexts for Performance	Adaptation and performance of literature for the community outside the university. Research into the practical uses of performed literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Minimum 2.50 GPA
COM	342	Oral History and Storytelling	Examines the formation of culture and history through research, presentations, the collection of oral history, and the telling of stories.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: ENG 101 or 102; Credit is allowed for only CMN 394 (Storytelling and Oral History), COM 342 or 394 (Storytelling and Oral History)
COM	353	Professional Communication	Introduces both verbal and written professional communication styles and technologies in preparation for communication-related internships and careers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.0 GPA
COM		Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	371	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM		Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	377	Communication, Terrorism, and National Security	Surveys strategic communication and its relationship to terrorism challenges facing the United States and the rest of the world. Begins with a look at language and definitions, how strategic communication functions are traditionally conceptualized, and the scope and extent of the terrorism problem. Focuses on the contemporary problems of terrorism, including its extent, tactics, and strategies and strategies that aim to combat it. Concludes with a look at new frontiers in the terrorism struggle, including new media and communication approaches.	N	LEC	N	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: minimum 2.50; minimum Junior standing; Credit is allowed for only COM 377 or 394 (Communication: Terrorism and National Security)
COM		Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	College of Letters & Sciences	College of Letters and Sciences	1-6		Pre-requisites: Minimum 2.50 GPA; Credit is allowed for only CMN 382 or COM 382
COM	382	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Minimum 2.50 GPA; Credit is allowed for only CMN 382 or COM 382
COM		Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Pre-requisites: Minimum 2.50 GPA; Credit is allowed for only CMN 382 or COM 382
COM	383	Communication and Mentoring	Explores the role of communication in face-to-face and online mentoring relationships with an emphasis on message shaping, nonverbal communication, professionalism and audience analysis. Applies practice and theory from a variety of lower-division communication courses (public speaking, professional and business, small group, intercultural and interpersonal) to prepare students for mentoring roles in the Communication Assessment Learning Lab (CALL) on ASU's west campus. During the semester, students (individually and as a member of a group) are engaged in creating and delivering both online and in-person public speaking tutorials.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 100 (or COM 110 or 230 or 259 or 263) with B or better; COM 225 with B or better; Credit is allowed for only COM 383 or 498 (Call Lab Mentorship)
COM		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
COM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisite: Minimum 2.50 GPA
COM		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
COM		Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU & C	Prerequisites: Interdisciplinary Studies or Business Communication student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 259 (or COM 100 and COM 225) with C or better
COM	400	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	HU & C	Prerequisites: Interdisciplinary Studies or Business Communication student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 259 (or COM 100 and COM 225) with C or better
COM		Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU & C	Prerequisites: Interdisciplinary Studies or Business Communication student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 259 (or COM 100 and COM 225) with C or better
COM	404	Research Apprenticeship	Direct research experience on faculty projects. Student/faculty match based on interests.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	407	Advanced Critical Methods in Communication	Examines critical approaches relevant to communication, including textuality, social theory, cultural studies, and ethnography.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better; Credit is allowed for only COM 407 or 507
COM	408	Quantitative Research Methods in Communication	Advanced designs, measurement techniques, and methods of data analysis of communication research.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better; Credit is allowed for only COM 408 or 508
COM		Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	410	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM		Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM		Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better; Credit is allowed for only COM 411 or CMN 598 (Communication in the Family)
COM	411	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better; Credit is allowed for only COM 411 or CMN 598 (Communication in the Family)
COM		Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better; Credit is allowed for only COM 411 or CMN 598 (Communication in the Family)
COM	414	Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Minimum 2.50 GPA
COM		Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.50 GPA
COM	416	Gender, Race, Colonialism, and Media	Explores how the mass media constructs gender and race and perpetuates colonial views of minorities and varied nationalities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.0 GPA
COM	417	Communication and Aging	Critical study of changes in human communicative patterns through the later adult years, with attention on intergenerational relationships and self-concept functions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.0 GPA
COM		Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	421	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM		Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	422	Advanced Argumentation	Advanced study of argumentation theories and research as applied to public forums including: political, business, and legal contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisites: Minimum Junior standing; Minimum 2.00 GPA; ENG 101, 105, 107 or 111 with C or better

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COM	424	Television Studies and Criticism	Surveys critical and historical approaches to television as a medium; to television research; and to television's effects.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 207 with C or better or Junior standing with minimum 3.00 GPA
COM	426	Political Communication	Theories and criticism of political communication; including campaigns, mass persuasion, propoganda, and speeches. Emphasizes rhetorical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisite: Minimum 2.50 GPA
COM	429	Semiotics and Visual Communication	Semiotic analysis of mediated forms of communication, including film, television, and photography. Includes the political and aesthetic dimensions of images.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 207 with C or better OR Junior standing with minimum 3.00 GPA
COM		Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Minimum 2.50 GPA
COM	430	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Minimum 2.50 GPA
COM		Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.50 GPA
COM	441	Performance Studies	Theory, practice, and criticism of texts in performance. Emphasizes the interaction among performer, text, audience, and context.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 and COM 308 with C or better
COM	442	Identity, Performance, and Human Communication	Explores communication dimensions of self and others as performance. Examines topics that include gender, race, sexuality, age, and ethnicity through performance.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: COM 225 (or COM 241); Minimum 2.50 GPA
COM	445	Narrative Performance	Theory and practice of performing narrative texts (e.g., prose fiction, oral histories, diaries, essays, letters). Includes scripting, directing, and the rhetorical analysis of storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 with C or better
COM	446	Performance of Literature Written by Women	Explores, through performance and critical writing, literature written by women.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	(L or HU) & C	Pre-requisite: Minimum 2.50 GPA
COM		Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	450	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM		Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	451	Communication and Work Relationships	Communication principles and practices associated with supervisory, peer, and client relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: COM 100; Minimum 45 completed hours; Minimum 2.50 GPA
COM	452	Communication and the Art of Happiness	Examines how communication behaviors relate to constructing happiness and wellbeing. Topics include gratitude, forgiveness, social support, appreciation, social networks and communicative contagion of mood intersecting with issues of dyadic, group and organizational communication. Auxiliary readings come from a variety of disciplines, including psychology, management, sociology, positive organizational scholarship and appreciative inquiry. Course activities include reading, field exercises, journal writing, exams, project presentation(s) and paper(s).	N	LEC	N	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: 2.50 GPA; Junior standing; Credit is allowed for only COM 452 or 494 (Communication of Happiness)
COM		Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): minimum 2.50 GPA
COM	453	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): minimum 2.50 GPA
COM		Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 2.50 GPA
COM	454	Rhetorical and Critical Approaches to Public Relations	An historical and contemporary account of how public relations messages build corporate identities and persuade audiences by shaping public values.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: COM 207 with C or better OR Junior standing with minimum 3.00 GPA; Credit is allowed for only COM 454 or CMN 598 (Rhetorical&Critical Approaches to Public Relations)
COM		Political Communication Campaigns	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): minimum 2.50 GPA

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COM	450	Political Communication Campaigns	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 2.50 GPA
COM	457	New Media	Explores how new communication and information technologies affect communication and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 207 with C or better OR Junior standing with minimum 3.00 GPA
COM	459	Theory and Methods of Social Media Networks	A network-based perspective plays an increasingly important role in our understanding of contemporary communication process of which much has shifted from a hierarchical, densely bounded group basis to a personalized, lateral network. Especially, along with the popularity of social media, social networking has become a key term that characterizes our everyday life. Discusses the role of new media technologies in evolving networked society, and how online networks are intertwined with our offline life. Covers theories and computerized methods that help understand online network structure. Includes lectures and discussions on theoretical issues with hands-on exercises of analytic methods.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): junior standing; minimum 2.50 GPA; MAT 142 or higher with C or better. Credit is allowed for only COM 459 or COM 494 (Social Networks)
COM		Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	463	Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM		Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	464	Communicative Sexualities	Grounded in the discipline of communicology, provides an introduction to the qualitative research practice of semiotic phenomenology. Examines sexuality as a personal, social, historical, and cultural phenomenon, wherein communication is studied as the mediating force through which meanings are ascribed to sexuality and sexual experience. Sexuality is studied as it manifests among a wide variety of people, practices, and contexts. U.S. American culture provides the primary cultural context. Addresses basic questions including: How do we understand sexuality? How have we come to know what we know about sexuality? How do we understand the relationship between sexuality as personal desire, and sexuality as social norm in specific cultural contexts.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: Junior or Senior standing; Minimum 2.50 GPA; Credit is allowed for only COM 464 or 494 (Communicative Sexualities)
COM		Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Minimum 2.50 GPA
COM	465	Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		Pre-requisite: Minimum 2.50 GPA
COM	471	Global Media and Cultural Identity	Explores theory and practices of global media production, dissemination and consumption. Surveys the ways in which local, regional and global sociocultural and political forces interplay to shape cultural identities and media consumption.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	Prerequisite(s): minimum 2.50 GPA; junior standing
COM	477	Sport, Culture, and Discourses	Introduces sport as a global economic and cultural force, and as a foundational discourse experienced largely through media. Facilitates the understanding of sport as a major cultural and socializing institution and, thus, as a key site for the construction of knowledge, understandings, ideologies, and identities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 2.50 GPA
COM	483	Advanced Communication and Mentoring	Students serve as peer mentors in the Communication Assessment Learning Lab (CALL) with instructional emphasis on speaker apprehension, listening, the dynamics of group communication and leadership. Through experiential learning, mentors employ ethical peer tutoring practices by coaching undergraduates in managing public speaking apprehension, speech development and organization. Further, mentors provide on-the-spot feedback to undergraduates relating to delivery techniques, style, nonverbal communication, persuasive strategies and the use of presentational material.	N	LEL	Y	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 383 with C or better
COM		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): Communication major; minimum 56 hours; minimum 2.50 GPA; COM 225 with C or better; COM 308 with C or better

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COM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): Communication major; minimum 56 hours; minimum 2.50 GPA; COM 225 with C or better; COM 308 with C or better
COM		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Pre-requisites: Communication major or Public Relations and Strategic Communication minor student; Minimum 56 hours; Minimum 2.80 GPA; COM 225 (CMN 225) with C or better; COM 308 or 309 with C or better
COM		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6		Prerequisite(s): Barrett Honors student
COM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Prerequisite(s): Barrett Honors student
COM		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
COM		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6	L	Prerequisite(s): Barrett Honors student
COM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6	L	Prerequisite(s): Barrett Honors student
COM		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
COM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
COM		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisite: Minimum 2.50 GPA
COM		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
COM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Prerequisite(s): Barrett Honors student
COM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-7		
COM		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-7		
COM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Minimum 2.50 GPA
COM		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		Pre-requisite: Minimum 2.50 GPA
COM	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	507	Qualitative Research Methods in Communication	Qualitative research methods, including interviewing, field methods, and other nonquantitative techniques for analyzing communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Communications Graduate student; Credit is allowed for only COM 407 or 507

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	508	Quantitative Research Methods in Communication	Empirical research designs, measurements, and statistical strategies and techniques in analyzing and evaluating experimental and descriptive research in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Communications Graduate student. Credit is allowed for only COM 408 or COM 508
COM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student
COM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	604	Theory Construction in Communication	Review and analysis of philosophical problems inherent in communicative research and of metatheories designed to deal with these problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Communications PhD student
COM	607	Contemporary Rhetorical Methods	Analysis of issues in the practice of rhetorical communication research, including criticism and scholarship.	N	SEM	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	608	Multivariate Statistical Analysis of Data in Communication	Statistical analysis of communication research data. Multivariate procedures used in communication research and methods of causal analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Communications PhD student
COM	609	Advanced Qualitative Research Methods in Communication	Analysis of issues in the practice of qualitative communication research, including data gathering, fieldwork issues, analysis strategies, and reporting results.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Communications PhD student
COM	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications PhD student
COM	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student
COM	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Communications PhD student; COM 600 or COM 608 with B or better; COM 601 or COM 700 with B or better
COM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	100	Introduction to Construction	Introduces construction industry sectors and professionals. Additional content includes developing personal competencies required of construction professionals.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2		
CON	101	Construction and Culture: a Built Environment	Analyzes the cultural context of construction, emphasizing its centrality in the evolution and expansion of built environments as expressions of ethical and historical value systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	HU & H & G	
CON	106	Introduction to Concrete Materials for the Built Environment	Effects of concrete-making materials (aggregates, cements, admixtures, etc.) on the properties of fresh and hardened concrete. Discusses concrete mixture proportioning along with the calculations and statistical analysis of strength testing.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	4	SQ	
CON	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CON	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	221	Applied Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2		Prerequisite(s): MAT 170 or higher with C or better; PHY 111 with C or better; PHY 113 with C or better
CON	223	Strength of Materials	Analyzes strength and rigidity of structural members in resisting applied forces. Stress, strain, shear, moment, deflections, combined stresses, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2		Prerequisite(s): CON 221 with C or better
CON	241	Surveying	Theory and fieldwork in construction and land surveys.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): MAT 170 or higher with C or better; Credit is allowed for only CEE 281, CNE 241 or CON 241
CON	243	Heavy Construction Equipment, Methods and Materials	Emphasizes Horizontal construction. Fleet operations, maintenance programs, methods, and procedures to construct tunnels, roads, dams, and the excavation of buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Credit is allowed for only CON 243 or CNE 243
CON	244	Working Drawing Analysis	Provides the ability to read and understand architectural plans; to understand drawing symbols, dimensions, abbreviations, and terms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2		
CON	251	Microcomputer Applications for Construction	Applies the microcomputer as a problem-solving tool for the constructor. Uses spreadsheets, information management, and multimedia software.	N	LAB	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): MAT 170 or higher with C or better
CON	252	Building Construction Methods, Materials, and Equipment	Emphasizes Vertical construction. Methods, materials, codes, and equipment used in building construction corresponding to the division of the CSI Master Format.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		

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CON	271	Construction Safety	Safety procedures and equipment. OSHA requirements for construction. Biological aspects of construction safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; Credit is allowed for only CNE 271 or CON 271
CON	273	Electrical Construction Fundamentals and Project Management	Electrical construction, design, estimating, scheduling and project management. Electrical safety, blueprints and symbols, theory, sequence of installation. National Electrical Code (NEC).	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		
CON	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	296	Field Internship	Participation as interns on construction projects to observe and experience the daily activities.	N	PRA	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CON 271 or CNE 271; Credit is allowed for only CON 296 or CNE 296
CON	310	Testing of Materials for Construction	Structural and behavioral characteristics, engineering properties, measurements, and application of construction materials. Not open to engineering students.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4		Prerequisite(s): Construction Management BS major; CON 221 with C or better; CON 223 with C or better
CON	345	Mechanical Systems	Design parameters and equipment related to heating and cooling systems for mechanical construction. Biorelated aspects of mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS major; CON 221 with C or better; CON 252 with C or better; PHY 111 or 121 with C or better; PHY 113 or 122 with C or better
CON	377	Residential Construction Production Procedures	Process used in residential construction. How a house is built: design, permits, scheduling, codes, contracting, site management, mechanical/electrical.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: Construction BS or Design BSD student; CON 221 with C or better; CON 252
CON	383	Construction Estimating	Analyzes construction drawings and specifications. Utilizes advanced technical and ethical practices in estimating process. Quantity surveying techniques for CSI divisions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4		Prerequisite(s): Construction Management BS major; CON 243 and CON 252 OR Construction Engineering BSE major; CNE 243 or CON 243; Credit is allowed for only CNE 383 or CON 383
CON	384	Environmental Aspects of Heavy Construction	Methods, measures and analysis related to control of erosion, dust generation and storm water discharge during projects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): BS Construction Management major. Pre- or corequisite(s): CON 243. Credit is allowed for only CON 384 or CON 394 (Environmental Aspects of Heavy Construction)
CON	389	Construction Cost Accounting and Control	Nature of construction cost. Depreciation and tax theory and variable equipment costs. Cash flow theory, investment models, profitability, and analysis. Computer applications. Funding sources and arrangements. Builder's insurance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	CS	Pre-requisite: Engineering and Design BS or BSD student; CON 221 with C or better; CON 251, or Construction Engineering student
CON	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Pre-requisite: Engineering BS or BSE student
CON	424	Structural Design	Economic use of concrete, steel, and wood in building and engineered structures. Design of beams, columns, concrete formwork, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS major; CON 223 with C or better; Pre- or corequisite(s): CON 310

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CON	430	Facilities Operations and Maintenance	Operations, maintenance and energy management requirements of various types of facilities and built environments. Ethical practices.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): minimum junior standing; Credit is allowed for only CON 430 or CON 494 (Facilities Management/Operations & Maintenance) or CON 530 or CON 598 (Facilities Management/Operations & Maintenance)
CON	446	Marketing for Construction	Provides key marketing practices to include strategic planning, marketing collateral, networking, business development, and interview preparation for project pursuits. Covers all aspects of service-based marketing topics and practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): COM 225; CON 221 with C or better
CON	448	Sustainable Construction	Studies the principles associated with sustainable construction: problem definition, definition of sustainability, measures of sustainability, examination of current industry practices, financial and resource impacts of sustainable construction, independent student investigation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Construction BS or Civil (Sustainable Engineering) student; Senior standing; Credit is allowed for only CON 448, CON 494 or CON 598 (Sustainability in Construction)
CON	450	Geotechnical Applications for Construction	Soil formation, engineering properties and use as building materials. Soil's influence on construction of built environment, including specifications and biological aspects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS major; CON 223 with C or better; CON 310; Credit is allowed for only CNE 450 or CON 450
CON	453	Construction Project Management I	Building information modeling, including current computer programs and LEED methodologies for advanced project deliveries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CON 271 or CNE 271 with C or better; CON 383 or CNE 383; Pre-or Corequisite(s): CON 495 or CNE 495; Credit is allowed for only CON 453 or CNE 453
CON	454	Trenchless Construction Methods	Theory and practice of trenchless construction methods. Types of equipment, roles of site personnel, engineering design, contractual issues and safety. Lecture, class projects, and site visits. Knowledge of heavy construction equipment, methods and materials required to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; Pre- or corequisite(s): CNE 243 or CON 243; Credit is allowed for only CON 454 or CON 494 (Trenchless Construction Mth) or CON 554
CON	455	Construction Project Management II	Advanced topics in administrative procedures, planning processes, and coordination required to successfully complete construction projects on time and budget.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CNE 453 or CON 453; Pre- or corequisite(s): CNE 495 or CON 495; Credit is allowed for only CNE 455 or CON 455

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CON	457	Principles of Leadership for Project Managers	Individual, organizational and process/structure leadership in project setting. Four-step leadership transformational model for project leaders. Project leadership tools and applications to motivation, conflict management, team building and delegation of risk.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: BS Construction Management or BSE Construction Engineering major; Pre/Co-requisite(s): CON 243; Credit is allowed for only CON 457, 494 (Prin Lead & Management), 557 or 598 (Prin Lead and Mgmt)
CON	465	Deductive Logic, Leadership and Industry Structure	Simple, logical explanations of construction and other industries. State-of-the-art supply chain, profit maximizing and efficient practices.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): junior or senior standing; Credit is allowed for only CON 465 or CON 565
CON	467	Advanced Procurement Systems	Development of multicriteria decision procurement model for selecting the performing contractor.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): junior or senior standing; Credit is allowed for only CON 467 or CON 567 or CON 494 (Advanced Procurement Systems)
CON	471	Mechanical and Electrical Project Management	Specialty contracts and agreements, scheduling, material handling, labor unit analysis, and job costing for mechanical and electrical construction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite: Construction BS student; CON 453 with C or better
CON	472	Development Feasibility Reports	Integrates economic location theory, development cost data, market research data, and financial analysis into a feasibility report.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	L	Pre-requisite: Construction BS or Design BSD student; REA 380
CON	477	Residential Construction Business Practices	Topics addressed include development, marketing, financing, legal issues, and sales.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Engineering BS or Design BSD student; MKT 382 or MKT 395 with D or better OR CON 446 with C or better; CON 377 with C or better; CON 389 with C or better
CON	483	Advanced Building Estimating	Concepts of pricing and markup, development of historic costs, life cycle costing, change order and conceptual estimating.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Construction BS student; CON 383 with C or better
CON	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): Construction Management BS major with CON 296 or CNE 296 OR Construction Engineering BSE major with CON 271 or CNE 271; Credit is allowed for only CON 484 or CNE 484
CON	486	Heavy Construction Estimating	Methods analysis and cost estimation for construction of highways, bridges, tunnels, dams, and other engineering works.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction BS major and CON 383 with C or better, or Construction Engineering BSE major
CON	487	Heavy Construction Project Management	Studies methods used to manage large magnitude heavy construction projects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): BS Construction Management major; CON 243 (or CNE 243) with C or better; Credit is allowed for only CON 487 or 494 (Heavy Const Proj Mgmt)

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CON	488	Heavy Construction Earthworks	Geotechnical issues with respect to foundation grading, forming and location for various types of infrastructure and transportation projects. Also includes streets, highway and embankment developments, retaining wall system, mechanically stabilized earth walls, and required quality control methods for these activities.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; Pre- or corequisite(s): CON 243; Credit is allowed for only CON 488 or CON 494 (Heavy Construction Earthworks)
CON	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6		Prerequisite(s): Barrett Honors student
CON	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6	L	Prerequisite(s): Barrett Honors student
CON	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	495	Construction Planning and Scheduling	Various network methods of project scheduling, such as AOA, AON Pert, bar-charting, line-of-balance, and VPM techniques. Microcomputers used for scheduling, resource allocation, and time/cost analysis.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	CS	Prerequisite(s): Construction Management BS major or Construction Engineering BSE major; CON 383 or CNE 383; Credit is allowed for only CON 495 or CNE 495
CON	496	Construction Contract Administration	Surveys administrative procedures of general and subcontractors. Studies documentation, claims, arbitration, litigation, bonding, insurance, and indemnification. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	L	Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CNE 453 or CON 453; Credit is allowed for only CNE 496 or CON 496
CON	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-7		
CON	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CON	501	Construction Research Methods	Data collection methodologies, applied parametric and nonparametric statistics, data analysis techniques, technical writing, and data presentation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Construction Graduate student
CON	530	Facilities Operations and Maintenance	Operations, maintenance and energy management requirements of various types of facilities and built environments. Ethical practices	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CON 430, 494 (Facilities Management/Operations & Maintenance), 530 or 598 (Facilities Management/Operations & Maintenance)
CON	531	Facility Management: Building Energy Management	Understand and learn energy management techniques in facilities management. Identifying and performing efficiency evaluations on various types of heating, ventilation and air conditioning systems in typical buildings. Concepts and methods of managing, adjusting and balancing equipment and systems for maximum facility performance. Facilities organizations best practices to maximize energy savings and performance, such as insulation usage, lighting optimization, energy management systems and commissioning procedures. Identification of ancillary benefits to energy-efficient building systems such as indoor air quality, sustainability and energy audits.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CON 531 or CON 598 (Facility Management Building)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CON	532	Facilities Project Management	Understand and learn project management techniques in facilities management. Stakeholder analysis, including roles, responsibilities and risk considerations. Asset owner and manager considerations within project components and deliverables. Development of project scope, requirements, schedules, budgets and communication plans from a facility manager's perspective. Best practices of facilities organizations for managing contract types, contract governance and performance management.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only CON 532 or CON 598 (Facility Project Management)
CON	540	Construction Productivity	Productivity concepts. Data collection. Analysis of productivity data and factors affecting productivity. Means for improving production and study of productivity improvement programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction MS or Construction Engineering MSE major
CON	545	Construction Project Management	Theory and practice of construction project management. Roles of designer, owner, general contractor, and construction manager.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction or Construction Engineering graduate student
CON	551	Alternative Project Delivery Methods	Design/construction interaction; conceptual estimation and scheduling; the RFO/RFP process; legal, insurance, risk allocation issues; procurement and selection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	554	Trenchless Construction Methods	Theory and practice of trenchless construction methods. Types of equipment, roles of site personnel, engineering design, contractual issues, and safety. Lecture, class projects, and site visits. Knowledge of heavy construction equipment, methods, and materials required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Construction Graduate student
CON	557	Principles of Leadership for Project Managers	Individual, organizational and process/structure leadership in project setting. Four-step leadership transformational model for project leaders. Project leadership tools and applications to motivation, conflict management, team building and delegation of risk.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: MS or PhD Construction Management or MSE Construction Engineering major. Pre/Corequisites: CON 243; Credit is allowed for only CON 457, 494 (Prin Lead & Management), 557 or 598 (Prin Lead and Mgmt)
CON	561	International Construction	Investigation of the cultural, social, economic, political, and management issues related to construction in foreign countries and remote regions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Engineering Graduate student
CON	565	Deductive Logic, Leadership and Industry Structure	Simple, logical explanations of construction and other industries. State-of-the-art supply chain, profit maximizing, and efficient practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking). Credit is allowed for only CON 465 or CON 565
CON	567	Advanced Procurement Systems	Development of multicriteria decision procurement model for selecting the performing contractor.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CON 467, 567 or 494 (Advanced Procurement Systems)
CON	570	Introduction to Advanced Technology Facilities	Introduces advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. The constructor's viewpoint, including: planning, structures, mechanical, and tool installation. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	571	Construction of Advanced Technology Facilities	Construction issues for advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. Issues include scheduling, cost estimating, project management, mechanical, safety, commissioning and tool hookup. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: CON 570 with C or better
CON	575	Information Technology in Construction	Uses virtual construction methodologies to improve the construction enterprise using communications, facility modeling, and decision making. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CON	589	Construction Company Financial Control	Financial accounting and cost control at the company level in construction companies. Accounting systems. Construction project profit calculations. Financial analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Engineering MS, MSE or PHD student
CON	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisite: Construction Masters student
CON	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Ira A. Fulton Engineering	Del E. Webb Construction	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Prerequisite(s): Construction graduate student
CON	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisite: Construction Masters student
CON	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	700	Research Methods	Course on research methods in a specific discipline.	N	RSC	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		Pre-requisite: Construction Doctoral student
CON	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Ira A. Fulton Engineering	Del E. Webb Construction	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		Pre-requisite: Construction Doctoral student
CPI	101	Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	CS	
CPI		Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3	CS	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CPI	111	Game Development I	Introduces video game design, art theory, and concepts as they apply to video game development. Basic art principles used in game development. Covers the fundamental video game art principles of 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets. Also includes game design, game production, asset production, and game programming. Hands-on experience by creating 2-D game prototypes belonging to different video game genres and evaluating the techniques.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3	CS	
CPI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	200	Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	MA	Prerequisite(s) with C or better: MAT 242 (or MAT 342 or 343); 243
CPI		Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3	MA	Prerequisite(s) with C or better: MAT 242 (or MAT 342 or 343); 243
CPI	211	Game Development II	Introduces the basics of 3D game development by using a game engine. Focuses on the pipeline of 3D game development including environment and contents creation, scripting to control components, and graphics user interfaces development. Develops several 3D games for multi platforms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 111 with C or better
CPI	220	Applied Data Structures and Algorithms	Thorough grounding in applied knowledge and skills related to algorithms and data structures used in the development of software designed to solve complex problems. Overview of computational and critical thinking skills that can be called upon to analyze and solve complex problems in multiple domains.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s): CSE 205 with C or better
CPI	221	Advanced Object-Oriented Principles Using Java	Advanced object-oriented programming using the Java language. Design concepts and problem solving.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s): CPI 220 with C or better
CPI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	310	Web-Based Information Management Systems	Relational database design, entity-relationship modeling, relational algebra, SQL, database access through Web, Web data management, introduction to XML, fundamentals of Web application development, Web server architectures, lecture, in-class lab activities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CSE 205 with C or better
CPI	311	Game Engine Development	State-of-the-art techniques for computer game design and programming with an emphasis on 3-D graphics and interaction. Focuses on a practical, example-driven approach to learning the unique art of 3-D game development. Topics include graphics game engines, textures, shader programming, artificial intelligence, physics, modeling, sound effects, and techniques for user interfaces.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 211 with C or better
CPI	321	Fundamentals of Game Art	Introduces art theory and concepts as they apply to video game development. Covers 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 211 with C or better
CPI	350	Evaluation of Informatics Systems	Methods for evaluation of informatics systems, including design of computational and human experiments, ethnography, and analytic techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s) with C or better: GCU 495 (or IEE 380 or STP 226 or 231 or 420); BS Informatics major
CPI	360	Decision Making and Problem Solving	Practical use of database systems, computer graphics, and modeling to inform decision making.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CSE 205 with C or better
CPI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	400	Scientific Computing and Visualization	Introduces scientific computing and visualization, supported by data acquisition, geometric modeling, and computer graphics. Covers the necessary mathematical foundations, data structures, and algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 101 with C or better; CPI 200 with C or better
CPI	411	Graphics for Games	Examines real-time rendering of high-quality interactive graphics. Studies advances in graphics hardware and algorithms that make this possible. Examples of techniques and topics include nonphotorealistic rendering, occlusion culling, level of detail, terrain rendering, shadow generation, image-based rendering, and physical simulation. Helps students add graphics-related features to the game architecture developed in CPI 311.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 311 with C or better
CPI	412	Cognitive Systems and Intelligent Agents	Advanced concepts and techniques of rule-based programming and agent architectures, incorporating ideas from artificial intelligence, cognitive psychology, and linguistics, along with their use in creating intelligent synthetic characters for interactive games and other virtual environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 311 with C or better

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CPI	421	3-D Modeling and Texturing	Provides working knowledge of 3-D modeling, texture mapping, and paint concepts for the creation of 3-D video games art assets. Students work on concepts such as 3-D lighting, high polygon mesh rendering, and various third-party software and how to integrate them into the asset production pipeline.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s): CPI 211 with C or better
CPI	422	3-D Animation and Rigging for Video Games	3-D rigging, skinning, and 3-D animation techniques for video game development. Includes rotoscoping for character animation, animation loops, and integration of motion capture data, as well as prop animation. Covers operation of 3-D cameras and 3-D rendering.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 321 with C or better
CPI	441	Gaming Capstone	Industry-oriented course emphasizing the video game development process, technical skills, teamwork and communication among the students enrolled in the gaming certificate. Students partner with local industry involved in game development, visual art, and educational gaming and solve real-world problems by working in a team comprised of students from the three tracks available within the certificate.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s): BS Informatics or BIS (Computer Gaming) or Computer Gaming certificate; senior standing
CPI	460	Intelligent Interactive Instructional Systems	Intelligent interactive instructional systems serve as tutors, as learning companions or both. Covers their design, the technology that powers them, the learning theories that motivate them and results from experimental evaluations. Emphasizes intelligent tutoring systems, as they are a more mature technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CSE 205 with C or better; Credit is allowed for only CPI 460 or CSE 494 (Intelligent Instr Sys)
CPI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-12		
CPI	485	Informatics Capstone I	Team-based design of an informatics system; working with clients; development of requirements, use cases, class/object diagrams, and plans for quality assurance and other evaluations; technical communication; teamwork.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3	L	Pre-requisite: CPI 310, 350 and CSE 463 with C or better; Informatics BS student
CPI	486	Informatics Capstone II	Implementation of the informatics system designed during CPI 485; work processes; keeping designs consistent with implementations; conducting QA and other evaluations; technical communication; teamwork.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	4	L	Pre-requisite: Informatics BS student; CPI 485 with C or better
CPI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-6		Prerequisite(s): Barrett Honors student
CPI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-6	L	Prerequisite(s): Barrett Honors student
CPI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-3		
CPI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CPP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-4		
CPP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-4		
CPP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-4		
CPP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-4		
CPP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-7		
CPP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-3		

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CPP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic or writing a literature review of a topic.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		
CPP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		
CPP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	623	Counseling At-Risk Youth	Examines the behaviors that place adolescents at risk for not achieving career goals and interventions to address these behaviors.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	644	Psychology of Careers	Advanced career counseling, including theory, research, and practice.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate; CED 577
CPY	645	Professional Issues and Ethics	Ethical, legal, and professional issues of concern to practitioners and researchers functioning in a variety of settings.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	650	Counseling Latinos	Survey course addressing mental health concerns and perspectives for individuals and families of Latino, Spanish-speaking origin.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: CED 522
CPY	651	Personality Assessment	Training in the use of major objective personality instruments to assess psychological symptoms; emphasizes MMPI-2 and MCMI-III.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: CED 523
CPY	660	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CPY	668	Grant Writing and Grant Makers: The Washington Context	Develops successful proposals for educational research projects. Students gain experience writing for federal agencies, reviewing, and being evaluated on grant proposals.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CPY or HED 668
CPY	670	Individual Differences	Focuses on definitions and assessment of ways humans vary on psychological constructs.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	671	Multicultural Counseling	Provides awareness of the influence of sociocultural variables on human development and explores implications for counseling minority populations.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	674	Counseling Women	Explores women's development and its implications for counseling. Sexism in mental health, sex differences in diagnosis and psychopathology, and women's particular treatment needs.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CPY	675	Health and Wellness Counseling	Theory, research, and practice in health and wellness counseling.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CED 577 with C or better
CPY	676	Social Bases of Behavior	In-depth examination of contemporary research and theory in selected areas of social psychology.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	677	Advanced Counseling	Advanced topics in counseling theory, research, and practice.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate; CED 577 with C or better
CPY	678	Supervision Theory	Models of therapist development and clinical supervision.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	679	History and Systems of Psychology	Examines the development and differentiation of the discipline of psychology from its origins in philosophy to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	694	Substance Abuse: Therapy and Psychoeducation	Develops knowledge and skills for conducting psychotherapeutic and educational interventions to address substance use disorders and associated concerns.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	701	Science and Practice of Counseling Psychology	Directed experiences involving the integration of theory, research, and practice in counseling psychology.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	702	Research Methods in Counseling Psychology	Applies experimental and/or quasi-experimental methods to theory construction and treatment evaluation in counseling psychology.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: COE 502
CPY	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate

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CPY	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Letters & Sciences	College of Letters and Sciences	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Letters & Sciences	College of Letters and Sciences	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CRD	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		Pre-requisite: Maximum 25 hours; Credit is allowed for only CRD, PRM or TDM 191
CRD	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CRD	210	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD or NLM or PRM or TDM 210
CRD	235	Leadership and Ethics	Examines ethical questions faced by emerging leaders. Focuses on helping students develop emotional intelligence, current professional issues, and the refinement of a professional philosophy and comprehensive set of competences that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only CRD 235 or NLM 235
CRD	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301
CRD	302	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	C	Pre-requisites: ENG 102 with a C or better; MAT 142 or higher with a C or better; NLM 160 (or PRM 120) with a C or better; 2.50 GPA; 45 earned hours; Credit is allowed for only CRD, NLM, PRM or TDM 302

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CRD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CRD	403	Leadership and Professional Development	Examines leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: CRD, NLM, PRM or TDM 210 with C or better; CRD, NLM, PRM or TDM 301 with C or better; senior standing; 2.50 GPA; Credit is allowed for only CRD, NLM, PRM or TDM 403
CRD	435	Service Learning for Community Development	Applies youth and adult development theories through community service immersion in collaboration with local nonprofit partners.	N	REC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): Minimum 45 hours. Credit is allowed for only CRD 435 or NLM 435
CRD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CRD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
CRD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	502	Statistical and Data Analysis	Introduces descriptive and inferential methods used in community development, with an emphasis on nonprofit, tourism, and recreation sciences. Students gain experience using statistical software.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
CRD	530	Community Services Management	Examines and applies organizational behavior, leadership, human resources, development, planning, and risk management to profession.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	552	Critical Issues	Examines critical research issues in the leisure, recreation and tourism fields.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	555	Theoretical Perspectives in Community Development	Reviews theoretical and empirical literature in community development with an emphasis on nonprofit, tourism, and recreation sciences.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
CRD	569	Advanced Tourism and Recreation Studies	Advanced study of tourism with an emphasis on relevant practices, theories, and concepts.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	570	Social Aspects of Outdoor Recreation Management	Analyzes the social aspects of natural resource science, policy, and management.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
CRD	572	Community and Social Innovations	Considers community innovation and development from the perspective of achieving balance among economic, environmental, social, physical and political realms as a framework of sustainability.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CRD, NLM 572 or NLM 598 (Community & Social Innovations)
CRD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		

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CRD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		
CRD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CRD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	610	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability. Considers issues at different scales, ranging from urban to rural, local to global, historical to contemporary. Critically examines the role of public, private, and nonprofit institutions in promoting quality of life.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	620	Community Research Methods	Introduces community research methods, with emphasis on methodological questions and techniques relevant to contemporary community-based research.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	640	Research Seminar in Community Resources and Development I	A seminar designed to explore issues related to advancing a career as a researcher in the fields associated with community resources and development (i.e., non]profit, recreation and parks, tourism). Critical to this study is an understanding of the conduct of high quality research, an understanding of issues that arise in professional settings (e.g., expediency vs. effectiveness), and ethical principles and processes that undergird research.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Doctoral student in Community Resources and Development
CRD	650	Research Seminar II	Helps prepare doctoral students to become productive and successful social scientists in community resources and development. Covers a wide range of topics under the broader conceptual umbrella of research, teaching, and service.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Doctoral student in Community Resources and Development
CRD	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		
CRD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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CRJ	100	Introduction to Criminal Justice	Overview of the justice system. Roles of law enforcement personnel, the courts, and correctional agencies. Philosophical and theoretical views in historical perspective.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	SB	
CRJ	201	Criminal Justice Crime Control Policies and Practices	Introduces concepts as the application of situational crime prevention strategies, problem-oriented crime control approaches, hot spots policing, defensible space, and crime prevention through environmental design. Students work to apply academic theory to actual crime problems in the local area.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Credit is allowed for only CRJ 201 or 294 (Criminal Justice Crime Control)
CRJ	203	Courts and Sentencing	History and development of courts, trial by jury, and other dispute resolution mechanisms; selection and removal of judges and juries; organization, structure, and jurisdiction of courts; trial and nontrial processes of the judiciary.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	204	Juvenile Justice	History and development of the juvenile court and the juvenile justice system.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	225	Introduction to Criminology	Provides a broad survey of criminal behavior and the major attempts to explain it. Topics include definitions and measurement of crime, theories of crime causation, and crime types.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	SB	Credit is allowed for only CRJ 225 or 294 (Introduction to Criminology)
CRJ	230	Introduction to Policing	Introduces policing in the United States covering the history of police, contemporary police work, and problems in policing.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	240	Introduction to Corrections	Introduces the structure and function of the corrections system from historical and contemporary perspectives.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	260	Substantive Criminal Law	Criminal liability. Crimes against persons, property, and society. Governmental sanctions of individual conduct as formulated by legislatures and the courts.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	270	Community Relations in the Justice System	Focuses on developing an informed plan and policy for incorporating research findings about the surrounding community within various justice services and agencies. Topics include social stratification, minority groups, and victimology.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	SB	
CRJ	284	Professional Growth in Criminal Justice	Engages students in targeted field practice. Activities include: identifying and touring at two criminal justice agencies, conducting one professional interview, observing one court procedure, participating in small group discussions and exercises, enhancing interpersonal skills, video reviews, listening to professional guest speakers employed in the field, exploring and incorporating research tools, maintaining journal entries, developing one professional resume, and building opportunities to network professionally.	N	LEC	N	YGB	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: CRJ 100
CRJ	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-4		
CRJ	302	Research Methods	Focuses on developing and evaluating research designs, data collection, and the relationship between validity and reliability. Also stresses methods for conducting research.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	L	Pre-requisite: MAT 117, 119, 142 (114), 170, 210, or 270 with C or better; CRJ 100 with C or better; CRJ 201 with C or better
CRJ	303	Statistical Analysis	Fundamentals and application of descriptive and inferential statistics, with emphasis in the administration of justice area.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	CS	Pre-requisites: CRJ 100 with C or better; CRJ 201 with C or better; MAT 117, 119, 142, 170, 210 or 270 with C or better
CRJ	305	Gender, Crime, and Criminal Justice	Studies women as offenders, victims, and professionals in the criminal justice system.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	C	Pre-requisite: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	306	Race, Ethnicity, Crime, and Criminal Justice	Studies minority issues in the criminal justice system.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	C	Pre-requisite: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	308	Advanced Criminological Theory	Focuses on the definition, measurement, causes, consequences, and control of crime. Explores fundamental debates in criminological thought through original readings in the field. Emphasizes critical assessment of dominant criminological theories.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 100 with C or better; CRJ 201 with C or better; CRJ 225 with C or better; Junior or Senior standing; Credit is allowed for only CRJ 308 or 394 (Advanced Criminological Theory)
CRJ	315	Police Organization and Management	Provides a thorough understanding of the structure, processes, and behavior of police organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: CRJ 100, CRJ 301, JUS 100, JUS 105 or JUS 305 with a C or better; CRJ 230 (AJS 230) with C or better

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CRJ	321	Imperatives of Proof	Problems and means of establishing identity and fact in relation to arrest, detention, adjudication, sentencing, and correctional case management.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	350	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	SB	Pre-requisite: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-4		
CRJ	403	Victims and the Criminal Justice System	Examines criminal victimization in the United States. Topics may include: victimization theories, the nature and extent of victimization, the impact of crime on victims and society, the interactions between victims and the criminal justice system, and victim rights and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Junior, Senior or Postbaccalaureate standing; Credit is allowed for only CRJ 403, 494 (Victimology) or 494 (Victims and the Criminal Justice System)
CRJ	404	Juvenile Delinquency	Examines the nature of delinquency related to causes, correlations and current strategies being used to reduce its occurrence. Topics may include: policies and programs, juvenile hate crime, social reaction and labeling theories, learning problems and delinquency, gangs, drugs, and capital punishment for juveniles.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Junior, Senior or Postbaccalaureate standing; Credit is allowed for only CRJ 404 or 494 (Juvenile Delinquency)
CRJ	405	Neighborhoods and Crime	Draws from the ecology of crime perspective as well as urban sociology to study variation in crime across neighborhoods with emphasis on how social institutions and public policy can influence community crime patterns.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Junior, Senior or Postbaccalaureate standing; Credit is allowed for only CRJ 405 or 494 (Neighborhoods and Crime)
CRJ	406	Sex Crimes	This course examines the prevalence, nature, and etiology of sex crimes. Crimes examined include sex-related homicide, sexual assault, intrafamilial sexual abuse, sex trafficking, and prostitution. The course also provides a comprehensive overview of the response of the criminal justice system to victims and perpetrators of sex crimes, with a focus on the investigation of sex crime and the prosecution and punishment of sex offenders. Other issues that will be covered are the history and impact of the rape law reform movement, rape trauma syndrome, sex offender treatment strategies, and the history and impact of sex offender notification and registration laws.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisites: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing. Credit is allowed for only CRJ 406 or 494 (Sex Offenders and Sex Crimes)
CRJ	408	Drugs and Crime	Address the problems, practices, programs, and policies associated with drugs, crime, and drug policy. Primarily focuses on the nature, patterns, and trends of drug use, the relationships between drug use and crime, and criminal justice policy targeted at drug use. Also focuses on discussing various research findings and the controversies surrounding the relationship between drugs and crime. Teaches students about theories of drug use and crime, the basic elements of drugs, and the history of drug control and contemporary drug policies. Pays specific attention to the war on drugs and how the role of race was and is intertwined with drugs and crime.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	409	Police Accountability	Using historical, theoretical and practical approaches, explores major issues in police accountability and community policing including command and control systems, managing police culture, accountability to the community, and training.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 100 and 201 with C or better (or BAS Appl Sci maj or BIS Criminlgy and Crim Justice emph or Crimlngly and Crim Justice min with CRJ 201 with C or better); Jr, Sr or Postbacc standing. Credit for only CRJ 409 or 494 (Police Acctability)
CRJ	410	Procedural Criminal Law	The criminal process. Constitutional and legal problems associated with arrest, search and seizure, and due process of law.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing

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CRJ	412	International Terrorism	Provides a systematic examination of the structural, organizational and political characteristics that affect the topic of international terrorism. Also examines the legal ramifications of the Patriot Act and its legal implications upon our judicial system.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: CRJ 100 and 201 with C or better; Junior or Senior standing; Credit is allowed for only CRJ 412, 494 (Homeland Security) or 494 (International Terrorism)
CRJ	413	Forensics	Provides an overview of forensic science as it is practiced in a modern crime laboratory. Examines how the principles of chemistry, biology, physics and other scientific disciplines are applied to the analysis of physical evidence.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Junior, Senior or Postbaccalaureate standing; Credit is allowed for only CRJ 413 or 494 (Forensics)
CRJ	417	Cyber Terrorism	Focus on the specific avenues of terrorism that are perpetuated in the digital world of the 21st century.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisites: CRJ 100 and 201 with a C or better and Junior or Senior Standing
CRJ	419	Domestic Terrorism	Develops a foundation and understanding of how domestic terrorism has evolved in the United States of America. Introduces the history of significant events, current events, actors and organizations, and how the future of domestic security issues affects the internal and external politics of the USA. Also examines the problems that have been faced, created, and how other actors react to the United States approach to protect itself and combat Domestic Terrorism.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Junior, Senior or Postbaccalaureate standing; Credit is allowed for only CRJ 419 or 494 (Domestic Terrorism)
CRJ	422	Violence in America	Provides undergraduate students with an understanding of violence in American society. Explores the meanings and measure of violence, as well as theoretical and historical context. Examines multiple dimensions of violence, including domestic, gang-related, terrorism, homicide, hate crimes, school violence and sexual assault. Explores, in addition to theoretical discussion, patterns, prevention, policy and practical implications.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Junior, Senior or Postbaccalaureate standing; Credit is allowed for only CRJ 422 or 494 (Violence in America)
CRJ	443	Community Corrections	Examines the probation and parole functions as well as the numerous and diverse types of community corrections programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisites: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	450	Crime Analysis	Techniques of crime analysis and crime mapping and how they are practiced in everyday policing. Focuses on issues in crime analysis and crime mapping, critiquing current practices, and reviewing some of the technology that is used. Covers topics such as: introduction to crime analysis and crime mapping; environmental criminology; data and technology; and specific techniques and examples used in tactical, strategic and administrative crime analysis.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 201 with C or better; junior standing
CRJ	461	Domestic Violence	Legal, historical, theoretical, and treatment aspects of domestic violence, including child abuse, woman battering, incest, and marital rape.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Junior, Senior or Post-Baccalaureate standing
CRJ	462	Gangs	Critical examination of the history and development of gangs, including criminal justice system responses to gangs and gang-related behaviors.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Junior, Senior or Post-Baccalaureate standing
CRJ	463	White Collar Crime	Overview of major issues in business, professional, and official rule violations. Includes consumer fraud, securities violations, unethical professionalism, and political corruption.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: CRJ 100 and CRJ 201 with C or better. Junior or Senior standing
CRJ	464	Organized Crime	The nature of organized crime and its illegal activities, theories of containment, and efforts by justice agencies to counter its dominance in society.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisites: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	470	Discretionary Justice	Use/abuse, key issues/manifestations of discretion in legal system and other societal institutions. Theoretical/empirical linkages between discretion and discrimination, based on race, ethnicity, and gender.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	L or SB	Pre-requisites: CRJ 100 with C or better; CRJ 201 with C or better; ENG 101, 105 or 107 with C or better; Junior or Senior standing
CRJ	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): CRJ 201 with C or better, CRJ 284 with Y grade if completed

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CRJ	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-6		Pre-requisite: Barrett Honors student; CRJ 100, CRJ 201 with C or better. Junior or Senior standing
CRJ	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-6	L	Pre-requisite: Barrett Honors student; CRJ 201 with C or better
CRJ	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-4		Pre-requisite: CRJ 201 with C or better; Minimum Junior standing
CRJ	495	Student Assessment	Students may attend a mid-semester information session on the assessment process. At the end of the semester, students take part in a standardized examination and self-administered survey. Y/E grade only. Students must register for this class their final semester.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	0		Pre-requisite: CRJ 100 and CRJ 201 with C or better. Junior or Senior standing
CRJ	496	Directed Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to contribute to a specific project such as a report or publication. Tasks may include data collection and coding, data analysis, literature reviews and producing research reports. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the faculty member with whom the student will work and the director of the school offering the course.	N	RSC	Y	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-3		Prerequisite(s): CRJ 302 with C or better; junior or senior standing
CRJ	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-3		Pre-requisites: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	501	Seminar in Criminal Justice	Overview of the American criminal justice system, with emphasis on policy issues in police, courts, sentencing, corrections.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	502	Seminar in Criminology	Theory and research on the nature, causes, and prediction of criminal careers and events.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	503	Research Methods	Introduces data analysis; overview of research methods used in social science research, including experimental design, survey research, field research, and evaluation research.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	504	Statistical Tools for Criminology and Criminal Justice	Focuses on essential statistical analysis that can be used in criminal justice and related agencies.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	505	Theory and Practice in Criminal Justice	Capstone course for the MA in Criminal Justice; provides a synthesis of the criminal justice system.	N	RSC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

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CRJ	510	Criminal Justice Planning and Program Evaluation	Examines the application of alternative models of strategic planning to the criminal justice system. Covers methods of evaluating criminal justice policies and practices.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	511	Applied Data Analysis in Criminal Justice	Examines a variety of tools used in the analysis of criminal justice data, including GIS mapping.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	512	Seminar in Policing	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	513	Seminar in Courts and Sentencing	Overview of the nature, proposed principles, and theoretical doctrine of the courts and sentencing policies in criminal justice.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	514	Seminar in Corrections	Theory, research, and policy issues regarding community-based and institutional correction programs.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	515	Seminar in Women and Crime	Introduces students to issues regarding women and the criminal justice system, focusing on their roles as offenders, victims and professionals.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	516	Seminar in Criminal Justice Organization and Management	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	517	Seminar on Juvenile Delinquency and Juvenile Justice	Examines patterns and correlates of delinquency within the context of theories of delinquency. Reviews the response of the juvenile justice system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	518	Seminar on Race/Ethnicity, Crime, and Justice	Theoretical perspectives and research on the overrepresentation of racial minorities as victims, offenders, and defendants in the criminal justice system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	519	Seminar on Victimization	Examines theory and research concerning victimization and consequences for victims, society, and the justice system. Also examines effective responses to victims' post-crime needs.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

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CRJ	520	Seminar on Violent Crime	Examines patterns and correlates of violent crime, as well as prevention strategies and policy implications.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	521	Seminar on the Nature of Crime	Examines patterns and correlates of crime at individual, situational, and aggregate levels. Topics include defining crime, offender typographies, and criminal careers.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	522	Seminar on Gangs and Crime	Theoretical perspectives and research on gangs and crime, and on the role of the community and the criminal justice system in causes and control.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	524	Seminar on Punishment and Society	Examines the fundamental philosophical principles of justice and punishment. Includes a comparative and historical perspective.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	525	Seminar on Life-Course Criminology	Provides an intensive examination of life-course explanations of crime, the life-course perspective and a theoretical orientation, and research methods used in life-course research.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	526	Theories of Crime Causation		N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Criminology and Criminal Justice MS or PhD major; Credit is allowed for only CRJ 526 or 598 (Theories of Crime Causation)
CRJ	527	Police Accountability	Examines the great authority of police, the various and most common ways that police abuse that authority, the consequences of those abuses, and accountability mechanisms that can prevent those abuses from occurring.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: MA in Criminal Justice or MS in Criminology and Criminal Justice or PhD in Criminology and Criminal Justice major; Credit is allowed for only CRJ 527 or 598 (Police Accountability)
CRJ	528	Prison and Jail Administration	Overview of prison and jail administrative practices, with emphasis on policy and management issues in modern correctional institutions.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminal Justice MA or Criminology and Criminal Justice MS or Criminology and Criminal Science PhD student
CRJ	529	Community Corrections	Provides a review of theory, research and policy focusing primarily on correctional strategies and programs that take place within the community setting, as well as the function of community corrections within the larger correctional system. Gives particular attention to the purpose and goals of community-based corrections; the historical development of probation and parole practices; and contemporary community corrections programs and strategies such as evidence-based practices, risk assessment, offender reentry, sex offender management, diversion, restitution, community service programs and other emerging alternatives to traditional incarceration.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: MA in Criminal Justice or MS in Criminology and Criminal Justice or PhD in Criminology and Criminal Science student
CRJ	553	Terrorism and Weapons of Mass Destruction	Historical evolution of terrorism and weapons of mass destruction. Analyzes current theories and mitigation, preparedness, and response tactics.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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CRJ	554	Homeland Security	Presents skills necessary to develop policies, strategies, programs, and organizational structure of an all hazards/all risk homeland security program.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisites: Degree- or nondegree-seeking graduate; Credit is allowed for only PAF 461 or 554
CRJ	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Pre-requisite: Criminology and Criminal Justice MS student
CRJ	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-4		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

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CRJ	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	601	Seminar on Criminological Theory	Examines historical and contemporary criminological theories.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	602	Seminar on Criminal Justice Policies and Practices	Analyzes responses to crime and the operation of criminal justice system, with emphasis on theory and research on effectiveness of policies and practices of the system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	603	Advanced Research Design	Exposes students to advanced topics in research design and methodology in preparation for writing the doctoral dissertation.	N	RSC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	604	Advanced Statistical Analysis	Use and application of advanced statistical techniques and multivariate analysis of data.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	605	Topics in Quantitative Methods	Explores advanced techniques of statistical analysis within the field of criminal justice.	N	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	606	Advanced Topics in Theoretical Criminology	Focuses on criminological theory construction, historical and contemporary theoretical debates within criminology, theory testing, empirical support for theories, and theoretical integration.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	607	Advanced Topics in Policing	Covers the major issues related to policing and police organizations in the United States. Principal focus on policing and police organizations in large cities, with a focus on police organizational structure, police culture, police organizational environment, police decision making and change in the police organization.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	608	Advanced Topics in Courts and Sentencing	Focuses on recent research on charging, plea bargaining, bail decision making, jury decision making and sentencing, as well as the impact of recent reforms directed at the criminal court system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	609	Advanced Topics in Corrections	Provides a critical examination of the theoretical framework underpinning current correctional policy (institutional and community based), as well as advanced, in-depth analyses of contemporary issues surrounding corrections.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	610	Advanced Topics in Juvenile Justice	Examines the meaning of the concept of juvenile delinquency as a separate entity in the criminal justice system. Considers the relationship between social attitudes and definitions of youthful law violation, and reviews studies on various forms of delinquency, such as drug offenses, sex delinquency, and status offenders. Also focuses on the internal workings of the juvenile justice system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	611	Advanced Topics in Crime and Victimization	Examines research on criminal offending and victimization, focusing on the correlates of offending and victimization, risk and protective factors, and policies designed to reduce the impact of crime on victims.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	612	Advanced Topics in Race, Gender, and the Criminal Justice System	Examines the interrelationships among race and ethnicity, gender, crime and the criminal justice system. Focuses on theoretical perspectives and empirical research on racial minorities and women as victims, offenders, and criminal justice professionals.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	613	Qualitative Methods	Provides students with an examination of the design, execution, and write-up of qualitative research. Discusses methods of data collection, including participant-observation, ethnography, and interviewing.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CRJ	792	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student

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CRJ	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student
CSE	100	Principles of Programming with C++	Principles of problem solving using C++, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	CS	
CSE	110	Principles of Programming	Concepts of problem solving using an object-oriented programming language, algorithm design, structured programming, fundamental algorithms and techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	CS	
CSE	120	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		
CSE	180	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	CS	
CSE	180	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	CS	
CSE	182	Applied Problem Solving with C#.Net	Introduces object oriented programming, problem solving, fundamental algorithms and techniques, computer systems concepts, and implementation of programs using Visual C#.Net platform.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		
CSE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	205	Object-Oriented Programming and Data Structures	Problem solving by programming with an object-oriented programming language. Introduces data structures. Overview of computer science topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	CS	Pre-requisite: CSE 110 with C or better. Credit is allowed for only ACO 102 or CSE 205 or CST 200
CSE	220	Programming for Computer Engineering	Introduction to C/C++, systems programming, and concurrency.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: CSE 120 or EEE 120 with C or better; CSE 205 with C or better
CSE	230	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming, Exception/interrupt handling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: CSE 120 or EEE 120 with C or better; CSE 100, 110 or 200 with C or better OR Computer Science or Computer Systems Engineering Graduate student; Credit is allowed for only CSE 230 or EEE 230
CSE	240	Introduction to Programming Languages	Introduces the procedural (C/C++), applicative (LISP/Scheme), and declarative (Prolog) languages.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): CSE 205 with C or better or Geographic Information Science major with GIS 321 with C or better
CSE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		Prerequisite(s): Barrett Honors student
CSE	301	Computing Ethics	Ethics for computing majors: history of computing, intellectual property, privacy, ethical frameworks, professional ethical responsibilities, and risks of computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Pre-requisite: Computer Science BS or Computer Systems Engineering BSE student; CSE 205 with C or better
CSE	310	Data Structures and Algorithms	Advanced data structures and algorithms, including stacks, queues, trees (B, B+, AVL), and graphs. Searching for graphs, hashing, external sorting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s) with C or better: CSE 220 or 240; MAT 243 (or 300 for CMS); Computational Math Sci (CMS), Computer Science, Computer Systems Engineering, Digital Culture (Media Proc), Engineering Management, Geo Info Sci or Informatics or BMI/CSE grad

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CSE	320	Design and Synthesis of Digital Hardware	Design and synthesis of digital hardware with hardware description language, computer-aided design tools, and programmable devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Systems Engineer BSE or Computer Science BS student; CSE 220 with C or better; CSE 230 or EEE 230 with C or better
CSE	325	Embedded Microprocessor Systems	System-level programming and analysis of embedded microprocessors systems. Fundamental concepts of digital system design for embedded system applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Systems Engineer BSE or Computer Science BS student; CSE 220 with C or better; CSE 230 or EEE 230 with C or better; Credit is allowed for only CSE 325 or 421
CSE	340	Principles of Programming Languages	Formal syntactic and semantic descriptions, compilation and implementation issues, and theoretical foundations for several programming paradigms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Systems Engineer BSE or Computer Science BS student; CSE 310 with C or better; CSE 230 or EEE 230 with C or better OR CSE Graduate student
CSE	355	Introduction to Theoretical Computer Science	Introduces formal language theory and automata, Turing machines, decidability/undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS students; CSE 310 with C or better OR CSE Graduate student
CSE	360	Introduction to Software Engineering	Software life cycle models; project management, team development environments and methodologies; software architectures; quality assurance and standards; legal, ethical issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): CSE 220 or 240 with C or better; Biomedical Informatics BS or Computer Science BS or Digital Culture (Media Processing) BA or Geographic Information Science BS or Computer Systems BSE or Engineering Mgmt BSE, or Computer Science graduate
CSE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	408	Multimedia Information Systems	Design, use, and applications of multimedia systems. Introduces acquisition, compression, storage, retrieval, and presentation of data from different media such as images, text, voice, and alphanumeric.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student
CSE	412	Database Management	Introduces DBMS concepts. Data models and languages. Relational database theory. Database security/integrity and concurrency.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Biomedical Informatics BS or Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student; Credit allowed for only ACO 220 or ACO 320 or CSE 412 or CST 433
CSE	414	Advanced Database Concepts	Object-oriented data modeling, advanced relational features, JDBC and Web access to databases, XML and databases, object-oriented databases, and object-relational databases.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; CSE 412 with C or better

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CSE	420	Computer Architecture I	Computer architecture. Performance versus cost tradeoffs. Instruction set design. Basic processor implementation and pipelining.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 230 or EEE 230 (or CSE 330) with C or better; CSE 310 with C or better OR Computer Engineering graduate student
CSE	423	Systems Capstone Project I	Development process: specification, design, implementation, evaluation, and testing with economic, social, and safety considerations. Technical communication and team skills enrichment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Prerequisite(s): Computer Systems Engineering BSE student; senior academic level; Prerequisite(s) with C or better: CSE 310, 320, 325 and 360; Credit is allowed for only CSE 423 or 485
CSE	424	Systems Capstone Project II	Continuation of capstone project started in CSE 423.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Pre-requisite: Computer Systems Engineering BSE student; Senior standing; CSE 423 with C or better
CSE	430	Operating Systems	Operating system structure and services, processor scheduling, concurrent processes, synchronization techniques, memory management, virtual memory, input/output, storage management, and file systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; CSE 230 or EEE 230 with C or better; CSE 310 with C or better OR CSE Graduate student
CSE	432	Operating System Internals	IPC, exception and interrupt processing, memory and thread management, user-level device drivers, and OS servers in a modern microkernel-based OS.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; CSE 430 with C or better
CSE	434	Computer Networks	Network architecture and protocols, principles of network applications, socket programming, flow and congestion control, switching and routing, link-layer technologies, traffic capture and analysis, security.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 230 or EEE 230 with C or better; CSE 310 with C or better OR Computer Science and Engineering graduate student; Credit is allowed for only ACO 330 or CSE 434
CSE	438	Embedded Systems Programming	Development of embedded system software, I/O handlers, and multiple threaded programs. Scheduling algorithms. Embedded software structures. Real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 325 with C or better OR Computer Science and Engineering graduate student
CSE	440	Compiler Construction I	Introduces programming language implementation. Implementation strategies such as compilation, interpretation, and translation. Major compilation phases such as lexical analysis, semantic analysis, optimization, and code generation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Systems Engineering BSE or Computer Science BS major; CSE 310 with C or better OR Computer Engineering graduate student
CSE	445	Distributed Software Development	Distributed system architectures and design, service-oriented computing, and frameworks for development of distributed applications and software components.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 360 with C or better OR Computer Science and Engineering graduate student

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CSE	446	Software Integration and Engineering	Software development using architecture design, composition, workflow, services, data resources, data representations, data management, and development tools.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engr BSE major; Pre- or corequisite(s): CSE 445 with C or better if completed OR Computer Science and Engr grad student; Credit allowed for only CSE 446 or 598 (Software Integration & Engineering)
CSE	450	Design and Analysis of Algorithms	Design and analysis of computer algorithms using analytical and empirical methods; complexity measures, design methodologies, and survey of important algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Systems Engineering BSE or Computer Science BS major; CSE 310 with C or better OR Computer Engineering graduate student
CSE	457	Theory of Formal Languages	Theory of grammar, methods of syntactic analysis and specification, types of artificial languages, relationship between formal languages, and automata.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; CSE 355 with C or better
CSE	459	Logic for Computing Scientists	Propositional logic, syntax and semantics, proof theory versus model theory, soundness, consistency and completeness, first order logic, logical theories, automated theorem proving, ground resolution, pattern matching unification and resolution, Dijkstras logic, proof obligations, and program proving.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; CSE 355 with C or better
CSE	460	Software Analysis and Design	Object-oriented and structured analysis and design; software architecture and design patterns; component-based development; software safety and reliability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Geographic Information Science BS or Computer Systems Engineering BSE major; CSE 360 with C or better OR Computer Science and Engineering graduate student
CSE	463	Introduction to Human Computer Interaction	Design, evaluate, and implement interactive software intended for human use.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Informatics BS or Digital Culture (Media Processing) BA major; CPI 310 with C or better OR Computer Science and Engineering graduate student
CSE	464	Software Quality Assurance and Testing	Software quality assurance (SQA), software quality metrics, software configuration management, software verification and validation, reviews, inspections, understanding software testing process, functional testing, structural testing, model-based testing, integration, system, and regression testing techniques, software life cycle models and software testing, testing distributed software, bug management, and use of testing tools.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: BSE Computer Systems Engineering or BS Computer Science student; CSE 360 with C or better; Credit is allowed for only CSE 464, 494 or 598 (Software Quality Assurance and Testing)
CSE	465	Information Assurance	Concepts of information assurance (IA); basic IA techniques, policies, risk management, administration, legal and ethics issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisites: Computer Information Systems BS, Computer Systems Engineering BSE, Computer Science BS or Industrial Engineering BSE student; CIS 300 (or CSE 310 or IEE 305) with C or better

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CSE	466	Computer Systems Security	Countermeasures to attacks to computer systems from miscreants (or hackers) and basic topics of cryptography and network security.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Science BS or Computer Systems Engineering BSE student; CSE 310 with C or better
CSE	467	Data and Information Security	Basic concepts of security and privacy, data and database security, access controls, trust models, watermarking, and private information retrieval.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Science BS or Computer Systems Engineering BSE student; CSE 310 with C or better
CSE	468	Computer Network Security	Practical network security exposure and hands-on experience about basic concepts, case studies, and useful tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Engineering graduate student
CSE	469	Computer and Network Forensics	Identification, extraction, documentation, interpretation, and preservation of computer media for evidentiary purposes, file system forensics, and network forensics.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): CSE 310 with C or better OR Computer Science and Engineering graduate student; Credit is allowed for only CSE 469 or CSE 598 (Computer and Network Forensics)
CSE	470	Computer Graphics	Introduces basic concepts of interactive computer graphics, realistic rendering, and 3-D viewing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS, Geographic Information Science BS, Digital Culture (Media Processing) BA or Computer Systems Engineering BSE student; CSE 310 with C or better; MAT 342 or MAT 343
CSE	471	Introduction to Artificial Intelligence	State space search, heuristic search, games, knowledge representation techniques, expert systems, and automated reasoning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Systems Engineering BSE, Computer Science BS or Geographic Information Science BS student; CSE 240 with C or better; CSE 310 with C or better
CSE	472	Social Media Mining	Network measures, social network analysis, network models, random graphs, small-world model, power laws, data mining, influence and homophily, information diffusion, epidemics, behavioral analysis, recommendation in social media, community detection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite with C or better: CSE 310; IEE 380; MAT 343; Computer Science or Computer Systems Engineering major; Credit is allowed for only CSE 472 or 494 (Social Media Mining)
CSE	476	Introduction to Natural Language Processing	Principles of computational linguistics, formal syntax, and semantics, as applied to the design of software with natural (human) language I/O.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; CSE 310 with C or better
CSE	477	Introduction to Computer-Aided Geometric Design	Introduces basic concepts of 3-D computer geometry, including curves, surfaces, meshes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; MAT 342 or 343 with C or better OR Computer Science and Engineering graduate student
CSE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	YGB	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): junior or senior standing

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CSE	485	Computer Science Capstone Project I	First course in capstone sequence for computer science majors emphasizing development process, technical skills, teamwork, and communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Pre-requisite: Computer Science BS major; Senior standing; CSE 310 with C or better; CSE 340 with C or better; CSE 360 with C or better; Credit is allowed for only CSE 423, 461 or 485
CSE	486	Computer Science Capstone Project II	Second course in capstone sequence for computer science majors continuing the development process, technical skills, teamwork, and communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Pre-requisite: Computer Science BS student; Senior standing; CSE 355 and 485 with C or better
CSE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		Prerequisite(s): Barrett Honors student
CSE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
CSE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Pre-requisite: CSE 310 with C or better
CSE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-7		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; Minimum cumulative GPA of 2.50 or Graduate Engineering student
CSE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-3		
CSE	509	Digital Video Processing	Concepts of digital video compression, video analysis, video indexing, browsing and retrieval, video transmission over networks, video processors, and relevant industry standards.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	510	Database Management System Implementation	Implementation of database systems. Data storage, indexing, querying, and retrieval. Query optimization and execution, concurrency control, and transaction management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	511	Semi-Structured Data Management	Addresses the data management issues for semi-structured data, which are commonly found in Web applications. Covers techniques on modeling, storing, querying and searching data without schemas, with optional confidence, and/or provenance information. Requires knowledge on relational databases and programming skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	512	Distributed Database Systems	Distributed database design, query processing, and transaction processing. Distributed database architectures and interoperability. Emerging technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	515	Multimedia and Web Databases	Data models for multimedia and Web data; query processing and optimization for inexact retrieval; advanced indexing, clustering, and search techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	520	Computer Architecture II	Computer architecture description languages, computer arithmetic, memory-hierarchy design, parallel, vector, multiprocessors, and input/output.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	522	Real-Time Embedded Systems	Development of real-time embedded systems, scheduling algorithms, embedded software structures, real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Science, Computer Engineering, Master of Engineering or Engineering Science (Software Engineering) Graduate student
CSE	530	Embedded Operating System Internals	Investigating Linux source including: memory management, kernel synchronization and driver design topics. Designing, coding, testing, and evaluating embedded operating system software in a Linux environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student

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CSE	531	Distributed and Multiprocessor Operating Systems	Distributed systems architecture, remote file access, message-based systems, object-based systems, client/server paradigms, distributed algorithms, replication and consistency, and multiprocessor operating systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	534	Advanced Computer Networks	Advanced network protocols and infrastructure, applications of high-performance networks to distributed systems, high-performance computing and multimedia domains, special features of networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	535	Mobile Computing	Mobile networking, mobile information access, adaptive applications, energy-aware systems, location-aware computing, mobile security and privacy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	536	Advanced Operating Systems	Protection and file systems. Communication, processes, synchronization, naming, fault tolerance, security, data replication, and coherence in distributed systems. Real-time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	539	Applied Cryptography	Uses cryptography for secure protocols over networked systems, including signatures, certificates, timestamps, electrons, digital cash, and other multiparty coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	543	Information Assurance and Security	Comprehensive understanding of information assurance and security problems with the solutions as well as hands-on experiences about applying these solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	545	Software Security	Theories and tools for software security, including secure design, threat analysis and modeling, security testing and coding.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	548	Advanced Computer Network Security	Comprehensive understanding of network security and corresponding solutions, including cryptography, access control, secure Web transactions, e-mail security, and viruses.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	550	Combinatorial Algorithms and Intractability	Combinatorial algorithms, nondeterministic algorithms, classes P and NP, NP-hard and NP-complete problems, and intractability. Design techniques for fast combinatorial algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	552	Randomized and Approximation Algorithms	Introduces two important areas of algorithm design for graduate students. A randomized algorithm is allowed to rely on the outcome of a random experiment in deciding on its next step. In many applications, randomized algorithms are simpler than any deterministic algorithms known, but in several cases, they are in fact more powerful or more efficient than any deterministic algorithms. Covers basic paradigms for randomized algorithm design and analysis, as well as for derandomization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	555	Theory of Computation	Rigorous treatment of regular languages, context-free languages, Turing machines and decidability, reducibility, and other advanced topics in computability theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	556	Game Theory with Applications to Networks	Strategic conflict as matrix games, notions of equilibrium, definition and existence of Nash equilibrium, zero-sum games, extensive-form games, Bayes Nash equilibrium, potential games, routing games, algorithmic game theory, computation of Nash equilibrium, incentives and pricing in communication networks, application of game theory in wireless networks. Knowledge of calculus, discrete mathematics, probability theory and algorithms is necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student; Credit is allowed for only CSE 556 or CSE 591 (Game Theory with Applications to Networks)
CSE	561	Modeling and Simulation Theory and Application	Modeling theories, simulation protocols, object-oriented modeling, model design, simulation analysis, network-based systems, discrete-event modeling, continuous modeling, hybrid modeling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	563	Software Requirements and Specification	Examines the definitional stage of software development; analysis of specification representations, formal methods, and techniques emphasizing important application issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	564	Software Design	Examines software design issues and techniques. Includes a survey of design representations and a comparison of design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	565	Software Verification, Validation, and Testing	Test planning, requirements-based and code-based testing techniques, tools, reliability models, and statistical testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	566	Software Project, Process, and Quality Management	Project management, risk management, configuration management, quality management, and simulated project management experiences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student

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CSE	569	Fundamentals of Statistical Learning and Pattern Recognition	Concepts of statistical pattern recognition, Bayesian decision theory, parameter estimation, discriminant analysis, basics of artificial neural networks, basics of data clustering. Knowledge of college-level calculus, linear algebra, basic probability theory and proficiency in computer programming is necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Engineering or Computer Science Graduate student. Credit is allowed for only CSE 569 or 591 (Statistical Learning and Pattern Recognition)
CSE	570	Advanced Computer Graphics I	Hidden surface algorithms, lighting models, and shading techniques. User interface design. Animation techniques. Fractals and stochastic models. Raster algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	571	Artificial Intelligence	Definitions of intelligence, computer problem solving, game playing, pattern recognition, theorem proving, and semantic information processing; evolutionary systems; heuristic programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	572	Data Mining	Advanced data mining techniques: classification, clustering, association, preprocessing; performance evaluation; information assurance, Web mining, security and privacy issues, and other applications. Students must have a solid background in database management systems, search, learning, and statistics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	574	Planning and Learning Methods in AI	Reasoning about time and action, plan synthesis and execution, improving planning performance, applications to manufacturing intelligent agents.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	575	Statistical Machine Learning	Spectral clustering, regression, classification, semi-supervised learning, feature reduction, manifold learning, ranking, kernel learning and multitask learning.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Science or Computer Engineering MCS, MS, or PHD major. Credit is allowed for only CSE 575 or 591 (Machine Learning)
CSE	576	Topics in Natural Language Processing	Comparative parsing strategies, scoping and reference problems, nonfirst-order logical semantic representations, and discourse structure.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	577	Advanced Geometric Modeling I	Advanced concepts of geometric modeling: rectangular and triangular surfaces, triangle meshes, Voronoi diagrams, discrete and continuous shape measures, volumes and volume visualization. Students must have a solid background in linear algebra, calculus, and basic 3D graphics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	579	Knowledge Representation and Reasoning	Covers knowledge representation and reasoning algorithms in artificial intelligence, shows how they can be used in practice, and provides an overview of current research trends.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Science or Computer Engineering Graduate student. Credit is allowed for only CSE 579 or 591 (Knowledge, Represent/Reasoning)
CSE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): Computer Science or Computer Engineering graduate student

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CSE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CSM	201	Introduction to Community Sports	Examines the role of community sports at the local, national and international levels.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only CSM 201 or PRM 201
CSM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CSM	303	Program Planning	Effective program planning in varied leisure delivery systems.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only CSM or PRM 303
CSM	305	Sports Facility Operations and Management	Overview of the management and operations of sports facilities.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: Community Sports Management major; CRD 210 (or NLM/PRM/TDM 210) with C or better; MAT 142 or higher; minimum 2.50 cumulative GPA; minimum 45 hours
CSM	335	Sports and Recreation for Youth Development	Provides an overview of definitions, statistics, theories and models, and types of programs surrounding youth development in relation to sports, recreation and leisure services. Addresses current trends related to youth development and collaborative partnerships in sports, recreation and leisure services at various levels within local, state, national and/or international systems.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only CSM 335 or PRM 335
CSM	350	Tourism, Recreation and Sports Marketing	Critical examination of marketing principles in leisure and related industries in diverse settings, including local, national, and international.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or CSM 201 or TDM 205; minimum 45 hours. Credit is allowed for only CSM 350 or PRM 350 or TDM 350

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CSM	401	Management of Parks and Recreation Services	Analyzes administrative function, structure, and policies. Successful application in administrative situations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CSM 305 (or PRM 304) with C or better; ENG 102 with C or better; MAT 142 or higher; CSM or PRM major; minimum 2.50 cumulative GPA; minimum 45 hours. Credit is allowed for only CSM 401 or PRM 401
CSM	402	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CSM 401, NLM 410, PRM 401, or TDM 401 with C or better. Credit is allowed for only CSM 402, NLM 402, PRM 402 or TDM 402
CSM	407	Ethics and Legal Issues in Sports	Comprehensive look at ethical decision making from many perspectives in the sports environment. Presents legal issues as they relate to history, present society and future trends.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: CSM 201
CSM	463	Senior Internship	Supervised guided experience in selected agencies.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	6-12		Prerequisite(s) with C or better: CRD 403 or PRM 413; CSM 402 or NLM 402 or PRM 402 or TDM 402. Credit is allowed for only CSM 463 or NLM 463 or PRM 463 or TDM 463
CSM	483	Sports Tourism	Examines the relationship between sports and tourism, and the role of recreation and amateur sports as an economic and community development strategy. Also considers the motives, behaviors and experiences of sport tourists; the impacts of sport tourism; and trends in sports tourism.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): Minimum 45 hours. Credit is allowed for only CSM 483 or TDM 483
CSM	485	Sports Events	Expands the basic concepts of recreation, leisure or tourism program planning and leadership as they are specifically related to sport events management.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only CSM 485 or PRM 485
CST	100	Object-Oriented Software Development	Introduces problem solving with a state-of-the-art programming language. Expressions, statements, basic control flow and methods. Data, data aggregation and usage. Uses a structured personal software development process to implement solutions representative of common computing applications. Uses development kits for some course activities.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		
CST	111	Introduction to Game Development	Introduces fundamental video game development concepts and techniques prevalent in video game industry. Provides opportunity to understand these techniques and learn how they are applied during the production of a video game. Includes game design, game production, asset production, game programming, game art and animation. Hands-on experience by writing 2D game prototypes while learning different game mechanics and features. Intended to serve as an introduction into the game production cycle, breaking down the complex process of game creation into a simple step-by-step program. No programming knowledge is required; however, some degree of computer proficiency is desirable.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Credit is allowed for only CST 111 or 194 (Intro to Game Development)
CST	150	Computer Systems Fundamentals I	Logic design and computer organization; number systems and arithmetic, boolean algebra; digital systems components; assembly language and instruction set concepts and application.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3	CS	Pre-requisite: CST 100, EGR 101 or SER 101 (or be co-enrolled in CST 100); MAT 117 or higher; Credit is allowed for only CST 150 or SER 232
CST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-3		
CST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
CST	200	Core Data Structures with Object Oriented Programming	Design, implementation and use of core data structures; object-oriented software development: design, analysis and programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 100 (or 211) with C or better; Credit is allowed for only ACO 102, CSE 205 or CST 200
CST	201	Object-Oriented Software Development II Lab	Hands-on development and programming using objects, inheritance, and polymorphism; GUI programming; introduction to software engineering concepts, UML tools.	N	LAB	N	OPT	Ira A. Fulton Engineering	Software Engineering	1		Pre/Co-requisite: CST 200

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CST	211	Intermediate Game Development	Introduces multiplayer games, artificial intelligence, and tile-based worlds using a scripted programming environment. Uses game scripting to automate, repeat, change, anticipate, and govern the action of games from a simple word game to a complicated multiplayer game like pool. Introduces gaming terminology and basic genres, enhancements such as fine-tuning graphics, creating optimal soundtracks, and using high score lists, as well as creating and modifying online chat files. Introduces video game scripting to the student. Scripting skills are essential in every aspect of game development and are used by designers, programmers, and artists in the game industry. Students learn the core scripting skills required to implement game features and apply those to enhance the prototype created in the introductory course.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 111; Credit is allowed for only CST 211 or 294 (Intermediate Game Development)
CST	220	Programming Languages and Their Execution Environment	Introduces the fundamental programming language concepts of data, type, control, abstraction, and structure; software development and execution environments; programming language paradigms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 200 or SER 102; Credit is allowed for only CST 220 or SER 221
CST	230	Design and Analysis of Data Structures and Algorithms	Data structures and related algorithms for their specification, complexity analysis, implementation and application. Sorting and searching. Professional responsibilities that are part of program development, documentation and testing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisites: EGR/SER 102 (or CST 200); MAT 243; Credit is allowed for only CST 230 or SER 222
CST	250	Microcomputer Architecture and Programming	Microcomputer architecture, instruction set, assembly language programming and debugging, I/O considerations, memory interface, peripherals and buses, exception/interrupt handling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 100; CST 150 or SER 232
CST	251	Microcomputer Architecture and Programming Laboratory	Hands-on experience in assembly language programming and debugging. May be taken concurrently with, or subsequent to, CST 250.	N	LAB	N	OPT	Ira A. Fulton Engineering	Software Engineering	1		Pre-requisite: EGR 101 (or CST 100), or CST 150; Pre/Co-requisite: CST 250
CST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
CST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student
CST	315	Software Enterprise I: Tools and Process	Introduces tools and techniques used in software enterprise/development, including coding, design, testing, configuration management, and personal process management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre/Co-requisite: CST 230 or SER 222
CST	335	Applications of Computer Theory	Introduces and applies formal language theory and automata, Turing machines, decidability, undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 230; MAT 243
CST	350	Digital Design with Hardware Description Languages	Digital system design using Verilog. Structural and behavioral modeling. Design examples include finite-state machines, RISC CPUs, and UARTs. Requires design projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	4		Prerequisite(s): CST 150 or SER 232 or Fulton Polytechnic School graduate student
CST	386	Operating Systems Principles	Fundamentals of operating systems, process management, scheduling and synchronization techniques, memory and file management, protection and security issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 200 (or SER 222) and CST 250 (or CST 251)
CST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
CST	415	Software Enterprise III: Inception and Elaboration	Third course in the four-course enterprise sequence. Students perform inception (project launch) and elaboration (requirements analysis) activities in project teams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3	L	Pre-requisite: CST 316; ENG 101, ENG 105 or 107
CST	416	Software Enterprise IV: Project and Process Management	Project-centric course focusing on applying software process, project management, and technical leadership. Final course in the software enterprise sequence.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 415; ENG 102, 105, 108 or 112
CST	420	Principles of Distributed Software Systems	Design and implementation of distributed software components; process and memory management underlying software applications; sockets, protocols, threads, XML, serialization, reflection, security, and events.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisites: CST 200 (or SER 102); MAT 243; Credit is allowed for only CST 420 or SER 321
CST	425	Server Software Programming	Design and implementation of software servers, threaded socket servers, servers for distributed Web-based applications; security for the Web.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 420 with C or better
CST	427	Distributed Object Systems	Distributed applications with Web services, NET, RMI, CORBA; concepts and frameworks for managing, registering, locating, and securing distributed object applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 420 with C or better
CST	428	Web-Client User Interface Programming	Client-server model for window interfaces. Java Swing, Applets, mark-up and scripting languages; Web tools and related technologies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 420 with C or better

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CST	433	Principles of Database Management	Fundamental methods in modeling and managing data-oriented systems. Relational, object, and hierarchical data modeling techniques. Query languages including SQL. Semantics of transaction processing. Database system architectures including cloud-based, client-server, and embedded databases. Security and privacy issues. Modern trends in data management including managing data on the cloud, unstructured data type management, data mining, and business analytics, and NoSQL data management platforms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 200 (or SER 102) and MAT 243 with C or better; Credit is allowed for only CST 433, SER 322 or CST 598 (Principles of Database Management), or Credit is allowed for only ACO 220 or ACO 320 or CSE 412 or CST 433
CST	441	Software Development for Mobile Devices	Mobile computing using Java's K, Virtual Machine, MIDP for wireless applications; user interfaces, persistent data storage, and networking.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 420 with C or better
CST	450	Computer Architecture	Price/performance analysis, instruction set design, RISC/CISC, processor design and implementation, pipelining, instruction-level parallelism, memory hierarchy, storage and I/O systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 250
CST	452	Digital Systems Synthesis with Hardware Description Languages	Uses a hardware description language to synthesize components of computers and digital systems as FPGAs. Emphasizes optimization and satisfying performance constraints of system scale designs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 350
CST	456	Embedded Interfaces: Sensors and Actuators	Electromechanical sensors and electrical actuators, analog-to-digital and digital-to-analog conversion, hardware and software interfaces for embedded systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 150 (or SER 232) and CST 200
CST	458	Digital Computer Networks	Network hardware and software, topologies, protocols, OSI model, LANs, WANs, Internet; basic concepts of packet switching, routing, error controlling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 250; CST 251 or IFT 201 or BAS student
CST	460	Computer Graphics with Applications	Hands-on course introduces 2D and 3D computer graphics programming and some of the applications related to the topic in a studio-style learning environment. Uses data structures for computer graphics, and a graphics API such as OpenGL taught with industry examples. Intended for upper-division (senior) students in CST programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 100 (or EGR 102); CST 230 (or SER 221)
CST	483	Cyber Security Capstone Project	Applies security techniques to a real-world situation. Development of security policy, risk solutions, and incident response facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	2		Pre-requisite: BAS student; CST 481 or CST 489; Pre/Co-requisite: CST 482
CST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		
CST	486	Embedded C Programming	Programming concepts for embedded systems. Interfacing and controlling LED, LCD, keypads, buttons. Embedded OS concepts. Timers and interrupts. Serial communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): undergraduate or nondegree Engineering student; CST 350 and 383 with C or better OR SER 222 with C or better; minimum 2.25 GPA OR graduate Engineering student
CST	490	Reading and Conference		N	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
CST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student
CST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Software Engineering	1-6	L	Prerequisite(s): Barrett Honors student
CST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		Prerequisite(s): Fulton Schools of Engineering undergraduate student; Min GPA 2.25; OR Fulton Schools of Engineering graduate student
CST	496	Ethics and Professionalism in Computing	Studies major social and ethical issues in computing, including impact of computing on society, ethical behavior, and social responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	1		Pre-requisite: Junior or Senior standing
CST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student

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CST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-7		Prerequisite(s): Fulton Schools of Engineering undergraduate student; Min GPA 2.25; OR Fulton Schools of Engineering graduate student
CST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-3		
DAH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DAH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DAH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): Barrett Honors student
DAH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Prerequisite(s): Barrett Honors student
DAH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DAH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
DAH	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
DAN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DBA	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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DBA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	701	Macroeconomic Policies in a Global Environment	Provides the framework for policy makers when facing macroeconomic situations, the tools in analyzing the costs and benefits of alternative policy options, and the knowledge necessary for making recommendations to policy makers and business leaders. Students learn knowledge and skills about global economy and risks that help facilitate dissertation research.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	702	Global Financial Systems: Markets and Institutions	Examines the overall architecture of the global financial system, its major components, and their functions in the macro economy.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	703	Global Financial Systems-Institutional Investing	A large fraction of investors around the world invest in securities markets indirectly, viz. through mutual funds or separate accounts established with investment managers, whether they be endowments, foundations, pension plans or sovereign funds. Exposes students to the global marketplace for such portfolios.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	704	Design of Knowledge Base Organizations for Performance and Innovation	Covers various issues on executive compensation and management pay structure with a particular emphasis on aligning business strategy, organization design to the choice of performance standards and pay structure for managers.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	705	Global Corporate Strategy	Demonstrates that decisions affecting the international expansion of a firm are neither obvious nor totally determined by the technological or economic forces generally associated with globalization. Addresses the most transcendental decisions that multinational firms face in the course of conducting business across borders.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	706	Strategic Visioning, Leadership and Change Management	Addresses the interrelationship among organizational culture, leadership, and the management of change in order to promote continuous improvement of the organization's market position. Addresses the role of strategy, how strategy explicates vision, and how effective strategies are created.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student

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DBA	707	Risk Management : An Enterprise Perspective	Provides an understanding of the broad set of risks an enterprise faces; their origin, characteristics and potential impact on business; and how they can be efficiently managed at the enterprise level.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	708	Challenges of Corporate Finance and Governance	Helps students understand the link between finance and corporate strategies, as well as examine ways to establish and reform the practices of corporate governance in China.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	709	Finance and Law	Helps students learn about the philosophy of law, various legal systems, the relationships among law and economics and finance, the practice of law in a global context.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	710	Financial Decision Making	Provides a framework of conceptual knowledge and enables students to understand what the literature on financial theory is trying to do and how it all fits together. Also provides an in-depth experience with the subject of finance and equips students for their future development as a practicing executive.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	711	Finanacial Innovations	Focuses on how financial innovations influence the evolution of finance. Discusses many of the major financial innovations in recent history, the forces driving these innovations, their impact on the financial system and the real economy and the risks they bring.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	712	Advanced Topics in Global Economy and Finance: Domestic Module	Addresses many critical topics facing China today on its quest of globalization, the need for transforming its economic structure, capital markets and corporate control, and its monetary policies.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	713	Advanced Topics in Strategy and Management: Domestic	Reexamines many popular best practices through panel discussion and speaker series on why some of those practices failed to work in China, and how firms have creatively modified their strategic undertakings to fit its environment.	N	LEL	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	714	Current Trends in Global Economy, Finance and Management: US Module	Provides first-hand experiences on the world class practices by the multinationals and interactions with the leading experts on the emerging topics of interest on globalization, financial regulations, and managerial innovations.	N	LEL	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	4		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	715	Current Trends in Global Economy, Finance and Management: Europe Module	Provides direct exposure to European markets, firms, and institutions, their history, current status, and future directions.	N	LEL	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	4		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	721	Research Seminar I- Research in Action	Provides needed skills for research and thesis work. 1. Focuses mainly on research design and fundamental statistical/survey and field study methods. The key objective is to provide students with the needed required skills and concepts of the scientific method, the philosophy of science, and research design with an emphasis to solve specific problems. This course is spread out during the first year of the program.	N	SEM	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	722	Research Seminar II-Research in Action II	Focuses on the process of research "in actions" through faculty presentation and research workshops. Faculty with diverse research interest and methodologies present up-to-date research works. Through interaction, students gain first-hand experience on learning the process of how faculty, with diverse research interests, are able to identify specific research topic, choosing the right research methodology to address their research questions. The presentation and research workshop are scheduled at the beginning of the second year and throughout the entire year, allowing the program to leverage faculty availability during their course delivery while enabling students to seek out their faculty mentors for future dissertation engagement.	N	SEM	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	723	Research Seminar III- Research in Action III	Provides students with opportunities to present their own research proposal/ thesis ideas while allowing the participating faculty and fellow students to offer constructive comments.	N	SEM	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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DBA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	100	Introduction to Dance	Overview of dance as a cultural and performative practice, exploring history and theory, philosophy, and movement practices, with reference to key pioneers in the field from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & G	
DCE	110	Argentine Tango I	Introduces basic movement elements, explores various contexts shaping Argentine Tango, and emphasizes social tango with exposure to vals and milonga timing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	111	Raqs Sharqi I	Familiarize students with the ancient art of Middle Eastern dance. Covers posture, styling, basic body isolations, rhythm patterns, footwork, as well as the social significance and history of the dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	112	Capoeira I	Introduces the Afro-Brazilian martial art and movement form capoeira. Molds elements of self-defense, dance, music, song, language, culture and philosophy into the course.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	113	Dances of Africa I	Introduces basic elements of West and Central African dance styles, including the traditional rhythms and cultural context.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	114	Dances of India I	Introduces Indian folk dances with an emphasis on the history and various movement elements of an ancient South Indian classical dance form, known as Bharata Natyam.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	115	Yoga I	Introduces a basic physical and philosophical understanding of yoga. Designed by a certified Yoga instructor.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Credit is allowed for only DCE 115 or 194 (Yoga I)
DCE	116	T'ai Chi Chuan I	Introduces an ancient Chinese internal martial art form. The structure includes the beginner level of Tai Chi Chuan theory and movement practice.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	117	Feldenkrais I	The Feldenkrais method is an approach to enhance awareness of the body, improve functional actions, and expand one's repertoire of movements.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	118	Yoga/Pilates	Provides a basic physical and philosophical understanding of yoga and Pilates mat practices.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	120	Modern Dance I	Introduces modern dance and its basic principles, including alignment, core muscular strength, and spatial exploration.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	121	Ballet I	Introduces principles of ballet and development of basic technical skills, including dynamic alignment, functional rotation, and musicality.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	122	Jazz I	Provides students with beginning-level technique class in different jazz styles. Focuses on alignment, technique, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	123	Hip Hop I	Equips student with understanding of hip hop dance history, culture and music through studio work on various hip-hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	124	Latin/Swing/Ballroom I	Introduces major Latin and ballroom dances and focuses on a system of elements that are found in all partnership dances, including movement components, rhythmic patterns, dance positions, and unique characteristics used to better define each dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	125	Latin/Salsa I	Introduces Latin dancing. Instruction focuses on salsa, cha-cha, merengue, and rumba.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	126	Country-Western	Initiates the student into the rhythm two-step, progressive two-step, night club two-step, country cha-cha, country waltz, triple swing and a multitude of line dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	130	First-Year Movement Practices I	Introduces diverse somatic movement principles and practices through exploration of movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance major
DCE	131	First-Year Movement Practices II	Modular structure enables a series of short intensive studies including movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance student; DCE 130 with C or better

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DCE	133	Urban Movement Practices I	Designed as an introduction to dance, history, culture, and music in urban movement styles.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors, BA Performance and Movement, BIS-Dance, Dance minor; Credit is allowed for only DCE 133, 194 (Intro to Urban Mvt. Practices) or 494 (Urban Movement Practices)
DCE	134	Postmodern Contemporary I	Introduces postmodern contemporary dance technique and theory. Designed to enhance the dancer's technical and artistic proficiency by using movement that is athletically challenging, nuanced, and rhythmically complex.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	135	Contemporary Ballet I	Introduces contemporary view of ballet technique and theory with attention to enhancing student's dynamic alignment.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	136	Somatic Practices I	Survey course offers a practical and theoretical introduction to some of the major somatic practices evolving out of the 20th century. Guest practitioners and teachers of various embodied practices share theory, practice and context. Explores movement and the integration of the body and mind through a variety of somatic lenses (e.g., the Alexander Technique, Authentic Movement, and experiential anatomy).	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Credit is allowed for only DCE 136 or 194 (Intro Movement Language Sources)
DCE	137	African and Diaspora Movement Practices I	Foundational course in the African and the Diaspora movement practices curriculum.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance BFA, BIS-Dance concentration or Dance minor; Credit is allowed for only DCE 137, 194 (Mvt Practice: Africa/Diaspora), 294 (Mvt Practice: Africa/Diaspora) or 494 (African & Diaspora Mvt Prac)
DCE	160	First-Year Creative Practices I	Explores creativity and creative processes with reference to some key historical practices and influential artists. Seeks to encourage and develop students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	161	First-Year Creative Practices II	Explores creativity and creative processes with reference to some key historical practices and influential artists. Encourage and develops students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance BFA student; DCE 160 with C or better
DCE	170	First-Year Seminar I	Orientation to the university learning environment and profession of dance with emphasis on developing tools and processes for reflection and critical thinking.	N	LEC	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major
DCE	171	First-Year Seminar II	Continuation of First-Year Seminar I. Focuses on orientation to the larger field of contemporary dance practice with an emphasis on developing tools and processes for reflection, synthesis, and critical thinking. Requires participation in School of Dance "Dance Matters."	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance majors
DCE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
DCE	201	Dance, Culture, and Global Contexts	Introduces the study of dance as culture in diverse global contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & G	
DCE	202	Dance in U.S. Popular Culture	Investigates vital cultural heritages that have shaped dance in U.S. American popular culture from 20th century to the present. Emphasizes dance as a producer of social space and cultural identity as well as a reflection of diverse social realities and dynamics of power. Following required reading and videos, the course surveys time periods of dance from the late 1800s through the 20th century to the present day.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & C	Credit is allowed for only DCE 202 or 294 (Dance in US Popular Culture)
DCE	203	Walk this Way	Addresses walking as a key component in movement studies and further brings the study of bodily movements center stage as a means to address the dynamic between self and society. Designed for nonmajors. Not eligible for majors credit.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre/Co-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only DCE 203 or 294 (Walk this Way)
DCE	210	Argentine Tango II	Builds upon concepts, figures, and elements of the Argetine Tango introduced in level one.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 110 or DAN/DCE 194 (Argentine Tango I)
DCE	211	Raq̄s Sharqi II	Focuses on refining beginning technique, advanced movements, layering and musical interpretation. Uses choreography and improvisation to encourage mind-body awareness.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 111 or DAN 194 (Raqs Sharqi I)

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DCE	216	T'ai Chi Ch'uan II	Intermediate-level study of the ancient Chinese martial art of rounded, fluid, balanced movements. Teaches the sets of long form Yang style of Tai Chi Ch'uan in a slow and relaxed manner.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 116 or DAN 194 (T'ai Chi Ch'uan I)
DCE	220	Modern Dance II	Explores modern dance practices, including somatic techniques, stylistic versatility, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Credit is allowed for only DAN 130 (Modern II) or DCE 220
DCE	221	Ballet II	Explores contemporary and classical ballet practices, focusing on whole body integration and performance strategies.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	222	Jazz II	Explores intermediate level of jazz dance techniques.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 122 or DAN 130 (Jazz I)
DCE	223	Hip Hop II	Intermediate-level class that provides the knowledge of hip hop dance history, culture and music through studio work on various hip hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 123 or DAN 194 (Hip Hop I)
DCE	224	Latin/Swing/Ballroom II	Continues development of level one Latin/Swing/Ballroom dances to prepare student to have command of the complex rhythmic patterns and figures used in major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 124 or DAN 194 (Latin/Swing/Ballroom I)
DCE	225	Latin/Salsa II	Reviews and reinforces the basics introduced in Latin/Salsa I and builds upon more complicated concepts and figures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 125 or DAN 194 (Latin/Salsa I)
DCE	230	Second-Year Movement Practices I	Investigates selected movement forms in the second-year movement practices. New movement forms include but are not limited to contact improvisation, Alexander technique, Feldenkrais, Body Mind Centering (BMC), taekwondo, aikido, wushu, LMA, yoga, or somatic bodywork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors; DCE 131 with C or better
DCE	231	Second-Year Movement Practices II	This course is set up in two modules. In module one, students will investigate a movement form, include but are not limited to contact improvisation, Alexander technique, Feldenkrais, Body Mind Centering (BMC), taekwondo, aikido, wushu, LMA, yoga, or somatic bodywork. Module two expands the practice of rhythmic awareness through exploration and investigation of the close relation between thought and act, the kinesthetic and the verbal, the text and the beat, as well as the breath and the word.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors; DCE 230 with C or better
DCE	233	Urban Movement Practices II	A practical and theoretical investigation of the urban movement forms and practices developed over recent years in urban centers around the world. Addresses the evolution of hip hop/urban movement dance through the study of House style.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors, Performance and Movement major, BIS-Dance Concentration or Dance minor; DCE 123 or 133 or 194 (Intro to Urban Mvt. Practices) or 494 (Urban Movement Practices) with C or better
DCE	234	Postmodern Contemporary II	Investigation and practices of postmodern contemporary dance technique. Development of movement quality and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	235	Contemporary Ballet II	Explores the possibilities of contemporary ballet technique and theory with awareness of student's individual anatomical differences.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	236	Somatic Practices II	Laboratory for somatic education that explores the foundations of movement, voice, expression and spatial awareness. Open to nonmajors, the class welcomes and encourages the participation of students from a wide variety of disciplines. Taught through the principles of specific somatic lenses (e.g., the Alexander Technique, Bartenieff Fundamentals, and Body Mind Centering), the course highlights how embodied awareness affects artistic process and choice making, as well as enhancing physical capacities, kinesthetic intelligence, and the refinement of performance and technical skills. Emphasizes developing a holistic perception of ourselves, our relation to one another, and to the environment.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	240	Media for Dance	Computer applications for human movement modeling, digital video design and creation, sound composition, and the incorporation of multimedia design elements into online environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	CS	
DCE	260	Second-Year Creative Practices I	Explores concepts introduced in the first year of creative practice and further expands into the themes of analysis and investigation. Year two experience involves the investigation of learning to compose and construct choreographic material through individual, collaborative, improvisational, and group exploration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance major; DCE 161 with C or better
DCE	261	Second-Year Creative Practices II	Continues developing students' awareness of their own creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance major; DCE 260 with C or better

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DCE	262	Rhythmic Theory for Dance I	Elements of music, music structures, and their relationship to dance. Emphasis on rhythmic analysis and dance accompaniment.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	270	Second-Year Seminar I	Continues developing tools and processes for reflection and critical thinking by identifying individual goals and objectives related to the students' current and future academic and professional careers	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major; DCE 171
DCE	271	Second-Year Seminar II	Provides basic understanding of costume design, sound production, and interactive performance for dance.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major; DCE 270 with a Y
DCE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DCE	300	Moving Histories	In-depth study of the history of Western dance in Europe and America. Students learn about various ways of conducting research into dance history, including interviewing, researching using primary resources and performing scholarship.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Pre-requisite: ENG 101, 105 or 107 with C or better
DCE	301	Meaning in Motion	Critical inquiry into the nature of dance through the lens of dance theory. Covers philosophical and theoretical issues raised by the study of dance in relation to specific historical and global contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better
DCE	303	The Body Condition(ed)	Examines contemporary practices of conditioning the body from a triangulation of perspectives: physical, social, and experiential. Enhances the ability to obtain a holistic understanding of how the self/social dynamic operates within the context of body conditioning. Designed for Non-Majors. Not Eligible for Dance Major Requirements.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	SB	Pre/Co-requisite: ENG 102, ENG 105 or ENG 108
DCE	324	Latin/Swing/Balroom III	Refines dances learned in the intermediate level of Latin and ballroom dances, including foxtrot, waltz, salsa, cha cha, rumba, samba, west coast swing, bolero, tango, and swing. Prepares students to have a more advanced command of the complex rhythms and figures used in the major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 224 or DAN 294 (Latin/Swing/Balroom II)
DCE	330	Third-Year Movement Practices I	Focuses on the application of diverse movement forms and somatic studies in a range of performance contexts. These contexts may include live and mediated performance, community-based projects, pedagogy, analysis of movement forms in relation to musical compositions or the creation of new movement languages.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance major; DCE 231
DCE	331	Third-Year Movement Practices II	Student will focus on the integration of diverse movement forms and somatic practices, as well as developing an in-depth understanding of a range of performance contexts practically and theoretically.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors; DCE 330 with C or better
DCE	333	Urban Movement Practices III	A practical and theoretical integration of the urban movement forms that have been investigated and practiced in the urban movement practices curriculum.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: DCE 233 with C or better
DCE	334	Postmodern Contemporary III	Integrates dance theory and practices of postmodern contemporary dance technique. Refines movement quality and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	335	Contemporary Ballet III	Expansion of student's technical skills and theoretical knowledge through utilization of a hybridized ballet movement vocabulary.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	336	Somatic Practices III	Laboratory for somatic education that explores the foundations of movement, voice, expression and spatial awareness. Open to nonmajors, the class welcomes and encourages the participation of students from a wide variety of disciplines. Taught through the principles of specific somatic lenses (e.g., the Alexander Technique, Bartenieff Fundamentals, and Body Mind Centering), the course highlights how embodied awareness affects artistic process and choice making, as well as enhancing physical capacities, kinesthetic intelligence, and the refinement of performance and technical skills. Emphasizes developing a holistic perception of ourselves, our relation to one another, and to the environment.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): minimum 45 hours
DCE	338	Urban Movement Practices Ensemble	Focuses on building a cooperative practice among artists. The ensemble of dancers and musicians explore the connections between urban musical praxis and urban movement forms in a live, improvisatory setting. Places special emphasis on hybridization, or the blending of musical and gestic traits from two or more genres. Participants are expected to experiment in a cross-disciplinary manner throughout the semester. Course serves as an "experiment lab" for students enrolled in DCE 333 as well as other music and dance students.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): minimum 45 hours; Corequisite(s): DCE 333; Credit is allowed for only DCE 338 or DCE 294 (Urban Movement Practices Ensemble)

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DCE	350	Dance in the Classroom: Learning Through Movement	Explores theories of learning, thought development, and knowledge construction through aesthetic movement experiences. Students look to theories from the fields of aesthetics, phenomenology (study of lived experiences), somatics (study of the soma or body/mind), sociology and epistemology (theory of knowledge) to understand how the intertwined relationship of human thought development and movement patterning can affect children's learning and development.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Junior standing
DCE	354	Creative Approaches to Teaching Dance I	Explores creative strategies and methodologies for teaching dance to a variety of populations in diverse settings.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance BFA student
DCE	356	Creative Approaches to Teaching Dance II	Explores creative strategies and methodologies for teaching dance to a variety of populations in diverse settings.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance major
DCE	360	Third-Year Creative Practices I	Provides an orientation to the field of community dance practice. Students investigate foundational theories pertaining to the development of community dance worldwide, are exposed to leaders in community dance practice, and have in-depth applied experiences interacting with different populations in a variety of community dance contexts.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance BFA student; DCE 261 with C or better
DCE	361	Third-Year Creative Practices II	Historical survey of music and compositional elements relative to dance. Emphasis on analysis of choreography from a musical standpoint.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance major; DCE 360 with C or better
DCE	370	Third-Year Seminar I	Provides an orientation to the field of community dance practice. Over two consecutive semesters, students investigate foundational theories pertaining to the development of community dance worldwide, are exposed to leaders in community dance practice, and have in-depth applied experiences interacting with different populations in a variety of community dance contexts.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major; DCE 271 with a Y
DCE	371	Third-Year Seminar II	Hones skills in collaborative approaches, teaching, leading, and facilitation through partnerships with community organizations in the Phoenix metropolitan area. Students study community dance practices covering a range of creative process and community building tools that can be used in diverse settings. Applies research methods, such as data collection, analysis, and reflection, to measure the efficacy of community arts practices.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major; DCE 370 with a Y.
DCE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DCE	402	Ethnography of Dance Practices	Examines the field of ethnochoreology, ethnographic methods, and interpretive research practices. Develops critical writing, thinking, and viewing skills for comparative dance study.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	(L or HU) & G	Pre-requisite: DCE 201 with C or better; ENG 102, 105, or ENG 108 with C or better
DCE	404	Dance and Ethics	Examines ethical issues as they relate to the field of dance, including the following: the ethical treatment of dancers within educational and professional institutions; the ethical creation of dances sensitive to copyright/appropriation concerns as well as issues of form and content; the ethical engagement of the arts by the state; the ethical use of dance in trauma recovery and community building.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Junior standing; ENG 102, ENG 105 or ENG 108 with C or better
DCE	405	Rhetorical Moves	Addresses creative practice from the perspective of the embodied creative artist. Embodiment is theorized using a conflation of interdisciplinary concepts to analyze the complex and fluid nexus that occurs as the artist creates. Students theorize the creative artist as a rhetor and the creative practice as a rhetorical situation to understand the deconstructive interaction of the creative act. Explores ways to utilize this new theorization of embodiment for interdisciplinary research into creative practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Prerequisite(s): Junior standing; Dance BFA major or nonmajor with DCE 303 (or DCE 394 The Body Conditioned) with C or better. Credit is allowed for only DAN 494 (Rhetorical Moves) or DCE 405
DCE	438	Dance Theatre Performance/Production	Performance or technical theatre work in designated dance productions. 3 hours a week per semester hour.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance BFA, Dance minor or BIS Dance concentration
DCE	460	Transition Project I	Original choreography for group performance with analysis and critique of problems encountered in production.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance BFA student
DCE	461	Transition Project II	Original research that integrates dance and a related field of interest. Includes production of written document and public presentation. Fall semester must be completed before spring registration. May be repeated for a total of 4 semester hours.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance students; DCE 460 with C or better
DCE	470	Fourth-Year Seminar	Explores and investigates the larger world of dance as it pertains to transitioning out of the university environment into professional lives. Discussion revolves around career opportunities, options and finding potential work synergies that will parlay into meaningful and exciting lives.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisites: BFA Dance major; DCE 371; Credit is allowed for only DCE 470 or 494 (4th-Yr Seminar)
DCE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
DCE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): Barrett Honors student

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DCE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Prerequisite(s): Barrett Honors student
DCE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DCE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-7	L	
DCE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
DCE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	501	Philosophy of Dance	Analyzes traditional and contemporary theories of dance with regard to issues of expression, form, and meaning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	502	Cultural Concepts of Dance	Examines the close connections among culture, dance, and movement through writings in cultural theory, dance ethnology, and philosophy.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	504	Dance and Ethics	Examination of ethical issues as they relate to the field of dance, including the following: the ethical treatment of dancers within educational and professional institutions; the ethical creation of dances sensitive to copyright/appropriation concerns as well as issues of form and content; the ethical engagement of the arts by the state; the ethical use of dance in trauma recovery and community building.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	505	Rhetorical Moves	Addresses creative practice from the perspective of the embodied creative artist. Embodiment is theorized using a conflation of interdisciplinary concepts to analyze the complex and fluid nexus that occurs as the artist creates. Students theorize the creative artist as a rhetor and the creative practice as a rhetorical situation to understand the deconstructive interaction of the creative act. Explores ways to utilize this new theorization of embodiment for interdisciplinary research into creative practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Herberger Institute of Design and the Arts graduate students
DCE	530	Graduate Movement Practices I	The four-semester sequence of graduate movement practices are a sequence of graduate-level movement studies experiences designed to emphasize in-depth psychophysical explorations of specific somatic movement practices and frameworks as well as epistemological frameworks for learning in and through the body. Addresses the integrated practices and theoretical underpinnings of Laban/Bartenieff praxis, Body Mind Centering and other somatic practices that are explored within the four-course sequence that facilitate movement exploration, movement functioning, movement performance and movement creation as well as performance and social theory constructs.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: MFA Dance student
DCE	531	Graduate Movement Practices 2	The series of graduate movement practices courses are a sequence of two graduate-level movement studies experiences designed to emphasize in-depth psychophysical explorations of specific somatic movement practices and frameworks as well as epistemological frameworks for learning in and through the body. Classroom experiences are approached from theoretically grounded and contextualized perspectives that address through practice current somatic and epistemological thinking. The overarching frameworks for the first and fourth modules are designed as "bookends" for introducing, contextualizing, and synthesizing classroom experiences and concepts explored within the two-course sequence.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: MFA Dance student
DCE	534	Postmodern Contemporary	Preparation in the performance and comprehension of professional-level modern dance for first-year graduate students. 6 hours weekly.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance Graduate student
DCE	535	Contemporary Ballet	Graduate-level theoretical study and movement practice of contemporary ballet for contemporary dancers.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: MFA Dance student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DCE	536	Somatic Practices	Laboratory for somatic education that explores the foundations of movement, voice, expression and spatial awareness. Open to nonmajors, the class welcomes and encourages the participation of students from a wide variety of disciplines. Taught through the principles of specific somatic lenses (e.g., the Alexander Technique, Bartenieff Fundamentals, and Body Mind Centering), the course highlights how embodied awareness affects artistic process and choice making, as well as enhancing physical capacities, kinesthetic intelligence, and the refinement of performance and technical skills. Emphasizes developing a holistic perception of ourselves, our relation to one another, and to the environment. Integrated lecture/lab. Prerequisite(s): degree- or nondegree-seeking graduate.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only DCE 536 or DCE 598 (Movement Language Sources) or (Somatic Practices)
DCE	537	African and Diaspora Movement Practices	Investigates and integrates historical and cultural contexts for West, Central, and South African and Post-African (diasporic) movement practices. Engages movement and physical articulation as tools to examine specific dance cultural knowledge and demonstrate/embodiment techniques representing that cultural knowledge.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance major; Credit is allowed for only DCE 537 or DCE 598 (African Diaspora Movement Practices)
DCE	538	Dance Theatre	Performance in specially choreographed dance productions.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: MFA Dance student
DCE	540	Issues in Media for Dance	Introduces desktop multimedia as it relates to dance creation, production, education, and research.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	543	Sound Design for Dance	Audio mixing for analog/digital recording and editing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors
DCE	554	Graduate Dance Pedagogy	Provides both the theoretical basis and practical application of principles for teaching contemporary dance disciplines in a postsecondary setting. Includes discussion, co-teaching and individual teaching projects and sessions, practical application of course readings, and guest speakers. Both dance and discussion of ideas in each class session.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	560	Graduate Creative Practices I	Artistic research through the practices of improvisation, choreographic choice making, and interdisciplinary collaboration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	561	Graduate Creative Practices II	Explores a variety of contemplative practices designed to cultivate awareness and serve as stimuli for generating choreography and creative approaches in interdisciplinary collaborations.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance Graduate student; DCE 560
DCE	563	Rhythmic Awareness	This course focuses on the kinesthetic aspects of weight, space, and time. It is opportunity for individual exploration as well as an ensemble experience, a chance to come together as a group through the communicative nature of sound, movement, and visual patterns.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	570	Graduate First-Year Seminar I	Part of a four-semester sequence that offers a cohort experience to increase awareness of current global dance practices, present opportunities for dialoguing about topics significant to fulfilling degree requirements and that promote success in the dance program as well as to facilitate transition into the professional world. Seminar.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance Graduate student; Credit is allowed for only DCE 570 or DCE 591 (1st Year Graduate Seminar)
DCE	571	Graduate First-Yr Seminar II	Part of a four-semester sequence that offers a cohort experience to increase awareness of current global dance practices; present opportunities for dialoguing about topics significant to fulfilling degree requirements and that promote success in the dance program as well as to facilitate transition into the professional world.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: MFA Dance student
DCE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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DCE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	634	Postmodern Contemporary	Preparation in the performance and comprehension of professional-level modern dance for second-year graduate students. 6 hours weekly.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance Graduate student
DCE	660	Graduate Creative Practices III	Artistic research through the practices of choreographic choice making, exploration, and experimentation of integrated environments and interdisciplinary collaboration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	661	Graduate Creative Practices IV	Culmination of a four-semester Creative Practices sequence, focusing on articulating individual creative practices and identifying the needs of each student relative to their Applied Projects. Students are also responsible for understanding the content and requirements for the selected modules of this course.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	670	Graduate Second-Year Seminar I	Part of a four semester sequence that offers a cohort experience to increase awareness of current global dance practices, presents opportunities for dialoguing about topics significant to fulfilling degree requirements and promotes success in the dance program as well as to facilitate transition into the professional world. Reflection is a key component of the School of Dance curriculum; develops ability and skills in analysis, but more importantly builds awareness of intuitive and habitual patterns of response to new stimuli. The Seminar is a key moment each week to develop a community of inquiry amongst peers.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: MFA Dance student; Credit is allowed for only DCE 591 (2nd Yr Seminar) or DCE 670
DCE	671	Graduate Second-Year Seminar II	The Second-Year Graduate Seminar is part of a four semester sequence that offers a cohort experience to increase awareness of current global dance practices, present opportunities for dialoguing about topics significant to fulfilling degree requirements and that promote success in the dance program as well as to facilitate transition into the professional world.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: MFA Dance student
DCE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DCI	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
DCI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
DCI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
DCI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
DCI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
DCI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
DCI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
DCI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		

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DCI	510	Teacher as Researcher	Introduces teacher research as a new research genre; offers teachers guidance on planning and conducting research on their practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: COE 501 or DCI 510 with B or better
DCI	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCI	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student

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DCI	701	Curriculum Theory and Practice	Curriculum theory and practice as a field of study. Its current orientations and applications, modes of inquiry, and community of scholars and practitioners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	702	Interdisciplinary Research Seminar	Core research course for students in the interdisciplinary PhD in Curriculum and Instruction program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DCI	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCI	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree-seeking) or Post Baccalaureate Undergraduate student
DCI	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DNP	601	Theoretical Foundations for Advance Practice Nursin	Examines philosophical foundations of advanced nursing practice by analyzing interrelationships among theory, philosophy, practice, and research.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	602	Evaluating Research for Practice	Provides opportunities for graduate students to develop the knowledge and skills to critically analyze scientific literature and research for application to practice.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	604	Advanced Human Pathophysiology Across Lifespan	Core course focuses on human pathophysiology and concepts of genetics for advance practice nursing.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontolog or Fam Psy MentHlth or Family NP or Women's Hlth NP or Neonatal NP or Pediatric NP) major or Family Nurse Practitioner or Family Psychiatric and Mental Health Nurse Practitioner certificate
DNP	605	Advanced Health Assessment Across Lifespan	Advanced health assessment skills, including history-taking strategies and physical, functional, developmental, and psychosocial assessment.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: DNP Adv Nursing Practice major or Family Nurse Practitioner or Family Psychiatric and Mental Health Nurse Practitioner certificate

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DNP	608	Advanced Pharmacotherapeutics Across Lifespan	For advanced practice nurses, expands theoretical and evidence-based knowledge and promotes synthesis of pharmacotherapeutic concepts and principles across the lifespan.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: DNP Adv Nursing Practice major or Family Nurse Practitioner or Family Psychiatric and Mental Health Nurse Practitioner certificate
DNP	609	Advanced Practice Nursing Role I	Focuses on the historical and contemporary social and political influences on the role of the DNP-prepared advanced practice nurse.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): Doctor of Nursing Practice student
DNP	610	Advanced Practice Nursing Role II	Focuses on the ethical and professional role of the DNP, negotiation strategies, and preparation of a professional portfolio.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Pre-requisite: DNP 609 with B or better
DNP	613	Women's Health Promotion I	Didactic course focuses on theories of health behavior, health promotion, disease prevention and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 614
DNP	614	Women's Health Practicum I	Clinical assessment and education of women across the lifespan for the purposes of health promotion and disease prevention.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 613
DNP	615	Management of Common Problems in Women's Health	Focuses on management of nursing care for high-risk perinatal women and women with common health problems.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 616
DNP	616	Advanced Women's Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 615
DNP	617	Management of Complex and Chronic Disease in Women	Didactic course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health status across the lifespan and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 618
DNP	618	Advanced Women's Health Practicum III	Clinical course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health states across the lifespan and patient education.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 617
DNP	621	Health Assessment Skills	Skill-based course focuses on advanced clinical skills including suturing, splinting, x-ray, ECG and advanced lab interpretation.	N	LEL	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): DNP 605
DNP	623	Adult-Gerontology Health Promotion	Introduces health promotion and disease prevention for adults across the lifespan emphasizing principles of evidence-based practice in clinical and community settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 624
DNP	624	Adult-Gerontology Health Promotion Practicum	Clinical practicum designed to apply principles of evidence-based practice in health promotion and disease prevention in clinical and community settings.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 623
DNP	625	Management of Common Health Problems in Adults Across the Lifespan	Includes theory and research that guides the management and maintenance of adults across the lifespan with common health alterations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 626
DNP	626	Management of Common Health Problems/Adults Across the Lifespan Practicum	Diagnosis, management, and application of advanced knowledge and skills in caring for adults across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 625
DNP	627	Management of Complex Health Alterations in Adults Across the Lifespan	Focuses on application of EBP in care of adults of all ages with complex health alterations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 628

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DNP	628	Management of Adults Across the Lifespan w/Complex Health Alterations Practicum	Clinical practicum designed to apply principles of evidence-based practice in primary care management of adults across the lifespan with complex health alterations.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major; Corequisite(s): DNP 627
DNP	633	Family Health Promotion	Focuses on concepts and strategies to promote, manage, and maintain health of children, adults, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 634
DNP	634	Family Health Promotion Practicum	Clinical application of theories, concepts, and principles in the care of children,	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 633
DNP	635	Management of Common Health Problems in Children, Adults and Families	Didactic course that integrates research into clinical decision making as the context for the assessment and management of acute and common health problems in family practice across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 636
DNP	636	Management of Common Health Problems in Children, Adults, and Families Practicum	Clinical application of theories, concepts, and research related to the management of acute and common problems in family practice across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 635
DNP	637	Management of Complex and Chronic Health Problems in Children, Adults and Families	Didactic course that integrates research into clinical decision making as the context for the assessment and management of complex and chronic problems in family practice across the lifespan.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 638
DNP	638	Management of Complex and Chronic Health Problems in Children, Adults, and Families Practicum	Clinical application of theories, concepts, and research related to the management of complex and chronic problems in family practice across the life span for Family Nurse Practitioner role specialty.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 637
DNP	640	Advanced Human Pathophysiology Pediatrics	Didactic course for pediatric nurse practitioner students focuses on applying concepts of human pathophysiology and genetics in pediatric patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner)
DNP	641	Advanced Health Assessment Pediatrics	Skills-based advanced health assessment course that includes history-taking strategies and physical, functional, developmental, psychosocial health assessment of children (birth-21).	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner)
DNP	642	Applied Pharmacotherapeutics for Pediatrics	Applies evidence-based pharmacotherapeutic principles to disease treatment and health promotion and maintenance for pediatric patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner)
DNP	643	Developmentally Based Care of the Well Child	Offers information for theory-based developmental care of well children. Includes anticipatory guidance for parents and/or children/teens.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 644
DNP	644	Well Child Advanced Practicum	Clinical application of theories, concepts and principles as they relate to the developmentally based care of the well child.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 643
DNP	645	Management of Common Problems in Pediatric Primary Care	Provides health promotion and disease prevention strategies for the advanced nursing care of all children and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 646
DNP	646	Management of Common Problems in Pediatric Primary Care Practicum	Facilitates development of advanced clinical skills in the assessment and management of child health, health surveillance and promotion.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 645
DNP	647	Management of Complex and Chronic Health Problems in Pediatric Primary Care	Third pediatric didactic course focuses on assessment and management of childhood complex and chronic health problems and special health conditions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 648
DNP	648	Management of Complex & Chronic Problems Pediatric Primary Care Practicum	Clinical course assists students in developing advanced clinical skills in decision making with chronically ill or special needs pediatric patients.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 647

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DNP	650	Advanced Human Pathophysiology Neonates	Didactic course for neonatal nurse practitioner students focuses on applying concepts of human pathophysiology and genetics in neonatal patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	651	Advanced Health Assessment of Neonates	Skill-based course focuses on advanced health assessment skills, including history-taking strategies and the physical, functional, genetic, developmental, and psychosocial/cultural health assessment of neonates.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	652	Applied Pharmacotherapeutics for Neonates	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for neonates and their families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	653	Advanced Development and Family Health Promotion: Neonatal Theory I	Concepts, theories, interventions, and research related to the promotion, management, and maintenance of physical, behavioral, and developmental needs of at-risk newborns and infants and their families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 654
DNP	654	Neonatal Practicum I	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 653
DNP	655	Management of Common Neonatal Problems	Proactive neonatal theory course focusing on the concepts, theories, and research related to acute and chronic health deviations of neonates and infants.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner) Co-requisite: DNP 656
DNP	656	Neonatal Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 655
DNP	657	Management of Complex Problems in Neonates	Examines the application of knowledge of complex, multi-system alterations in neonatal health from a theoretical and research perspective in preparation for clinical practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	658	Neonatal Practicum III: Management of Complex Problems in Neonates	Develops and applies advanced neonatal assessment, clinical decision making, and management skills to complex health alterations in at-risk neonates to include cultural, ethical, legal, and advocacy issues.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 657
DNP	659	Embryology and Genetics	Prepares advanced practice nurses to use embryology, genetics, and physiology concepts within the nursing process in the care of pediatric and neonatal patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal, Pediatric or Family Nurse Practitioner)
DNP	660	Advanced Neuropsychopathology Lifespan	Manifestations of altered neurophysiology and psychopathology over the lifespan. Uses evidence-based support for theoretical views of psychiatric disorders to analyze the relationships of neuropsychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	671	Advanced Mental Health Assessment Across the Lifespan	Focuses on comprehensive mental health assessment of psychiatric disorders occurring in children, adolescents, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner
DNP	672	Psychopharmacology Across the Lifespan	Focuses on evidence-based use of medications for mental health disorders across the lifespan.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DNP	673	Mental Health Promotion Across the Lifespan	Focuses on evidence-based interventions to promote mental health across the lifespan.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner. Co-requisite: DNP 674
DNP	674	Mental Health Promotion Across the Lifespan Practicum	Clinical experiences to become skilled in assessment and evidence-based individual intervention of mental health disorders across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) Family Psychiatric and Mental Health Nurse Practitioner; Co-requisite: DNP 673
DNP	675	Management of Common Mental Health Disorders Across the Lifespan	Emphasizes the assessment and evidence-based management of common mental health disorders across the lifespan.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner Co-requisite: DNP 676
DNP	676	Management of Common Mental Health Disorders Across the Lifespan Practicum	Clinical experiences necessary to become skilled in the assessment and evidence-based management of the most common mental health disorders across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner; Corequisite: DNP 673
DNP	677	Management of Complex & Chronic Mental Health Disorders Across the Lifespan	Focuses on modalities of evidence-based treatment with children, adolescents, adults, and families with complex and/or chronic psychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner; Co-requisite: DNP 678
DNP	678	Management of Complex & Chronic MH Disorders Across the Lifespan Practicum	Clinical experiences in the assessment and evidence-based management of the most complex and chronic mental health disorders across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner; Co- requisite: DNP 677
DNP	679	Biostatistics: Principles of Statistical Inference	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing graduate student
DNP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	682	Geriatric Health Promotion	Examines theoretical perspectives in aging and cultural and contextual approaches for health promotion in older adults.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	688	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DNP	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
DNP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	703	Innovation in Communication-Scholarly and Professional Writing	Provides a review of principles of scholarly and professional writing, plagiarism and APA 6th edition format.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): Doctor of Nursing Practice student
DNP	704	Principles of Evidence-Based Care in Advanced Practice	Foundational course focuses on the evidence-based process and understanding of evidence-based practice principles assist advanced practice nurses and other healthcare professionals in clinical decision making in order to provide best care.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: Doctor of Nursing Practice student
DNP	705	Healthcare Outcomes Management	Outcomes management methodology supports implementation of evidence-based practice and measurement of both patient and healthcare system outcomes attributed to adoption of best practices.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: Doctor of Nursing Practice student; DNP 704
DNP	706	Implementing Sustainable Change toward Evidence-Based Practice	Facilitates student learning about striving for and evaluating sustainable change that hinges on active improvement of practices through implementing evidence-based practice (EBP). Students engage strategies designed to facilitate advanced practice nurses' leadership of this change. Students analyze the success of their evidence-based applied clinical project that is implemented in their clinical residency course. Students evaluate the impact of their doctorally prepared evidence-based advanced practice nurse role on shifting culture to best practice. Students explore the use of adult learning, ethical, and mentorship principles to facilitate understanding of EBP in their workplace.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: Doctor of Nursing Practice major; DNP 704; DNP 705; Co-requisite: DNP 712
DNP	707	Disseminating Evidence to Advance Best Practice in Healthcare and Health Policy	Focuses on methods for dissemination of evidence to advance best practice within local, regional, and/or national settings, as well as advancement of EBP in health policy and the media.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): Doctor of Nursing Practice major; DNP 704, 705 or 706. Corequisite(s): DNP 712
DNP	708	Systems Thinking in a Complex Healthcare Environment	Studies basic and advanced systems principles as they relate innovation to the American healthcare system.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Doctor of Nursing Practice student
DNP	709	Individual and Innovation Leadership in Healthcare Practice	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Doctor of Nursing Practice student
DNP	710	Innovation in Communication and Information Systems in Nursing and Health	Examines principles of effective communication and information systems with a focus on evaluating and using emerging technologies as they relate to nursing and health care.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre-requisites: Doctor of Nursing Practice major
DNP	711	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy with emphasis on strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Doctor of Nursing Practice student
DNP	712	Clinical Residency and Management	Demonstrates DNP competencies through portfolio documentation of clinical learning experiences and implementation of the DNP Evidence-Based Clinical Applied Project. Doctoral students submit the DNP Portfolio in partial fulfillment of the degree.	N	PRA	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Doctor of Nursing Practice student
DNP	713	Analysis of Organizational Cultures in Healthcare	Analyzes culture, organizational implications and relationships to change and innovation in healthcare.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Advanced Nursing Practice (Innovation Leadership) major
DNP	714	Professional Relationships in Healthcare	Analyzes professional relationships within healthcare organizations and evidence-based strategies to improve communication, coordination, and collaboration.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Advanced Nursing Practice (Innovation Leadership) major
DNP	715	Dynamics and Principles of Information in Healthcare	Analyzes and applies multiple sources of information for healthcare leaders across the continuum of evidence including research, evidence-based practice, translational research, improvement science, and quality improvement.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Advanced Nursing Practice (Innovation Leadership) major
DNP	716	Leadership of Innovation in Healthcare	Analyzes leadership theories in the creation of complex healthcare system innovation.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: Doctor of Nursing Practice concentrations major
DNP	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DSC	100	ASU Design Experience	Covers ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	REC	N	GNA	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): BS, BSD or BSLA Design School major. Credit is allowed for only DSC 100 or 194 (ASU Design Experience)
DSC	101	Design Awareness	Surveys cultural, global, and historical context for the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & G	
DSC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
DSC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
DSC	236	Introduction to Computer Modeling	Computers in design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	The Design School	3	CS	Pre-requisite: Industrial Design student; Passed Milestone
DSC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
DSC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
DSC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
DSC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
DSC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
DSC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
DSC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7		
DSC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
DSC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Master of Science in Design or PhD in Environmental Design & Planning student
DSC	501	Qualitative Research in Design	Theory and application of qualitative research. Emphasizes using ethnography to identify and specify innovative concepts and strategies.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Master of Industrial Design or Master of Science in Design major
DSC	520	Contemporary Design Issues	Issues influencing contemporary design such as sustainability, globalization, education, gender, collaboration and emotion.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	558	Daylighting	Daylighting as a design determinant; concepts, techniques, methodology, experiments, and case studies.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Herberger Institute of Design and the Arts graduate student
DSC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Master of Science in Design student
DSC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD or Design (Inter Design) MSD student
DSC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DSC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): Master of Industrial Design, Master of Interior Architecture, Master of Science in Design, or Master of Visual Communication Design major
DSC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EAC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
ECD	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
ECD	211	The Developing Child: Theory into Practice, Prenatal-Grade 3	Examines process of physical, social, emotional, cognitive, language, and literacy development of young children; includes observation, practical application, fieldwork.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	
ECD	220	Introduction to Nutrition, Health and Safety	Emphasizes providing proper nutrition, promoting a safe but challenging learning environment, and becoming knowledgeable of a child's health status. Also covers practical applications for assisting young children to develop good habits and attitudes and to assume lifelong responsibility for their own well-being.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
ECD	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
ECD	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECD	302	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
ECD	312	Social/Emotional Foundations of Learning	Foundations of early social development and evidence-based practices for promoting social-emotional development; young children's understanding, interactions, and relationships to the social world.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
ECD	313	Technology in Early Childhood Education	Evaluates technology and technological learning tools for early childhood classrooms; integrates technology and its tools into students' learning. Lecture, discussion, active participation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
ECD	315	Classroom Organization and Guidance of Young Children	Theories and strategies to guide children's development toward becoming self governing; typical and atypical behaviors; implementing age-appropriate classroom management techniques that foster individual, social, and academic competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
ECD	316	Teacher Research: Studying Children in Context	Introduces designing, conducting, interpreting, and reporting teacher research; methods of research and fieldwork with children to improve teaching practices and child outcomes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
ECD	321	Emerging Language and Literacy	Language and literacy development; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical observation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
ECD	323	Building Home, School, and Community Partnerships	Knowledge and skills to facilitate positive and continuous family-school partnerships; family background, social context, family involvement, and current research on family-school interaction and academic success.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	Prerequisite(s): Admission to Professional Teacher Preparation Program
ECD	324	Social Studies and Creative Arts Curriculum, Instruction and Assessment	Social studies and creative arts standards, curriculum, and instructional and assessment strategies in an integrated social studies and creative expression curriculum for children birth through grade 3.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
ECD	341	Administration/Evaluation of EC Programs	Administration and evaluation of early childhood programs. Emphasizes planning and evaluation; regulations; health, nutrition, and safety; operations, budgeting, and supervision of personnel.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
ECD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
ECD	396	Clinical Experience: K-3 Setting	Provides opportunities to engage as a teacher and learner in a K-3 classroom. Emphasizes focused observation; co-planning with a placement teacher and co-teaching lesson to whole groups, small groups, and individual students.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): Admission to Professional Teacher Preparation Program
ECD	397	Clinical Experience: Preschool	Instruction, observation, and management of small groups and the whole class.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	4		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	406	Assessment: Birth-Grade 3	Examines assessments appropriate to birth - grade 3 instruction to align curriculum with learner needs. Focuses on test design, interpretation, lesson design, and aspects related to multiple classroom and formal assessments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	416	Social and Educational Policies Affecting Children and Families	Social policies at the national and state levels; values and assumptions of policies; political factors shaping policy and implementation; links between policy, educational practice, schools, and family functioning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	418	Instructional Methods for Young Children: Integrating Digital Media	Develops integrated experiences with children's literature for facilitating development in reading, writing, speaking, and listening. Further develops educational strategies for promoting growth in the social studies and creative arts curriculum, and instructional/assessment strategies for preprimary- and primary-level children; developmentally appropriate methods and strategies for effective instruction.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program
ECD	477	Student Teaching: Birth to Pre-K	Supervised practicum in a birth to pre-K program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	4-6		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECD	478	Student Teaching in Early Childhood (K-3)	Supervised teaching in the K-3 classroom setting. Synthesized experience in curriculum, instruction, classroom organization, and guidance of young children.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-9		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
ECD	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
ECD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
ECD	496	Field Experience	Instruction and management of small groups and substantial work with the whole class.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	0-1		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECD	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
ECD	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-7		
ECD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
ECD	503	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
ECD	504	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	505	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
ECD	520	Child Guidance and Management: Child, Family, Community, and Culture	Introductory exploration of a variety of techniques for developing a positive classroom environment. Includes overview of several classroom and school management programs and possible effects of implementation. Focuses on observations made during the students' classroom and field experiences. Provides the catalyst for introducing students to the program's professional portfolio requirement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
ECD	525	Emergent Literacy	Examines recent research on oral language and literacy development and effective strategies for teaching language and literacy in prekindergarten to grade 3, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	527	Mathematics in Early Childhood Education	Theory and practice in the use of manipulative materials for teaching mathematics to preschool and primary grade children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	541	Assessment of Young Children	Assessment principles, techniques, and issues related to guiding learning for children birth through eight years. Test construction, interpretation and communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	549	Foundations of Diversity, Human Development, and the Young Child	Historical foundations and theories of child development as examined with a concern for diversity, multidirectional human change, and cultural embeddedness.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
ECD	565	Appropriate Instructional Methodologies for Young Children	Surveys appropriate teaching methodologies for young children across the curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
ECD	570	Pre-K Internship	Field experience working with children between the ages of birth-age 4. Required for Arizona Dept. of Education Early Childhood Endorsement and Certification.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	0-2		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECD	571	Pre-K Student Teaching	Supervised student teaching in which a student works with children between the ages of birth to age 4.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	4		Pre-requisite: Graduate student
ECD	578	Student Teaching in Early Childhood (K-3)	Supervised teaching in the K-3 classroom setting. Synthesized experience in curriculum, instruction, classroom organization, and guidance of young children.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student
ECD	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-3		
ECN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-4		
ECN	211	Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	SB	
ECN		Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	
ECN	212	Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	SB	
ECN		Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	
ECN	213	Honors Macroeconomics	Introduces modern macroeconomic analysis. Theory of national income, unemployment, inflation, and economic growth and its application to economic policy. Not open to students with credit in ECN 313.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Pre-requisites: Barrett Honors student; MAT 210, 211, 270 or 271 with C or better
ECN	214	Honors Microeconomics	Introduces modern microeconomic analysis. Theories of consumer behavior, production, and cost. Output and price determination in a variety of market settings. Not open to students with credit in ECN 314.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Pre-requisites: Barrett Honors student; MAT 211 or 271 with C or better
ECN	221	Business Statistics	Methods of statistical description. Applies probability theory and statistical inference in business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3	CS	Prerequisite(s): MAT 211 or 271 with C or better
ECN	231	Honors Business Statistics	Applies statistical methods used in business and economic modeling and research. Emphasizes regression analysis and modeling.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	CS	Pre-requisites: Barrett Honors student; MAT 211 or 271 with C or better
ECN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: Barrett Honors student; Pre/Co-requisite: MAT 210, 211, 270, 271 or 272 with C or better if completed

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECN	303	Honors Managerial Economics	Develops a basic platform for managerial decision making. Applies basic economic concepts and models to actual business practices.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: Barrett Honors student; ECN 214 or 312/314 with C or better
ECN	306	Survey of International Economics	Surveys international trade issues, commercial policy, trade theory, customs unions, and international monetary topics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-requisites: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271 with C or better
ECN	312	Intermediate Microeconomic Theory	Role of the price system in organizing economic activity under varying degrees of competition.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Prerequisite(s): ECN 211 or 213 with C or better; ECN 212 or 214 with C or better; MAT 211, 266 or 271 with C or better
ECN	313	Intermediate Macroeconomic Theory	Determinants of aggregate levels of employment, output, and income of an economy.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Pre-requisites: ECN 214 or ECN 312/314 with C or better.
ECN	315	Money & Banking	Functions of money. Monetary systems, credit functions, banking practices, and central banking policy.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	331	Economics of the European Economic Union	Examines broad economic policies seeking to influence individuals' decisions, the history of European economic development and policies, as well as institutions and social systems.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	335	South Asia and the World Economy	Develops and discusses alternative theories of trade, development, and growth in the context of south Asia and the world economy.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Prerequisites: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271 with C or better
ECN	345	Survey of Environmental and Resource Economics	Economic principles applied to private and public policy decisions involving environmental resources, natural resource management, and policy analyses. Focuses on how economic methods can contribute to making better environmental decisions.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271 with C or better.
ECN	355	Economics of Healthcare	Uses economic tools and models to discuss and evaluate the American healthcare system. Applies standard concepts in microeconomics, macroeconomics, and public choice economics to the study of the evolution and the current state of the healthcare system and to the study of proposals for change. Focuses on the promise and problems of using economic tools in a historical, ethical, and cultural context to understand the current healthcare system.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisites: ECN 211 or 213; ECN 212 or 214 and MAT 211 or 271 with C or better.
ECN	360	Economic Development	Theories of economic growth and development. Role of capital formation, technological innovation, population, and resource development in economic growth.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	365	Economics of Russia and Eastern Europe	Origins and analysis of contemporary institutions. Comparative development and differentiation in the 20th century.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	382	Managerial Economics	Applies economic analysis to managerial decision making. Market analysis in the context of the socio-legal environment. Does not satisfy Economics major requirements.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: Not open to Economics or Business majors. Minimum 2.0 ASU cumulative GPA and minimum of 56 total earned hours OR Non-degree student with minimum 2.0 ASU cum GPA OR Graduate student.
ECN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	404	History of Economic Thought	Development of economic doctrines, theories of mercantilism, physiocracy, classicism, neoclassicism, Marxism, and contemporary economics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Pre-requisites: ECN 214 or 314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	410	Applied Regression Analysis and Forecasting	Applies regression techniques to forecasting in business and institutional environments.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 221 (or ECN 231 or IEE 380 or STP 226) with C or better; ECN 214 or ECN 312 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECN	413	Advanced Honors Macroeconomics	Develops and uses various macroeconomic models to evaluate important economic policies. Emphasizes honing students' policy evaluation skills.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: Barrett Honors student; ECN 213 or 313 with C or better; ECN 214 or 312/314 with C or better
ECN	414	Advanced Honors Microeconomics	Develops and uses various microeconomic models to evaluate important economic issues. Emphasizes the economics of uncertainty and information.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: Barrett Honors student; ECN 213 or 313 with C or better; ECN 214 or 312/314 with C or better
ECN	416	Game Theory and Economic Behavior	Introduces game theory and its application to various economic situations under conditions of complete and incomplete information.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-reqs: ECN 214 or ECN 312/314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	421	Labor Economics	Labor supply and demand, unemployment, determinants of wages, earnings inequality, labor unions and the structure of labor contracts.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Prerequisites: ECN 214 or 312 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	423	Economics of Education	Focuses on educational decisions, including individual choices, institutional strategies and government policies. Topics include measuring the costs and returns of education, the relationship between education and inequality, and the role of K-12 and postsecondary institutions in economic growth.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): ECN 214 or 312 with C or better; Pre- or corequisite(s): ECN 213 or 313; Credit is allowed for only ECN 423 or 494 (Economics of Education)
ECN	425	Introduction to Econometrics	Elements of regression analysis: estimation, hypothesis tests, prediction. Emphasizes use of econometric results in assessment of economic theories.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 221 (or ECN 231 or IEE 380 or STP 226) with C or better; ECN 214 or ECN 312 with C or better
ECN	436	International Trade Theory	Comparative-advantage doctrine, including practices under varying commercial policy approaches. Economic impact of international disequilibrium.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-reqs: ECN 214 or ECN 312/314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	438	International Monetary Economics	History, theory, and policy of international monetary economics. Balance of payments and exchange rates. International financial markets, including Eurocurrency markets.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Prerequisite(s): ECN 214 or ECN 312/314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	441	Public Economics	Public goods, externalities, voting models, public expenditures, taxation, and budget formation with emphasis on the federal government.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Pre-reqs: ECN 214 or ECN 312/314 with C or greater; Pre/Co-requisite: ECN 213 or 313
ECN	445	Environmental Economics	Advanced topics in environmental economics with quantitative methods for developing information that is used for environmental policy making.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisites: ECN 214 or 312 or 314 with C or better; Pre/Co-requisite: ECN 213 or 313.
ECN	450	Law and Economics	Economics of the legal system, including analysis of property, contracts, torts, commercial law, and other topics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-reqs: ECN 214 or ECN 312/314 with C or better
ECN	453	Industrial Organization and Competition Policy	Development of public policies toward business. Antitrust activity. Economic effects of government policies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-reqs: ECN 214 or ECN 312/314 with C or better
ECN	455	Health Economics	Focuses on health care decisions, including individual and government policies. Topics include demand for and supply of health care, payment for health care, the impact of health care reform and the techniques economists use to evaluate health care interventions.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): ECN 214 (or ECN 312) with C or better. Pre- or corequisite(s): ECN 213 (or ECN 313); Credit is allowed for only ECN 455 or 494 (Health Economics)
ECN	470	Mathematical Economics	Integrates economic analysis and mathematical methods into a comprehensive body of knowledge within contemporary economic theory.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-reqs: ECN 214 or ECN 312/314 with C or better
ECN	475	Capstone in Economics	Capstone course integrating several areas of economics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	L	Pre-reqs: ECN 213 or 313 with C or better; ECN 214 or ECN 312/314 with C or better; Senior standing.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Minimum 3.0 ASU cum GPA; ECN 213 or 313 with C or better; ECN 214 or 312/314 with C or better
ECN	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-6		Pre-requisites: Barrett Honors W. P. Carey undergraduate student; ECN 213 or 313 with C or better; ECN 214 or 314 with C or better
ECN	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Pre-requisites: Barrett Honors W. P. Carey BS or BA student; ECN 213 or 313 with C or better; ECN 214 or 314 with C or better
ECN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-4		Pre-reqs: ECN 214 or ECN 312/314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	GNA	W.P. Carey School of Business	Department of Economics	1-7	L	Pre-requisites: ECN 313 and 314 with C or better
ECN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		
ECN	501	Statistics for Managers	Fundamentals of statistical analysis to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	502	Managerial Economics	Applies microeconomic analysis to managerial decision making in areas of demand, production, cost, and pricing. Evaluates competitive strategies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: MBA degree program student
ECN	503	Global Business Environment	Macroeconomic analysis of issues related to economic growth, inflation, interest rates behavior, unemployment, exchange rate determination, and global competitiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: MBA degree program student
ECN	510	Microeconomic Theory and Applications	Applies economic theory to production, consumer demand, exchange, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	525	Applied Regression Models	Simple linear regression, multiple regression, indicator variables, and logistic regression. Emphasizes business and economic applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	527	Categorical Data Analysis	Discrete data analysis in business research. Multidimensional contingency tables and other discrete models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 525
ECN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 712 and 714 with C or better
ECN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	711	Macroeconomic Analysis I	Current theories of output, employment, inflation, and asset prices as well as major aggregates. Introduces dynamic optimization techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	712	Microeconomic Analysis I	Theory of production, consumer demand, resource use, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	713	Macroeconomic Analysis II	Focuses on growth theory, dynamic general equilibrium models, monetary theory, open-economy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	714	Microeconomic Analysis II	General equilibrium, welfare economics, production, and capital theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	715	Advanced Macroeconomic Analysis	Focuses on current research areas in macroeconomics and monetary theory with emphasis on methods in economic dynamics and numerical techniques.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 711 with C or better; ECN 713 with C+ or better
ECN	716	Advanced Economic Theory I	Economic behavior under uncertainty; markets and contracts under asymmetric information; the theory of games with incomplete information and applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 714 with C or better; ECN 712 with C+ or better
ECN	717	International Macroeconomics	Intertemporal approach to the current account, international business cycles, international risksharing and home bias, models of exchange rate determination, balance of payment crises, sovereign debt and default.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	721	Labor Economics I	Develops basic theoretical models for analyzing labor market issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 713 and 714 with C or better
ECN	722	Labor Economics II	Extensions/criticisms of labor market theories. Applications to a variety of policy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 721 with C or better
ECN	725	Econometrics I	Problems in the formulation of econometric models. Emphasizes estimation, hypothesis testing, and forecast of general linear models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student

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ECN	726	Econometrics II	Estimation and inference of qualitative and limited dependent variable models as well as general multiple equation models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 725 with C+ or better
ECN	727	Quantitative Methods in Economics	Generalized method of moment estimation, estimation with censored and truncated samples, nonlinear models, panel-data models, econometrics of nonstationarities.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 713 and 714 with C or better
ECN	736	International Trade Theory	Theories of comparative advantage and their empirical verification. Theory and political economy of commercial policy. Resource transfers and the role of the multinational corporation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 713 and 714 with C or better
ECN	741	Public Economics	Economics of collective action, public spending, taxation, and politics. Impact of central governmental activity on resource allocation and income distribution.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey Graduate degree-seeking students only; ECN 712 with B or better; Co-requisite: ECN 714
ECN	753	Industrial Organization	Analyzes structure, conduct, and performance in industrial markets; the economics of organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 713 and 714 with C or better
ECN	760	Economics of Growth and Development	Economic problems, issues, and policy decisions facing the developing nations of the world.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 711 and 712 with C+ or better; Co-requisite: ECN 713 and 714
ECN	770	Mathematics for Economists	Surveys mathematical ideas encountered in economics and econometrics. Topics include measure theory, probability theory, and mathematical statistics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	784	Internship		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ECS	310	Foundations in Typical / Atypical Child Development	Examines the process of typical and atypical physical, social, emotional, cognitive, and language development of young children with or at risk for delay.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	312	Social and Emotional Development of the Young Child	Examines genetic, environmental and biological influences on typical and atypical social and emotional developmental processes through current research, current issues, as well as connections to practice.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	Prerequisite(s): minimum junior standing
ECS	315	Classroom Organization and Child Guidance	Develops and implements analysis, intervention, and consultation strategies for effective management of classroom behavior for students with and without disabilities. Age-appropriate techniques addressing individual, social, and academic competence.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	316	Assessment/Evidence-based Practice	Examines assessments appropriate to birth - grade 3 instruction to align curriculum with learner needs. Focuses on test design, interpretation, lesson design, and aspects related to multiple classroom and formal assessments. Introduces designing, conducting, interpreting, and reporting teacher research; methods of research and fieldwork with children to improve teaching practices and child outcomes.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing

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ECS	321	Communication, Language Development, and Emergent Literacy	Language and literacy development; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical observation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
ECS	397	Practicum in Inclusive Birth-Age 5 Early Childhood Setting	Provides opportunities for students to engage as a teacher and learner in an inclusive birth to age 5 early childhood setting. Emphasizes focused observation, co-planning with a placement teacher, and co-teaching lessons to a whole group, small group, and individual student.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2-4		Prerequisite(s): admission to Professional Teacher Preparation Program
ECS	411	Instructional Methodologies for Young Children: STEM	Explores, applies and integrates STEM (Science, Technology, Engineering and Math) content, project-enhanced instructional strategies and assessments.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program
ECS	412	Mathematics Curriculum, Instruction and Assessment	Focuses on math content, methods, skills, and attitudes to be considered in teaching young children. Examines the theoretical foundation for young children's inquiry and learning. Methods focus on practical application of theory in classroom practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECS	413	Literacy Curriculum, Instruction and Assessment	Extends ECD 321; language and literacy development in K-3 classrooms; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
ECS	420	Evaluation and Intervention Strategies for Infants, Toddlers and Preschoolers with Disabilities	Students will learn to screen, assess and provide services to young children with special needs using norm-referenced, criterion-referenced, and formative assessments to determine special education eligibility, plan individualized family service programs, and monitor progress for eligible students.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	430	Systems, Policy, and Advocacy in Early Childhood/Special Education	Social policies at the national and state levels; values and assumptions of policies; political factors shaping policy and implementation; links among policy, educational practice, schools, and family functioning that have a direct impact on both typical and special needs children in early childhood programs.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program
ECS	431	Family, Community and Professional Support Systems	Covers methods and issues in cooperative teaching for special education students in general education classrooms, with an emphasis on collaborative communication skills for working with a variety of school professionals and families.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program OR enrolled in Educational Studies program OR enrolled in Early Childhood minor
ECS	478	Student Teaching K-3 Special Education	Student teaching in an inclusive birth to age 5 early childhood special education setting. Synthesizes experience in curriculum, instruction, and classroom management.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-6		Prerequisite(s): admission to Professional Teacher Preparation Program
ECS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-7		
ECS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
ECT	479	Capstone Seminar in ECT	Reflective, experience-based integration of theory and practice; professional development for preschool through grade 3 teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Progression into upper division Professional Teacher Preparation Program (PTPP) courses
EDA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
EDA	501	Competency/Performance in Educational Administration	Nature of educational administration and the concept of competency as it applies to educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDA	505	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	511	School Law	Interpreting state and federal law and policy in school settings. Includes statutory authority for administrators, liability, constitutional rights, law, and ethics.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	514	Leadership in Curriculum and Assessment	Curriculum and assessment responsibilities of school administrators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	526	Instructional Supervision	Administering curriculum improvement, in-service education, evaluating, and improving teaching competence; administrative instructional responsibilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	548	School, Family, and Community Connections	Administrative factors of primary importance in developing community involvement in public schools. Emphasizes theory and skill of school system and individual communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	572	School Finance and Human Resources	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and school financial affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	578	Critical Issues in Educational Leadership	Explores current critical issues in school leadership, including student support and relationships with governmental agencies and the community.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	611	Educational Policy and the Law	Emphasizes policy analysis and application of federal and state law to policy evaluation and development in public schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	634	Instructional Leadership	Theory, practice, and issues in school change and reform with a focus on leading change efforts at the school site.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	676	The School Superintendency	Critical examination of the school superintendency and the primary functions of this educational position. Includes the duties, responsibilities, activities, and problems of the school superintendent. Examines the unique leadership role of the school superintendent.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	679	Administration of Special Programs in Education	For personnel administering special education and federal programs; responsibilities of principals, supervisors, counselors, and directors for special education and federally funded programs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDA	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	685	Education in Global Contexts	Global perspectives on education in contemporary society with emphasis on social, political, and economic factors that affect access and equity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-6		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	701	Assessment Policies, Issues, and Practices	Critical thinking about assessment data and other information sources to make inferences, judgments, and predictions about reality in schools.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	702	Dynamic Contexts of Education	Explores current ethical issues influencing leadership decisions with a focus on real problems in the educational setting.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	703	Innovation in Teaching and Learning	Development and psychological processes of human cognition, motivation, and performance applied to cognitively diverse, English language learners, adult professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	704	Leading Change in Educational Organizations	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	772	School District Human Resources and Business Management	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and business affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	773	The Superintendency and School District Leadership Roles and Responsibilities	Examines management roles and responsibilities of public school district superintendents and other leaders in identifying and addressing critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDA	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDP	302	Assessment and Evaluation in Education	Applies assessment and evaluation principles to education contexts, using a case format.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1		
EDP	310	Educational Psychology for Non-Teachers	Human behavior in educational situations. Individual differences, factors affecting learning, behavioral and cognitive learning, motivation, testing, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	SB	
EDP	311	Educational Psychology for Future Teachers	Planning and conducting effective instruction based on learning theories and principles.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3	SB	Prerequisite(s): Teachers College major, minor or certificate student
EDP	313	Childhood and Adolescence	Principles underlying total development of pre- and early-adolescent children. Emphasizes physical, intellectual, social, and emotional development with practical implications for teachers. Meets ADE requirement for one course in early adolescent psychology for middle grade endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	
EDP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDP	454	Statistical Data Analysis in Education	Role of data analysis in research and decision making. Elements of exploratory data analysis, descriptive indexes, and statistical inference.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	CS	
EDP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
EDP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
EDP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
EDP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-7		
EDP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
EDP	502	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	503	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	504	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EDP	514	Psychology of the Adolescent	Cognitive, physical, and social development of adolescents in contemporary society. Impact of family, school, and workplace on adolescent development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	523	Educational Assessment	Increases teachers' and others' competence in classroom assessment, grading, and testing. Emphasizes integration of curriculum, instruction, and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	529	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	530	Theoretical Issues and Research in Human Development	Psychological theories, research, and methods relevant to human development, emphasizing the relations between early development and later performance.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	536	Physiology of Behavioral Disorders	Critical study of nervous system, brain function for fundamental behaviors, and system dysfunctions in mental/neurological disorders.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	540	Theoretical Views of Learning	Classical and cognitive theories of learning, plus recent orientations. Illustrative experimental and rational foundations; implications for educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate student. Credit is allowed for only EDP 540 or LSE 540
EDP	541	Motivating Students to Learn	Examines multiple perspectives on motivation and the management of learning environments as bases for reflecting on educational practice.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
EDP	552	Multiple Regression and Correlation Methods	Educational applications of regression techniques. Quantitative and qualitative predictors, curvilinear trends, and interactions. Emphasizes analyzing data and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	554	Analysis-of-Variance Methods	Educational applications of ANOVA techniques. Between- and within-subjects designs, multiple comparisons. Emphasizes using statistical software and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	563	Consultation and Supervision	Examines consultation and supervision research relevant to school psychology practice.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
EDP	566	Advanced Psychoeducational Practice	Develops advanced knowledge and skills in psychoeducational assessment and intervention with an emphasis on case conceptualization and evidence-based methods.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDP 560 and 562 with B or better
EDP	567	School Psychological Services for Diverse Populations	Examines historical, legal, ethical, and practical issues involved in the delivery of school psychological services to diverse populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	568	Psychological Assessment and Intervention	Skills-building course emphasizing interventions, assessment, and outcome-based educational decisions for students experiencing emotional and/or behavioral difficulties.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
EDP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EDP	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	597	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	651	Methods and Practices of Qualitative Research	Advanced course for students familiar with theory and extant work. Topics include data collection, analysis, reporting, and an extensive fieldwork project.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: COE 503 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDP	652	Multivariate Procedures for Data Analysis	Educational applications of multivariate methods, including MANOVA, discriminant analysis, and exploratory factor analysis. Emphasizes analyzing data and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	654	Structural Equation Modeling in Educational Research	Educational applications of confirmatory factor analysis, path analysis, and full latent variable models. Experience in conducting analyses and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDP	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		Pre-requisites: Freshman standing, Maximum 25 hours
EDS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
EDS	200	Design Literacy and Communication	Builds the requisite skills for students to be able to express their ideas visually. Gives exercises to create an understanding of basic principles of design as well as design communication, principles of composition and aesthetic evaluation. Uses tools such as sketching, drawing, computer graphics and model making as a vehicle to develop an understanding of visual methods of expressing one's self.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Environmental Design or The Arts (Fashion Design) major
EDS	201	Fundamentals of Sustainability in Design	Explores sustainability as it relates to the key disciplines that comprise environmental design. Topics range from issues affecting the preservation of the urban fabric to the development of earth-friendly materials used by interior designers and product designers to the design of sustainable buildings by architects through the use of appropriate materials and requisite energy efficiencies. Surveys the literature of sustainability, identifying critical issues on the subject today. Explores the theoretical underpinnings of the sustainability movement as it affects environmental design and related disciplines.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		
EDS	223	Design Thinking	Introduces the notion of design thinking, a concept that is gaining significant recognition in several disciplines including art, design, business, engineering and others. Design thinking can be described as a creative, multidisciplinary, human-centered approach to solving complex problems. Contemporary society faces numerous challenges, and the need for new tools and methods to tackle and solve these problems is more pressing than ever before. Offers several new techniques of design thinking and creative problem solving through engaging lectures and exciting projects.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		
EDS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDS	301	Contemporary Issues in Design Strategies and Innovation	Covers theories and methods needed in design, innovation and management of environmental design projects. Uses best practices and case studies related to the design of artifacts and to the design of built environments as a vehicle to develop students' understanding of different aspects of environmental design in a real-world setting. Also discusses the impact of contemporary issues such as globalization, digital tools, global connectivity on the theories and practice of environmental design.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre- or corequisite(s): EDS 200
EDS	302	Design Inquiry and Undergraduate Research	Theories and methods of design inquiry within a research environment. Prepares students for the senior-year synthesis courses. Students take on design-related research and develop and write a proposal for an integrative experience/project for an environmental design intervention and make an implementation plan to realize this intervention.	N	RSC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: EDS 301
EDS	394	Special Topics		Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
EDS	401	Environmental Design Synthesis I	First of a two-semester sequence of synthesis courses intended to be integrative, based on design research and inquiry. Serves as a culminating experience where, through the successful completion of an environmental design research project/application or experience, students demonstrate their understanding and synthesis of the knowledge and skills they have acquired in the program. Students identify a relevant research problem in environmental design and undertake the necessary literature search and reading regarding theories and methods related to the selected research question. Emphasizes the use of visual methods as a method of inquiry and research.	N	RSC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: EDS 302
EDS	402	Environmental Design Synthesis II	Second of a two-semester sequence of synthesis courses intended to be integrative, based on design research and inquiry. Serves as a culminating experience where, through the successful completion of an environmental design research project/application or experience, students demonstrate their understanding and synthesis of the knowledge and skills they have acquired in the program. Students implement the research study identified in the first semester of the two-semester sequence. Emphasizes the use of visual methods as a method of inquiry and research.	N	RSC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: EDS 401
EDS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
EDS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
EDS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
EDS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
EDT	180	Technology Literacy: Problem Solving using Digital Technology Applications	Introducing digital technologies and their place in society. Applies 21st-century skills to problem solving using digital technology applications including spreadsheets and databases.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	CS	Credit is allowed for only EDT 180 or EDT 321
EDT	184	Modeling, Inquiry, & Analysis Using Technology Tools	Project-based course as an overview of modeling, simulation, statistics, probability, and the role of technology in education, business and personal. Investigates exploration and presentation of emerging technology along with their acquisition, use, and implementation into society. Course includes the use of software programs and online simulations for scientific investigation, internet research, data collection, visual representation of data, probability, measures of central tendency, Action Research, 3D modeling, and Web page design.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
EDT	210	Games, Technology and Society	Introduces the role and significance of digital games in society and the process of designing games for impact in areas such as education, healthcare and social activism. Explores general theories about the relationship between technology and society, using games as examples, as well as develops a better understanding of methods that take a systemic, contextualized approach to designing games for impact.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDT	220	Understanding Games for Impact	Explores the nature of learning in and around games designed for entertainment as well as games designed intentionally for impact. Students gain familiarity with current research on course topics; develop a language for reflection on the cognitive, sociocultural and educational merits and drawbacks of game-centered learning environments; and gain new insights into the ways in which digital playspaces and pastimes shape how people think and learn. Develops the ability to analyze learning in games and game-related social contexts, using different theoretical perspectives and tools.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
EDT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDT	310	Games for Impact: The Full Life Cycle	Focuses on the complete life cycle of impact games, from perceived need through design to evaluating impact. Highlights ethics of game-based learning, unintended consequences of impact interventions, and how to involve stakeholders in the design process. Students collaboratively workshop an original impact game concept and publishing plan to address a key 21st-century challenge.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
EDT	321	Computer Literacy: Mobile Technologies and Your World	Uses mobile technologies across disciplines for communication, collaboration, creativity and problem solving. Employs digital tools including Microsoft Office's spreadsheets and databases, Google apps, mobile apps, and a variety of other Web-based tools in problem-based environments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	CS	Pre-requisite: Minimum 45 hours; Credit is allowed for only EDT 180 or EDT 321
EDT	329	Games, Simulations, and Virtual Environments	Focuses on the use of Gaming, Simulations, and Virtual Environments (GS/VE) in education and instruction. Examines how educational professionals and other practitioners can leverage students interests in digital culture to accelerate their learning. Participants explore the foundational, social, and cultural implications of these new media and the power they hold to engage learners in new ways. Discusses historical overview of GS/VE with an emphasis on educational applications. Analyzes the distinctive features of GS/VE from different pedagogical, psychological (cognitive/emotional), social, and entertainment perspectives. Participants learn how to analyze the design of games, simulations, and virtual environments, creating evaluative criteria for the selection of products in educational environments.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
EDT	340	Designing Games for Impact	Introduces concepts, methods, techniques and issues associated with designing interactive, game-centered experiences that are developed through a lens of impact. As a cumulative project, students create and test a digital game or game-based experience that demonstrates understanding of impact models and learning science principles.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
EDT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDT	440	Creating and Marketing Mobile Apps	Focuses on conceptualizing, creating and marketing of apps for mobile devices.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only EDT 440 or EDT 494 (Creating and Marketing Mobile Apps)
EDT	460	Games, Technology and Society	Education, healthcare and social activism. Explores general theories about the relationship between technology and society using games as examples, as well as develops a better understanding of methods that take a systemic, contextualized approach to designing games for impact. Students play and analyze existing impact games as well as conduct a landscape analysis for an impact game on a topic of their own choosing.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Junior or Senior standing; Credit is allowed for only EDT 460 or 560
EDT	461	Understanding Games for Impact	Explores the nature of learning in and around games designed for entertainment as well as games designed intentionally for impact. Students gain familiarity with current research on course topics; develop a language for reflection on the cognitive, sociocultural and educational merits and drawbacks of game-centered learning environments; and gain new insights into the ways in which digital playspaces and pastimes shape how people think and learn. Develops the ability to analyze learning in games and game-related social contexts, using different theoretical perspectives and tools.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
EDT	462	Designing Games for Impact	Concepts, methods, techniques and issues associated with designing interactive, game-centered experiences that are developed through a lens of impact. As a cumulative project, students create and test a digital game or game-based experience that demonstrates understanding of impact models and learning science principles.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDT	463	Games for Impact: The Full Life Cycle	Presents an impact game publishing methodology covering the full life cycle and key considerations for impact game design, development and publishing as well as the unique challenges in making games for impact. Applies methodology to examine an existing impact game currently in development. Students collaboratively workshop an original impact game concept and publishing plan that harnesses the power of games to address a key 21st-century challenge.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing. Credit is allowed for only EDT 463 or EDT 563
EDT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	IND	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
EDT	501	Foundations and Issues in Educational Technology	Introduces educational technology. Examines accomplishments and issues in the field.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	502	Design and Development of Instruction	Design, development, and formative evaluation of objectives-based instructional materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Accepted in either the MED in EDTECH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	503	Instructional Media Design	Uses media selection, design, and production principles to prepare design specifications for solutions to instructional messages and products.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate
EDT	504	Development of Computer-Based Instruction	Systematic design, development, and formative evaluation of computer-based instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDT 502 with C or better
EDT	506	Educational Evaluation	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDT 502 with C or better
EDT	507	Trends in Performance Improvement	Introduces the field of human performance technology. Emphasizes the analysis of performance problems, their causes, and interventions.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDT 501 with B or better
EDT	523	Distance Education Theory and Practice	Explores development of distance learning principles by examining national and international systems and applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	524	Principles and Issues in K-12 Online Learning	Examines current issues, policies, and trends pertaining to K-12 Web-based teaching and learning. Actively explores research related to online learning, with a focus on virtual schooling and emerging best practices for effective online instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Practicing or licensed K-12 teacher
EDT	530	Technology Integration Methods across the Curriculum	Examines a constructivist approach to technology in education. Investigates technology as a catalyst for rethinking instructional goals and practices.	Y	LEL	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	540	Creating and Marketing Mobile Apps	Focuses on conceptualizing, creating and marketing of apps for mobile devices.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only EDT 494 (Concept, creating & mktg APPS), 540 or 594 (Concept, creating & mktg APPS)
EDT	545	Using the Internet in Education	Explores the Internet as an educational tool for research, inquiry-based learning, and online learning communities. Incorporates constructivist theory.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	560	Games, Technology and Society	The role and significance of digital games in society and the process of designing games for impact in areas such as education, healthcare and social activism. Explores general theories about the relationship between technology and society, using games as examples, as well as develops a better understanding of methods that take a systemic, contextualized approach to designing games for impact.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only EDT 460 or EDT 560

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EDT	561	Understanding Games for Impact	Explores the nature of learning in and around games designed for entertainment as well as games designed intentionally for impact. Students gain familiarity with current research on course topics; develop a language for reflection on the cognitive, sociocultural and educational merits and drawbacks of game-centered learning environments; and gain new insights into the ways in which digital playspaces and pastimes shape how people think and learn. Develops the ability to analyze learning in games and game-related social contexts, using different theoretical perspectives and tools.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only EDT 461 or EDT 561
EDT	562	Designing Games for Impact	Concepts, methods, techniques and issues associated with designing interactive, game-centered experiences that are developed through a lens of impact. As a cumulative project, students create and test a digital game or game-based experience that demonstrates understanding of impact models and learning science principles.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EDT 462 or EDT 562
EDT	563	Games for Impact: The Full Life Cycle	Focuses on the complete life cycle of impact games, from perceived need through design to evaluating impact. Highlights ethics of game-based learning, unintended consequences of impact interventions, and how to involve stakeholders in the design process. Students collaboratively workshop an original impact game concept and publishing plan to address a key 21st-century challenge.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only EDT 463 or EDT 563
EDT	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: EDT 501, 502, and 503 with C or better
EDT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: EDT 501, 502, and 503 with C or better
EDT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate
EDT	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDT	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	701	Research in Educational Technology	Review and analysis of research studies in educational technology. Methodology for designing, conducting, and reporting educational technology research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDT 501 and 502 with C or better
EDT	704	Emerging Technologies in Education	Examines the role and impact of emerging technologies in education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student. Credit is allowed for only EDT 591 (Emerging Technologies in Education) or 704
EDT	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDT 502 with C or better
EDT	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: EDT 501, 502, and 503 with C or better
EDT	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisites: EDT 701 with C or better
EDT	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EED	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EED	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
EED	309	Environmental Education Project	Covers topics in environmental education that assist students with being able to learn about and investigate their environment in order to make intelligent and informed decisions.	Y	LEL	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): minimum 45 hours; Credit is allowed for only EED 309 or EED 494 (Project Wild Aquatic) or EED 494 (Project Wet)
EED	324	Social Studies in Elementary Schools	Social studies education standards, curriculum, and instructional and assessment strategies for all children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Teacher Preparation Program
EED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EED	396	Clinical Experience I	Develops knowledge and skills for effective lesson planning. Introduces the TAP instructional rubric, the college professionalism rubric, backwards design of a direct instruction lesson plan, and strategies for co-teaching. Provides opportunities for students to engage as a teacher and learner in a pre-K-12 classroom setting. Emphasizes focused observation; co-planning with a placement teacher; and co-teaching lessons to a whole group, small group, and individual student.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Prerequisite(s): admission to the Professional Teacher Preparation Program
EED	397	Clinical Experience II	Develops knowledge and skills for effective classroom management, establishing a positive classroom environment, and effective lesson delivery. Continues use of the TAP instructional rubric, the college professionalism rubric, and strategies for co-teaching. Provides opportunities for students to engage as a teacher and learner in a pre-K-12 classroom setting. Emphasizes focused observation; co-planning with a placement teacher; and co-teaching lessons to a whole group, small group, and individual student.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Pre-requisite: EED 396 or SPE 396; Admission to Professional Teacher Preparation Program
EED	411	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Admission to the professional program; Credit is allowed for only EED or SCN 411
EED	412	Mathematics in Elementary Schools	Methods of teaching mathematics to all students at the K-8 level, instructional planning and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 412 or MTE 412 or SPE 410
EED	433	Language Method Management and Assessment	Theory on the social nature of oral and written language and congruent teaching, management and assessment practices. Emphasizes skills, strategies and dispositions for teaching 21st-century multimodal literacies to diverse learners including ELL with a focus on learners as creators of content, communicators, collaborators and global citizens.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Teacher Preparation Program
EED	478	Student Teaching in the Elementary School	Student teaching in elementary school classrooms, Synthesized experience in curriculum, instruction, and classroom management	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-15		Prerequisite(s): admission to the Professional Teacher Preparation Program
EED	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
EED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
EED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EED	496	Field Experience III	Applies course content in a K78 school classroom. Emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	0-3		Prerequisite(s): admission to the Professional Teacher Preparation Program
EED	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
EED	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-7	L	Prerequisite(s): admission to the Professional Teacher Preparation Program

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): admission to the Professional Teacher Preparation Program
EED	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	511	Principles of Curriculum Development	Contemporary curriculum theories. Curriculum as an interrelated entity. Principles of conceiving and effecting change.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	521	Instructional Planning and Management in the Inclusive Classroom	Planning and delivering instruction; organizing and managing classrooms; making adaptations for English language learners and students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	524	Social Studies in Elementary Schools	Provides strategies for integrating social studies content knowledge with other curricular areas. Addresses a variety of issues related to social studies instruction in the elementary school, with an emphasis on valuing diverse cultures and experiences within historical and geographical perspectives. Emphasizes meeting the academic and linguistic needs of all learners including English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	526	Communication Arts in the Elementary School	Critical examination of school language arts teaching, focusing on theoretical assumptions regarding oral- and written-language development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	529	Science in the Elementary School	Problems and trends of current programs. Development of a balanced and articulated science program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	531	Teaching with Educational Technology	Focuses on using technology in K-12 classrooms. Addresses the integration of technology in all curricular areas for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	537	Mathematics in the Elementary School	Contemporary mathematics teaching. Content, materials, and approaches to instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	567	Clinical Experience I	Advanced application of course content in elementary education classrooms; observations, pupil management, planning, and delivering instruction and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	576	Clinical Experience II	Applies course content in elementary classrooms: observation, pupil management, planning and delivering instruction, and assessment.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): EED 567; degree- or nondegree-seeking graduate student
EED	578	Student Teaching in the Elementary School	Student teaching in elementary education setting for students in the MEd with Concentration in Teacher Certification.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	579	Apprentice Teaching in Elementary Education	Apprentice teaching in elementary school classrooms. Synthesized experience in classroom management, curriculum, instruction and assessment. Must be taken four times for a total of 12 semester hours.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	2-3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EEE	101	Introduction to Engineering Design	Introduces engineering design, teaming, engineering profession; computer models and programming; communication skills; design of electrical and computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	2		
EEE	120	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		
EEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-3		
EEE	202	Circuits I	Principles for analyzing linear and nonlinear circuits. Uses SPICE and MATLAB. Design and measurement of linear analog electrical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Pre/Co-requisites: MAT 274 (or MAT 275), and PHY 131 (with C or better if completed)
EEE	203	Signals and Systems I	Introduces continuous and discrete time signal and system analysis, linear systems, Fourier, and z-transforms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Pre-requisites: EEE 202; Pre-requisite: MAT 242 with C or better if completed or Pre/Co-requisite: MAT 342 or 343 with C or better if completed
EEE	230	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming, Exception/interrupt handling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Pre-requisites: CSE 100, 110 or 200; CSE 120 or EEE 120; Credit is allowed for only EEE 230 or CSE 230
EEE	241	Fundamentals of Electromagnetics	Vector analysis, differential operators, fourier analysis, scalar, vector fields, electro/magneto statics, time-varying fields, boundary value problems, dielectric, magnetic materials, Maxwell's equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): MAT 267 or 272 with C or better; MAT 274 or 275 with C or better; PHY 131 with C or better; Pre- or corequisite(s): EEE 202
EEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-4		
EEE	304	Signals and Systems II	Communication, signal processing, control systems, continuous, discrete transforms, sampling theorem, analog, digital modulation, filter design, signal processing applications, state space.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203
EEE	333	Hardware Design Languages and Programmable Logic	Develops digital logic with modern practices of hardware description languages. Emphasizes usage, synthesis of digital systems for programmable logic, VLSI.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 202
EEE	334	Circuits II	Design of analog and digital circuits. Diodes/BJTs/Mosfets. Digital and analog circuit building blocks. Fundamentals of mixed signal circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, BHSE undergraduate student or Computer Systems Engineering or Computer Systems Engineering (Information Assurance) student; EEE 202
EEE	335	Analog and Digital Circuits	Analog, digital microelectronic circuits and systems. Amplifiers, frequency response, gate sizing, timing analysis, sequential digital circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 334

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EEE	341	Engineering Electromagnetics	Time-varying electromagnetic fields, waves in homogeneous and stratified media, transmission lines, waveguides and cavity resonators, radiation and antennas.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203; EEE 241
EEE	350	Random Signal Analysis	Probabilistic and statistical analysis as applied to electrical signals and systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; MAE 317 or pre- or corequisite: EEE 203; or Fulton Engineering graduate student
EEE	352	Properties of Electronic Materials	Schrodinger's wave equation, potential barrier problems, bonds of crystals, the band theory of solids, semiconductors, superconductor dielectric, and magnetic properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; CHM 114, 115, 116 or 118; EEE 241; PHY 241 with a C or better
EEE	360	Energy Systems and Power Electronics	Conventional and alternate energy sources for power systems, three-phase analysis, AC generators, transformers, induction, DC motors, power electronic speed control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 202; Pre- or corequisite(s): EEE 241
EEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-4		
EEE	404	Real-Time DSP Systems	Digital signal processors, translating signals and systems concepts into real-time multimedia and communications applications, real-time algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; CSE 230 or EEE 230; EEE 203
EEE	407	Digital Signal Processing	Time and frequency domain analysis, difference equations, z-transform, FIR and IIR digital filter design, discrete Fourier transform, FFT, and random sequences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisites: Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203; MAT 342 or 343 with C or better
EEE	425	Digital Systems and Circuits	Digital logic gate analysis and design. Propagation delay times, fan out, power dissipation, noise margins. Design of MOS and bipolar logic families, including NMOS, CMOS, standard and advanced TTL, ECL, and BiCMOS. Inverter, combinational and sequential logic circuit design, MOS memories, VLSI circuits. Computer simulations using PSPICE.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 335
EEE	433	Analog Integrated Circuits	Analysis, design, and applications of modern analog circuits using integrated bipolar and field-effect transistor technologies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 335
EEE	434	Quantum Mechanics for Engineers	Angular momentum, wave packets, Schroedinger wave equation, probability, problems in one dimension, principles of wave mechanics, scattering, tunneling, central forces, angular momentum, hydrogen atom, perturbation theory, variational techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352
EEE	435	Fundamentals of CMOS and MEMS	Introduces basic CMOS processing and fabrication tools. Covers the fundamentals of thermal oxidation, CVD, implantation, diffusion, and process integration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352
EEE	436	Fundamentals of Solid-State Devices	Semiconductor fundamentals, pn junctions, metal-semiconductor contacts, metal-oxide-semiconductor capacitors and field-effect transistors, bipolar junction transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352
EEE	437	Optoelectronics	Basic operating principles of various types of optoelectronic devices that play important roles in commercial and communication electronics; light-emitting diodes, injection lasers, and photodetectors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 436
EEE	439	Semiconductor Facilities and Cleanroom Practices	Microcontamination, controlled environments, cleanroom layout and systems, modeling, codes and legislation, ultrapure water, production materials, personnel and operations, hazard management, advanced concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352
EEE	443	Antennas for Wireless Communications	Fundamental parameters; radiation integrals; wireless systems; wire, loop, and microstrip antennas; antenna arrays; smart antennas; ground effects; multipath.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 341
EEE	445	Microwaves	Waveguides; circuit theory for waveguiding systems; microwave devices, systems, and energy sources; striplines and microstrips; impedance matching transformers; measurements.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 341 (EEE 340)

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EEE	448	Fiber Optics	Principles of fiber-optic communications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 341 (EEE 340)
EEE	455	Communication Systems	Signal analysis techniques applied to the operation of electrical communication systems. Introduction to and overview of modern digital and analog communications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 350
EEE	459	Communication Networks	Fundamentals of communication networks. Study of Seven-Layer OSI model. Focus on functionality and performance of protocols used in communication networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203; Corequisite(s): EEE 350
EEE	460	Nuclear Power Engineering	Radioactivity and decay. Radiation interactions and dose. Nuclear reaction, fission and fusion theory. Fission reactors, four factor formula, moderation. Nuclear power, TMI, Chernobyl. Nuclear fuel cycle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; CHM 114 or 116; MAT 274 or 275 with C or better; PHY 241 or 361 with C or better
EEE	463	Electrical Power Plants	Generation of electric power using fossil, nuclear, and renewable, including solar, geothermal, wind, hydroelectric, biomass and ocean, energy sources. Power plant thermal cycle analysis. Cogeneration and combined cycles. Economics, operations, and design of electric power stations. Energy storage.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; CHM 114 or 116; MAE 240 (or ECE 340) or PHY 241 with C or better; MAT 274 or 275 with C or better
EEE	465	Photovoltaic Energy Conversion	Photovoltaics for production of electricity from solar energy. The grand energy challenge. Solar radiation and utilization. Fundamentals of semiconductors for photovoltaics: crystal structures, band theory, doping, carrier statistics, optical absorption, and p-n junctions. Principles of solar cells including loss mechanisms and design principles. Current solar cell technologies. Manufacturing of silicon solar cells. Solar modules, arrays and systems. Economic analysis of solar photovoltaic systems. Terawatt-scale deployment of solar cells.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352; Credit is allowed for only EEE 465 or 498: Solar Energy
EEE	470	Electric Power Devices	Analyzes devices used for short circuit protection, including circuit breakers, relays, and current and voltage transducers. Protection against switching and lightning over voltages. Insulation coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 360
EEE	471	Power System Analysis	Review of transmission line parameter calculation. Zero sequence impedance, symmetrical components for fault analysis, short circuit calculation, review of power flow analysis, power system stability, and power system control concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 360
EEE	472	Power Electronics and Power Management	Principles of switch mode power conversion, analysis, design and control of dc-dc converters, PWM rectifiers and inverters, power management, power electronics applications in information technology, renewable energy systems, motion control and lighting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203
EEE	473	Electrical Machinery	Operating principles, modeling and speed control of DC, brushless DC, and AC machines; power converters for DC and AC motors drives.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 360
EEE	480	Feedback Systems	Analysis and design of linear feedback systems. Frequency response and root locus techniques, series compensation, and state variable feedback.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203 or MAE 318 with C or better
EEE	481	Computer-Controlled Systems	Implements computer-based, embedded, control systems using MATLAB xPC Target toolbox. Small-scale, representative projects demonstrate theoretical issues and provide hands-on expertise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203 and EEE 230/CSE 230, or MAE 318
EEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student

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EEE	488	Senior Design Laboratory I	Design process: research, concept, feasibility, simulation, specifications, benchmarking, and proposal generation. Technical communications and team skills enrichment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3	L	Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; ENG 102, 105 or 108, EEE 241; EEE 334; EEE 350; three courses from the following list: EEE 304, 333, 335, 341, 352 or 360
EEE	489	Senior Design Laboratory II	Implement, evaluate, and document EEE 488 design. Social, economic, and safety considerations. Technical communications and team skills enrichment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3	L	Prerequisite(s): Fulton ECEE, SEMTE, or BHSE senior or post-bacc undergraduate student; EEE 488
EEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-6		Prerequisite(s): Barrett Honors Electrical Engineering BSE senior
EEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	0-6	L	Prerequisite(s): Barrett Honors Electrical Engineering BSE senior
EEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 433
EEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-7		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student
EEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-3		Prerequisite(s): Electrical Engineering BSE senior
EEE	501	Overview of Electrical Engineering	Electromagnetic fields, electrical circuit analysis, transmission lines, communications systems, electromagnetic interference and compatibility, computational techniques and electromagnetic software	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	505	Time-Frequency Signal Processing	Joint time-frequency analysis of time-varying signals and systems; linear and quadratic time-frequency representations; applications in current areas of signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	506	Digital Spectral Analysis	Principles and applications of digital spectral analysis, least squares, random sequences, parametric, and nonparametric methods for spectral estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	507	Multidimensional Signal Processing	Processing and representation of multidimensional signals. Design of systems for processing multidimensional data. Introduces image and array processing issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	508	Digital Image and Video Processing and Compression	Fundamentals of digital image perception, representation, processing, and compression. Emphasizes image coding techniques. Signals include still pictures and motion video.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student

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EEE	509	DSP Algorithms and Software	Linear systems review, digital filter design, software aspects, DFT, FFT, random signals, programming aspects, applications projects, MATLAB and Java simulations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	510	Multimedia Signal Processing	Speech/audio coding algorithms. LPC, CELP, MPEG, Cell phone, DTV, cinema, and surround sound standards. MPEG/JPEG introduction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	511	Artificial Neural Computation	Networks for computation, learning function representations from data, learning algorithms and analysis, function approximation and information representation by networks, applications in control systems and signal analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	518	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit for only MSE 518, EEE 518, MAE 518, MSE 475, or CHE 518
EEE	523	Advanced Analog Integrated Circuits	Analysis and design of analog integrated circuits: analog circuit blocks, reference circuits, operational-amplifier circuits, feedback, and nonlinear circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	524	Communication Transceiver Circuits Design	Communication transceivers and radio frequency system design; fundamentals of transceivers circuits; RF, IF, mixers, filters, frequency synthesizers, receivers, CAD tools, and lab work on IC design stations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	525	VLSI Design	Analysis and design of Very Large Scale Integrated (VLSI) circuits. Physics of small devices, fabrication, regular structures, and system timing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	526	VLSI Architectures	High throughput and low-power VLSI architectures for signal processing. Array processor systems; data path design and optimization; memory design; high-level synthesis; low-power design at system level, algorithm level, and architecture level.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	527	Analog to Digital Converters	Detailed introduction to the design of Nyquist rate, CMOS analog to digital converters. Requires knowledge of analog integrated circuits (analog circuit blocks, reference circuits, operational-amplifier circuits, feedback, and nonlinear circuits) to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	528	Introduction to Microelectromechanical Systems	Microelectromechanical systems and devices emphasizing analytical and numerical modeling of actuation and sensing mechanisms with an overview of fabrication technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	530	Advanced Silicon Processing	Thin films, CVD, oxidation, diffusion, ion-implantation for VLSI, metallization, silicides, advanced lithography, dry etching, rapid thermal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	531	Semiconductor Device Theory I	Transport and recombination theory, pn and Schottky barrier diodes, bipolar and junction field-effect transistors, and MOS capacitors and transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	532	Semiconductor Device Theory II	Advanced MOSFETs, charge-coupled devices, solar cells, photodetectors, light-emitting diodes, microwave devices, and modulation-doped structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	533	Semiconductor Process/Device Simulation	Process simulation concepts, oxidation, ion implantation, diffusion, device simulation concepts, pn junctions, MOS devices, bipolar transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	534	Semiconductor Transport	Carrier transport in semiconductors. Hall effect, high electric field, Boltzmann equation, correlation functions, and carrier-carrier interactions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	535	Electron Transport in Nanostructures	Nanostructure physics and applications. 2-D electron systems, quantum wires and dots, ballistic transport, quantum interference, and single-electron tunneling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	536	Semiconductor Characterization	Measurement techniques for semiconductor materials and devices. Electrical, optical, physical, and chemical characterization methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	537	Semiconductor Optoelectronics	Electronic states in semiconductors, quantum theory of radiation, absorption processes, radiative processes, nonradiative processes, photoluminescence, and photonic devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	539	Intro Solid-State Electronics	Crystal lattices, reciprocal lattices, quantum statistics, lattice dynamics, equilibrium, and nonequilibrium processes in semiconductors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	540	Fast Computational Electromagnetics	Method of moments, finite difference time-domain, finite element methods implemented using fast algorithms (wavelets, FMM, Nystrom) to gain high efficiency.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	541	Electromagnetic Fields and Guided Waves	Polarization and magnetization; dielectric, conducting, anisotropic, and semiconducting media; duality, uniqueness, and image theory; plane wave functions, waveguides, resonators, and surface guided waves.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	543	Antenna Analysis and Design	Impedances, broadband antennas, frequency independent antennas, miniaturization, aperture antennas, horns, reflectors, lens antennas, and continuous sources design techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	544	High-Resolution Radar	Fundamentals; wideband coherent design, waveforms, and processing; stepped frequency; synthetic aperture radar (SAR); inverse synthetic aperture radar (ISAR); imaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	545	Microwave Circuit Design	Analysis and design of microwave attenuators, in-phase and quadrature-phase power dividers, magic tees, directional couplers, phase shifters, DC blocks, and equalizers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	546	Advanced Fiber Optics	Theory of propagation in fibers, couplers and connectors, distribution networks, modulation, noise and detection, system design, and fiber sensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	547	Microwave Solid-State Circuit Design I	Applies semiconductor characteristics to practical design of microwave mixers, detectors, limiters, switches, attenuators, multipliers, phase shifters, and amplifiers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	548	Coherent Optics	Diffraction, lenses, optical processing, holography, electro-optics, and lasers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	550	Transform Theory and Applications	Introduces abstract integration, function spaces, and complex analysis in the context of integral transform theory. Applications to signal analysis, communication theory, and system theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	551	Information Theory	Entropy and mutual information, source and channel coding theorems, applications for communication and signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	552	Digital Communications	Complex signal theory, digital modulation, optimal coherent and incoherent receivers, channel codes, coded modulation, Viterbi algorithm.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	553	Coding and Cryptography	Introduces algebra, block and convolutional codes, decoding algorithms, turbo codes, coded modulation, private and public key cryptography.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	554	Random Signal Theory	Applies statistical techniques to the representation and analysis of electrical signals and to communications systems analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	556	Detection and Estimation Theory	Combines the classical techniques of statistical inference and the random process characterization of communication, radar, and other modern data processing systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	557	Broadband Networks	Physics of wireless and optical communications. Broadband multiplexing and switching methods. Blocking and queuing analysis. Network optimization, routing, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	558	Wireless Communications	Cellular systems, path loss, multipath fading channels, modulation and signaling for wireless, diversity, equalization coding, spread spectrum, TDMA/FDMA/CDMA.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	559	Wireless Networks	Design principles of cellular networks. Multiple access control protocols for wireless systems. Wireless routing and TCP/IP. Mobile management. Call admission control and resource allocation (e.g., power control and rate control). Wireless security. Future-generation wireless networks. A previous course in random signal theory is required to be successful in this class.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit is allowed for only CSE 591 (Wireless Networks), EEE 559 or 598 (Wireless Networks)
EEE	562	Nuclear Reactor Theory and Design	Principles of neutron chain reacting systems. Neutron diffusion and moderation. One-, two-, and multigroup diffusion equation solution methods. Heterogeneous reactors. Nuclear fuel steady-state performance. Core thermal-hydraulics. Core thermal design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	563	Nuclear Reactor System Dynamics and Diagnostics	Time-dependent solution to neutron diffusion equation. Reactor kinetics and reactivity changes. Dynamics, stability, and control of reactor systems. Modeling neutronic and thermal processes. System characterization in time and frequency domains. Reactor surveillance and diagnostics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	564	Interdisciplinary Nuclear Power Operations	Nuclear power plant systems. Studies interrelationship and propagation of effects that systems and design changes have on one another, especially in relation to nuclear power plant safety and operations. Case studies and design projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	565	Solar Cells	Introduction to the generation and utilization of electricity from solar energy. Exploration of the science and engineering of direct conversion (photovoltaics), including the design, fabrication, and operation of solar cells, and the construction and performance of solar cell modules. Prior knowledge of properties of electronic materials is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	571	Power System Transients	Simple switching transients. Transient analysis by deduction. Damping of transients. Capacitor and reactor switching. Transient recovery voltage. Travelling waves on transmission lines. Lightning. Protection of equipment against transient overvoltages. Introduces computer analysis of transients.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	572	Advanced Power Electronics	Analyzes device operation, including thyristors, gate-turn-off thyristors, and transistors. Design of rectifier and inverter circuits. Applications such as variable speed drives, HVDC, motor control, and uninterruptable power supplies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	573	Electric Power Quality	Sinusoidal waveshape maintenance; study of momentary events, power system harmonics, instrumentation, filters, power conditioners, and other power quality enhancement methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	574	Computer Solution of Power Systems	Algorithms for digital computation for the Newton and fast-decoupled power flow problem, and fault analysis. Sparse matrix and vector programming methods, creation of elimination trees, network equivalencing, solution of the least squares problem, introduction to state estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	575	Power System Stability	Dynamic performance of power systems with emphasis on stability. Modeling of system components and control equipment. Analysis of the dynamic behavior of the system in response to small and large disturbances. Knowledge of EEE470, 471 and 473 (or equivalents) is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	576	Power System Dynamics	Dynamic performance of power systems with emphasis on control. Modeling of control equipment, FACTS devices, wind generators, and nonlinear loads. Design of power system stabilizers. Prior knowledge of electric power devices, power system analysis, and electrical machinery is required to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit is allowed for only EEE 576 or 598 (Power System Dynamics)
EEE	577	Power Engineering Operations and Planning	Economic dispatch, unit commitment, dynamic programming, power system planning and operation, control, generation modeling, AGC, and power production.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	579	Power Transmission and Distribution	High-voltage transmission line electric design; conductors, corona, RI and TV noise, insulators, clearances. DC characteristic, feeders voltage drop, and capacitors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	581	Filtering of Stochastic Processes	Modeling, estimation, and filtering of stochastic processes, with emphasis on the Kalman filter and its applications in signal processing and control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	582	Linear System Theory	Controllability, observability, and realization theory for multivariable continuous time systems. Stabilization and asymptotic state estimation. Disturbance decoupling, noninteracting control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	586	Nonlinear Control Systems	Stability theory, including phase-plane, describing function, Liapunov's method, and frequency domain criteria for continuous and discrete, nonlinear, and time-varying systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	587	Optimal Control	Optimal control of systems. Calculus of variations, dynamic programming, linear quadratic regulator, numerical methods, and Pontryagin's principle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	588	Design of Multivariable Control Systems	Practical tools for designing robust MIMO controllers. State feedback and estimation, model-based compensators, MIMO design methodologies, CAD, real-world applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	589	Linear Algebra and Convex Optimization	Linear algebra and convex optimization. Vector spaces, matrix algebra, linear programming, Lagrange multipliers, Karush-Kuhn-Tucker (KKT) conditions, duality theory and algorithms for convex optimization. Newton's method, gradient and steepest descent methods. Algorithms for unconstrained, equality constrained and inequality constrained problems, which include interior point methods. Applications to approximation and data fitting and some geometric problems. Applications to signal processing, communications and control systems. Background in linear algebra necessary to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit allowed for only EEE 589 or 598: Advanced Linear Algebra & Opt
EEE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Master of Engineering or Electrical Engineering MS, MSE or PHD students

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Electrical Engineering Program	1		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	606	Adaptive Signal Processing	Principles and applications of adaptive signal processing, adaptive linear combiner, Wiener least-squares solution, gradient search, performance surfaces, LMS/RLS algorithms, block time/frequency domain LMS.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	607	Speech Coding for Multimedia Communications	Speech and audio coding algorithms for applications in wireless communications and multimedia computing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	625	Advanced VLSI Design	Practical industrial techniques, circuits, and architectures appropriate to high-performance and low-power digital VLSI designs such as microprocessors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	627	Oversampling Sigma-Delta Data Converters	Introduces design and analysis of sigma delta oversampled data converters from an IC design perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	631	Advanced Optoelectronics	Principles of heterojunctions and quantum well structures, band lineups, optical, and electrical properties. Introduces heterojunction devices. Knowledge of transport and recombination theory, pn and Schottky barrier diodes, bipolar and junction field-effect transistors, and MOS capacitors and transistors. is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	641	Advanced Electromagnetic Field Theory	Cylindrical wave functions, waveguides, and resonators; spherical wave functions and resonators; scattering from planar, cylindrical, and spherical surfaces; Green's functions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	643	Advanced Topics in Electromagnetic Radiation	High-frequency asymptotic techniques, geometrical and physical theories of diffraction (GTD and PTD), moment method (MM), radar cross section (RCS) prediction, Fourier transforms in radiation, and synthesis methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	686	Adaptive Control	Main topics covered: adaptive identification, convergence, parametric models, performance and robustness properties of adaptive controllers, persistence of excitation, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Electrical Engineering MS, MSE, or PHD student or Master of Engineering student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	731	Advanced MOS Devices	Threshold voltage, subthreshold current, scaling, small geometry effects, hot electrons, and alternative structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Electrical Engineering PhD students
EEE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-15		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Electrical Engineering Program	1		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EEE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Electrical Engineering Program	1-15		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student
EET	406	Control System Technology	Control system components, analysis of feedback control systems, stability, performance, and application.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3-4		Pre-requisites: EST 310; MAT 266; Credit for EET 506 or EET 406
EET	408	Digital Real-Time Control	Analysis, simulation, and design of discrete systems. Approach taken in this class begins with the analysis, simulation and design of a continuous system, which yields an s-based, transfer function compensator. Then, this compensator is transformed into a z-based transfer function, which can be realized with a difference equation in a microcontroller.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EET 406; Credit is allowed for only EET 408 or 494 (Digital Realtime Control)
EET	430	Instrumentation and Measurement Systems	Instrumentation and measurement techniques, sensors operating principles. Signal and error analysis. Signal conditioning and data acquisition.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 310; Credit is allowed for only EET 430 or 530
EET	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EET	506	System Dynamics and Control	Time, frequency, and transform domain analysis of physical systems. Transfer function analysis of feedback control systems performance and stability. Compensation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EET 406 or EET 506
EET	508	Digital Real-Time Control	Sample data control techniques and applications to process control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EET	530	Electronic Test Systems and Applications	Analysis, design, and application of electronic test equipment, test systems, specifications, and documentation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate (degree or non-degree) students; Credit is allowed for only EET 430 or EET 530
EET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EGR	101	Foundations of Engineering Design Project I	Introduces engineering as a profession, critical thinking in engineering design and modeling, team dynamics, engineering communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Credit is allowed for only SER 101 or EGR 101

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EGR	102	Foundations of Engineering Design Project II	Development and experimental verification of engineering models, engineering design, data acquisition, critical analysis of data, introduction to CADD, engineering communications.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 101; MAT 170 or higher; Pre- or corequisite(s): ENG 101 (or ENG 105, 107 or 111); Credit is allowed for only EGR 102 or SER 102
EGR	103	Introduction to Human Systems Engineering	Introduces basic principles, methods and theories of psychology and applications to engineering problems relevant to human systems. Gives particular attention to the intersection of psychology and engineering. Students learn brain anatomy and physiology, sensation and perception, cognition, social systems and research methods so that they are able to design systems consistent with human capabilities and limitations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3	SB	
EGR	104	Critical Inquiry in Engineering	Critical thinking. Systematic evaluation of information as input to well-informed decision making. Close reading and substantive writing in a technical setting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3	L	Prerequisite(s): ENG 101, 105 or 107
EGR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EGR	201	Use-Inspired Design Project I	Design, professionalism, and engineering practice developed in a multidisciplinary project setting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): APM 265, 270, MAT 265 or 270; EGR 102
EGR	202	Use-Inspired Design Project II	Design, problem solving, and engineering practice developed in a multidisciplinary project setting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 201
EGR	216	Engineering Electrical Fundamentals	Introduces modeling of electrical systems using mathematical and scientific principles. Covers electrical circuit analysis techniques including Kirchhoff's and Ohm's laws, series and parallel circuit elements, equivalent elements and circuits, and nodal analysis. These techniques are developed for DC, AC, and transient conditions. Also introduces the basic structure of a modern electronic measurement system and relates this structure to measurement accuracy, precision and resolution.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MAT 265 or MAT 270. Credit is allowed for only EGR 216 or 294 Engineering Fundamentals I
EGR	217	Engineering Mechanics Fundamentals	Provides a foundation in the theory and principles of statics and dynamics. Examines the effect of forces acting on particles and rigid bodies. Vector mechanics is used extensively. Statics addresses the topics of equilibrium in two and three dimensions, to include distributed loads, trusses, frames, friction and cables. Dynamics addresses kinematics, including translating and rotating reference frames, and two-dimensional kinetics methods of force-acceleration, work-energy, and impulse-momentum.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: PHY 121. Credit is allowed for only EGR 217 or 294 Engineering Fundamentals II
EGR	218	Materials and Manufacturing Processes	Applies material properties and manufacturing processes to the design and fabrication of engineered artifacts.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): CHM 113 or 114. Credit is allowed for only EGR 218 or 294 Engineering Materials & Manufacturing
EGR	219	Computational Modeling of Engineering Systems	Introduces computing that develops software to find solutions to engineering problems. Students write and document code to solve problems in data acquisition, modeling of physical systems, and optimization.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Credit is allowed for only EGR 219 or 294 Computational Modeling
EGR	223	Biology of Human Systems	Introduces the biological basis of human behavior and implications for human systems engineering. Structure and function of the nervous system as well as the behavioral effects of the physiological processes outside the brain (for example, hormones secreted by glands). Biological processes involved in many aspects of our behavior such as eating, sleeping, sexual behavior, emotional responses, sensory perception, learning and memory, language and cognitive functions, mental illness and drug abuses. Introduces a wide range of techniques and methods used to investigate the biological foundations of behavior. Prepares students for advanced courses in neuroscience, psychology or related fields.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3	SB	Prerequisite(s): EGR 103 or PSY 101
EGR	224	Social Basis of Human Systems	Covers social behaviors, social cognition and emotion critical for engineered systems that interact with humans (artificial intelligence, robots). Students learn how human beings behave, think and feel in daily social situations and think about how that information can be used to create effective human systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3	SB	Prerequisite(s): EGR 103 or PSY 101
EGR	225	Human Systems Integration	Reviews human systems integration (HSI), which is basically systems engineering from a human-centered perspective. Research, theory and methodological approach as applied to a variety of systems ranging from transportation systems to medical and military systems. Discusses handbook chapters and specific examples of human systems integration.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 103 or PSY 101

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EGR	230	Human Systems and Statistics I	Basic methods of exploratory data analysis (including graphics) and statistical computing methods, including a detailed look at hypothesis testing, effect size and power analysis, as well as some methods for dealing with categorical and discrete data. Introduces both correlation/regression and analysis of variance (ANOVA), as well as common statistical software.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3	CS	Prerequisite(s): EGR 103 or PSY 101 (or PGS 101) with C or better; MAT 119 or 171 or 265 with C or better
EGR	240	CADD and Solid Modeling	Uses 3-D solid modeling software to model mechanical parts and produce valid engineering drawings, including use of geometric dimensioning and tolerancing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		
EGR	280	Engineering Statistics	Applications-oriented introduction to statistics with computer-based experience using statistical software for formulating and solving engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3	CS	Prerequisite(s): APM 265, 270, MAT 265 or 270
EGR	290	Experimental Research Methods in Human Systems Engineering	Introduces the basics of research methodology as applied in human systems engineering. Quantitative and experimental design from an applied perspective. Guided study of the process of conducting research within human systems engineering. Project topics range from research question generation and literature review to reporting of results.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3	L	Prerequisite(s): EGR 103 or PSY 101
EGR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EGR	301	Concentration Project I	Design, communication, and critical thinking developed in a project setting based on selected concentration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MAT 267 or MAT 272
EGR	302	Concentration Project II	Design, engineering practice, and communication developed in a project setting based on selected concentration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 301
EGR	303	Mechanical Systems Project I	Analyze, design, implement and characterize a mechanical system through an in-depth mechanical system design project. Project includes modeling, analysis and measurement of the dynamic behavior of the mechanical system. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202; EGR 217; EGR 218; EGR 219
EGR	304	Electrical Systems Project I	Analyze, design, implement and debug an electrical or electromechanical system through an in-depth electrical system design project. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202, 216, 219
EGR	305	Robotics Systems Project I	Analyze, design, implement and debug a robotic electromechanical system through an in-depth robotic system design project. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202, 216, 219
EGR	306	Automotive Systems Project I	Analyze, design, implement and verify an automotive system through an in-depth design project. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202; EGR 217; EGR 218; EGR 219
EGR	307	Humanitarian Engineering Project I	Analyzes, designs, implements and characterizes an engineered system that addresses a humanitarian objective. Project includes modeling, analysis and measurement of the behavior of the system. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202, 217. Pre- or corequisite(s): EGR 321
EGR	308	Manufacturing System Project I	Focuses on design for product realization in a manufacturing environment. Projects are industry driven and applicable to low-volume product development.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202; EGR 217; EGR 218
EGR	310	Environmental Systems Project I	Analyze, design, implement and verify an engineered system that addresses an environmental objective through an in-depth design project. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202, 217. Pre- or corequisite(s): EGR 321
EGR	312	Environmental Systems Project II	Applies design principles to conceptualize, implement and characterize an engineered system that addresses an environmental need in a project setting. Project emphasizes communication with project stakeholders; applying a human-centered design approach in the context of environmental engineering; critical thinking in developing system specifications and evaluating a prototype relative to these specifications; and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 310
EGR	313	Mechanical Systems Project II	Applies design principles to conceptualize, implement and characterize a fluid and/or thermodynamic system in a project setting. Project emphasizes communication with project stakeholders; applying an appropriate design approach in the context of a fluid and/or thermodynamic system; critical thinking in developing system specifications and evaluating a prototype relative to these specifications; and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202, 217, 218, 340
EGR	314	Electrical Systems Project II	Applies design principles to conceptualize, implement and characterize an electrical or electromechanical system in a project setting. Project emphasizes communication with project stakeholders; applying a human-centered design approach in the context of an electrical system; critical thinking in developing system specifications and evaluating a prototype relative to these specifications; and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 304, 330 (or EGR 333)

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EGR	315	Robotic Systems Project II	Applies design principles to conceptualize, implement and characterize an electromechanical robotic system in a project setting. Project emphasizes communication with project stakeholders; applying a human-centered design approach in the context of a robotic system; critical thinking in developing system specifications and evaluating a prototype relative to these specifications; and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 305, 455
EGR	316	Automotive Systems Project II	Applies design principles to conceptualize, implement and characterize an automotive system in a project setting. Project emphasizes communication with project stakeholders; applying a human-centered design approach in the context of an automotive system; critical thinking in developing system specifications and evaluating a prototype relative to these specifications; and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 306, 340
EGR	317	Humanitarian Engineering Project II	Applies design principles to conceptualize, implement and characterize an engineered system that addresses a humanitarian objective in a project setting. Project emphasizes communication with project stakeholders, applying an appropriate design approach, thinking critically in developing system specifications and evaluating a prototype relative to these specifications, and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EGR 307; EGR 371
EGR	318	Manufacturing Systems Project II	Focuses on process development for high-volume manufacturing in the competitive global economy. Uses discrete event simulation software to model and study the manufacturing environments.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202; EGR 219; EGR 382
EGR	320	Human Systems and Statistics II	Statistical methods commonly used in human systems engineering research. Emphasizes (1) connecting research designs and statistical analysis, (2) interpreting and breaking down significant effects, (3) addressing practical problems associated with doing research in applied contexts, (4) using statistical methods to understand the connection between variables in a complex system, and (5) the use of statistical software. Primarily focuses on analysis of variance (ANOVA) but introduces other techniques (including mediation analysis, structural equation modeling and cluster analysis). Recommended for preparation for both graduate study and careers in related industry.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3	CS	Prerequisite(s): EGR 230 or PSY 230 or PSY 231
EGR	321	Water Resource Systems	Fundamentals of water supply and surface water hydrology in the context of the engineering, design and analysis of water resources systems. Places particular emphasis on those aspects of water systems that apply in the context of the developing world as well as in the context of environmentally sustainable systems. Course delivery is designed for engineering students with a broad understanding of engineering fundamentals but without specialist civil engineering knowledge.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 217 and 219
EGR	322	Cognition and Human Systems	Human cognition and how it bears on the design of technological and social systems. Although focuses on applications, requires student to delve into the basic literature that informs these applications and produce a literature review that draws on both applied and theoretical work. Many weeks involve a hands-on experience with a method or technique, and weekly quizzes emphasize critical thinking about these examples.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3	SB	Prerequisite(s): EGR 103 or PSY 101; junior or senior standing
EGR	323	Perception and Human Systems	In-depth exploration of methods by which humans receive and interpret information from the world by vision, audition, taste, smell, touch and movement. Emphasizes the integration of behavioral and neural research with potential applications to engineering practice. Topics cover a wide range from the biological basis of sensory information processing to the behavioral aspects of perception, and to the applications of perceptual theories to disciplines like computer vision, display technologies, graphic design and sound processing. Solid foundation for further coursework and research in neuroscience or psychology; students also gain knowledge that could be useful in various professions.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 103 or PSY 101; junior or senior standing
EGR	324	Structural Design for Land Development	Covers essential structural engineering concepts including loads, materials, constraints, specifications, optimization, and the design environment; structural modeling, analysis, and design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 221; EGR 222
EGR	325	Water and Wastewater Treatment	Essential elements of aquatic chemistry, water pollution and water and wastewater treatment technologies. Provides a fundamental basis for understanding sustainable water and wastewater treatment processes and their design considerations. Includes critical evaluation of contemporary issues concerning our water environment and the associated regulatory framework to strengthen and emphasize importance of adequate practices used in operation and design of engineered water and wastewater treatment systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): CHM 113; EGR 321

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EGR	330	Design of Electrical Systems	Overview of electrical system architectures and components used in design of smart electrical and electromechanical systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216; 219
EGR	333	Distributed Circuits and Systems	Analysis and modeling of the generation and distribution of electrical signals and energy across distributed systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 235; MAT 274 or 275
EGR	334	Analog-Digital Interface	Signal processing and operational tools that lie between sensors and digital data processors developed from a system perspective. Includes selection, deployment and analysis of sensors, analog signal processors and converters as well as their appropriate power supplies and the impact of all these components on system performance and cost. Uses experimental and simulation tools to demonstrate typical-use cases for medical, military, industrial and consumer applications.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216, 219
EGR	338	Microcontrollers in Smart Systems	Microcontroller implementation of smart systems. Microcontrollers applied to control dynamic systems, including the interface with sensors and actuators as well as developing simple open- and closed-loop control laws.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 330 and 334
EGR	339	Fabrication of Electrical Systems	Overview of electrical fabrication techniques; design cycle time, cost, quality, reliability, product life cycle, and testing; programmable versus hard-wired implementation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 235; MAT 274 or 275
EGR	340	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli's equation, applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): PHY 121; APM 266, 271, MAT 266 or 271; Credit is allowed for only EGR or MET 340
EGR	343	Mechanics of Solid Materials	Studies strength and physical performance, such as deformations and load-carrying capacity, of natural and artificial solid structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 217, 218
EGR	363	Automotive Powertrains and Thermal Systems	Internal combustion engine (ICE) design in the context of automotive systems and heat management in vehicle systems, including thermal design of engine and transmission cooling systems. Operating characteristics and efficiencies of the ICE, terminology and abbreviations used in the automotive industry, contemporary fuels and the latest hybrid technology, CAFE standards and EPA vehicle emissions standards, lubrication systems and fluids appropriate for a given design, and current and future standards requirements.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 340
EGR	371	Best Practices for Humanitarian Engineering	Technological and process-based best practices for engineering students to gain applied competence in low-cost and low-tech appropriate methods and technologies for small-scale technical problems in local and international humanitarian development contexts.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Fulton Schools of Engineering major; junior or senior standing
EGR	381	Manufacturing Processes and Validation Lab	Theory of basic manufacturing processes accompanied by the fundamental skills; safety practices while working with engineering drawings, machine tools and metrology equipment related to manufacturing.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 217, 218
EGR	382	Modeling of Manufacturing Systems I	Modeling of manufacturing systems using discrete event simulation. Introduces basic manufacturing-related data and system configurations. Uses commercial simulation software to build and analyze model output data.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 219, 280
EGR	383	Communications in a Production Environment	Effective communication is essential in all production environments for efficiency, yield and safety. Covers the major applications within a company and the expectations for the individual's capabilities.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 (or EGR 240)
EGR	385	Design for Manufacturing	Introduces the methods employed to design and produce products that can compete in the global marketplace. Topics include design for manufacturability and assembly, product life-cycle, economics of design and reliability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218
EGR	386	Integrated Circuit Manufacturing	Integrated circuit manufacturing combines judicious selection of materials with nano-meter features to create complex digital and analog circuits. The process demonstrates extreme applications of design, control and resource organization.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216; EGR 280
EGR	387	Industrial Automation	Introduces concepts and application of industrial automation systems. Topics include PLC control systems, embedded control systems, sensing technologies, robotics and material-handling systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 219
EGR	388	Engineering Materials And Semiconductor Science	Semiconductor technology operates at the limits of our understanding of many sciences--materials, optics, mechanics, plasma chemistry and charge movement. As well as examining the concepts, considers how they interact within tight constraints and how this affects continuous production, future development options and trouble shooting.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: Engineering BSE or Manufacturing Engineering BS major; Junior standing

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EGR	390	Qualitative Research Methods	Basics of qualitative research as it is implemented within the human systems engineering area. Covers methods of implementing core concepts such as validity and techniques of interviews; questionnaire and observation within various human system methodologies (e.g., cognitive task analysis, protocol analysis, and usability). All concepts taught with an applied focus with emphasis on how the methods can be implemented in real-world settings.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3	L	Prerequisite(s): EGR 290 or PSY 290
EGR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EGR	401	Professional Design Project I	First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3	L	Prerequisite(s): EGR 302, 312, 313, 314, 315, 316, 317 or 318
EGR	402	Professional Design Project II	Second half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 401 taken within one previous term
EGR	422	Human Medical Systems	Comprehensive introduction to human factors issues related to healthcare systems, medical training, and medical device design. Topics range from psychological and physiological aspects of human behavior like perceptual and cognitive functions, motor behavior, learning, motivation, physiology, and ergonomics to applied issues in the context of medicine and healthcare like human-computer interactions in medical information systems, the ergonomic design of medical devices, evaluation of medical device usability, team training in healthcare and the organization of medical environment.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 103 or PSY 101; EGR 290 or PSY 290; EGR 322
EGR	424	Human Automation Interaction	Explores the application of human systems engineering to automation. Human-automation interaction in domains of cyber security, remotely piloted aircraft systems, synthetic teammates, and human-robot interaction. Reading and discussion related to current articles describing research, methodology and theory.	N	SEM	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 103 or PSY 101; EGR 290 or PSY 290; EGR 322
EGR	425	Unit Treatment Technologies and Systems	Addresses fundamental concepts of unit treatment technologies and the scientific and engineering principles that govern the proper design, operation and management of these systems. Course is divided into two overlapping major categories of unit treatment technologies: air-pollution controls and soils/groundwater remediation. Enhances understanding of the unit treatment technologies by reviews of dimensional analysis, mass transport mechanisms, mass balances, modeling, kinetics and reactors.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EGR 325
EGR	426	Integrated Solid Waste Systems	Addresses the fundamental concepts of solid waste, pathways and transformation processes following the from cradle-to-grave approach. Follows the life of the solid waste from point of generation, reclamation and treatment to point of disposal. Emphasizes describing the present solid waste systems as an integrative set of functional units. Considers physical, chemical and biological transformations of the solid waste, together with the existing technologies and practices for management, treatment and disposal of the solid waste. Includes a specific overview of sustainable solid waste practices such as waste minimization, pollution prevention, reuse and reclamation, together with current domestic and foreign regulations. Addresses planning and design of solid waste operations and facilities.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EGR 325
EGR	427	Principles of Hazardous Waste and Materials	Trains future environmental engineers and professionals in fundamental hazardous waste and materials concepts. Addresses regulatory requirements; materials hazard communication; material safety concepts; types of hazardous waste/materials (chemical, radioactive, and infectious); risk assessment and routes of exposure; personal protective equipment; prudent practices; treatment; storage and disposal of hazardous waste/materials through the lens of the cradle-to-grave concept. Gains knowledge about the hazardous waste enforcement processes.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EGR 325
EGR	428	Judgment and Decision Making in Human Systems	Covers human judgment and decision making as it applies to the design of intelligent systems or decision aids, tools for augmenting human judgment, and understanding consumer decision making. Covers judgment and decision making approaches, theories, biases, heuristics with applications to engineered systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 103 or PSY 101; EGR 290 or PSY 290; EGR 322
EGR	429	Product Design and Evaluation	Applies human systems engineering methods to product design and evaluation. Consumer behavior, consumer research methods, systems and design thinking, how to conduct interviews, observational research, contextual analysis, questionnaire design and analysis, opportunity identification, usability testing and creativity.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 103 or PSY 101; EGR 290 or PSY 290; EGR 322

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EGR	430	Design, Fabrication, and Architecture of Electronic Devices	Comprehensive introduction to the design, operation, production and application of the most common semiconductor devices and categories of integrated circuit. Demonstrates the close interaction among materials, semiconductor physics and circuit performance, especially in terms of the applications and economics of digital systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 330
EGR	431	Power Management	Devices and techniques to supply and manage power in electrical systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 330
EGR	432	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 340; Credit is allowed for only EGR 432 or MET 432
EGR	433	Transforms and Systems Modeling	State-space and transform-domain modeling and analysis of electrical and electromechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216, 217; MAT 274 or MAT 275. Pre- or corequisite(s): MAT 342 or MAT 343
EGR	438	RF Systems	Applies fundamental principles of electromagnetics to design and analyze engineered RF systems and applications. Introduces and describes transmission lines, Smith Charts, s-parameters, waves in free space, reflection and refraction and their use in engineering systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): PHY 331; Credit is allowed for only EGR 438 or EGR 494 (Fundamentals of RF)
EGR	444	Engineering Design	Applies fundamentals of mechanics in analysis and synthesis of machine components and systems, with emphasis on stress and failure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite: EGR 343
EGR	445	Mechanical Engineering Systems	Design and modeling of multicomponent electromechanical systems. Applications of computers, controllers, electronics using system hardware and software development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 303 or EGR 313
EGR	455	Robotic Systems I	Analysis and design of robotic systems focusing on kinematics, dynamics, coordinate transformations and modeling.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 217 and 219; Credit is allowed for only EGR 455 or EGR 394 (Robotics I)
EGR	456	Robotic Systems II	Design of robotic systems focusing on dynamics, modeling and controlling a robot.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 455 or EGR 394 (Robotics I). Credit is allowed for only EGR 456 or EGR 494 (Robotics II)
EGR	463	Vehicle Electrical Systems and Hybrid Systems	Basic theory and operation of hybrid electric drive systems of motor vehicles. Covers fundamentals of next generation electrification including: batteries technology, charging, power electronic operation. Emphasizes the principals of HEV energy management strategies and HEV modeling fundamentals.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216, 363 (or EGR 394 Intro to Concepts in Automotive Engineering)
EGR	465	Ground Vehicle Dynamics	Basic understanding of vehicle dynamics principles and a sufficient knowledge to analyze vehicle dynamic performance and associated chassis system design concepts. Understanding of various dynamical equations of motion governing vehicle behavior as well as computer simulation.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 363 (or EGR 394 Intro to Concepts in Automotive Engineering)
EGR	472	Learning and Human Systems Engineering	Learning as applied within the human systems engineering area. Overview of the theoretical areas relevant to learning (behavioral, social cognitive, cognitive, emotion and motivation). Applies these perspectives to enhance the design of systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 103 or PSY 101; EGR 290 or PSY 290; EGR 322
EGR	476	Energy Infrastructures	Comprehensive study of sustainable energy conversion systems. Students learn to quantify and measure the concepts of sustainability of energy resources within the framework of the laws of thermodynamics. Covers conventional energy sources for primary power (fossil fuels, nuclear and hydroelectric); their sustainability, resource level and environmental impact. Covers the science and technology of heat engines and direct conversion methods. Considers conservation and storage.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EGR 340
EGR	480	Advanced Statistical Approaches for Manufacturing	Applies experimental design and statistical process control in the manufacturing environment. Uses engineering statistical software to formulate and solve problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 280
EGR	481	Enterprise Economics	All manufacturing is about cost. Considers the components of these costs and presents a number of mathematical tools and approaches for representing, understanding and making decisions based on them.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EGR 280
EGR	482	Materials Science in Manufacturing	High-technology manufacturing combines and exploits the properties of a wide range of materials. Provides a science-based view of materials selection and optimization for product manufacturability and reliability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	4		Prerequisite(s): EGR 218
EGR	483	Manufacturing Systems Operations	Introduces key factory management strategies, lean and six sigma philosophies, and global manufacturing supply chains. Software and computer model-based analysis and observation of factory and supply chain performance.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 382
EGR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EGR	485	Engineering Internship	Experiential education. Local company oversees a student project experience at their facility.	N	PRA	N	GNA	Ira A. Fulton Engineering	Engineering Programs	1-3		Prerequisite(s): EGR 302 or EGR 318
EGR	486	CNC Computer Programming	Theory and applications of NC languages using CAM software and CNC machine tools. Overview of advanced manufacturing processes including production CNC part programming ranging from current design to inspection standards.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EGR 381
EGR	487	Casting and Forming Processes	Theory and practice of metal casting processes and design of castings. Analysis of various forming processes to determine load requirements. Theory and practice of tooling design for stamping operations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218
EGR	488	Plasma Processing	Plasma processing is widely used in advanced technology manufacturing. Combines the principles of chemistry, materials, RF power and control to demonstrate key applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216, 218, 280
EGR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
EGR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student
EGR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EGR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-3		
EGR	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	520	Engineering System Design and Analysis	Develops a technical strategy to translate a user's operational needs into a physical solution to comply with specifications and requirements. Presents an approach for organizing, analyzing, designing, developing, verifying and validating systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	525	Lean Systems	Creates a framework and model of lean engineering and a methodology for applying lean practices to systems engineering as a basis for lean product development.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	530	Principles of Systems Engineering	Engineering is increasingly about complex systems. Addresses scale, scope and complexity increase that engineers need to consider to bring together technical and social issues in a highly integrated way as they design flexible, adaptable, robust systems that can be easily modified and reconfigured to satisfy changing requirements and new technological opportunities.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EGR 520
EGR	535	Engineering Innovation and Entrepreneurship	Provides knowledge of innovation and entrepreneurship practices and experience in the application of engineering systems innovation within an entrepreneurial setting of driving a product or process to successful launch. Includes protection of intellectual property and contractual relations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	570	Capstone Design	Comprehensive project experience based on cumulative knowledge and skills gained in earlier course work. Small-group project designing, building, evaluating and analyzing components, assemblies and systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EGR 530
EGR	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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EGR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ELL	515	Structured English Immersion (SEI) Methods	Addresses the role of language and culture in teaching, program types, and specific SEI strategies for teaching English Language Learners (ELLs).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ELL	516	Advanced SEI Methods for ELLs	More fully prepares teachers for linguistically diverse classrooms in which there are students learning through SEI methodology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	501	Environmental Life Sciences: Grand Challenge: Global Climate Change	Introduces first-year graduate students to a range of fields related to the Environmental Life Sciences graduate program. Co-instructed by an interdisciplinary faculty team, combines overview lectures and active discussion of current literature in the fields of inquiry. Culminates in synthetic collaborative research proposals on topics that foster transdisciplinary approaches to environmental life science questions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	502	Environmental Life Sciences: Field Camp	Combines lecture, field, and laboratory components; provides opportunities to develop field skills relevant to current questions in environmental life science, and to carry out a wide range of observations and measurements in natural systems. Instructed by an interdisciplinary faculty team. Travel out of the country is required and students need to be in possession of a valid passport.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: ELS 501
ELS	535	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning and the provisioning of ecosystem services; use of economic and other social-science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ELS 535 or SOS 535
ELS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ELS	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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EMS	501	Sustainability Leadership Workshop I	Formally takes students into the four learning threads of the EMSL program and the ASU brand of sustainability. Hands-on collaboration and group time with peer cohort members, field trips and deep diving into discussion, and application of sustainability theories into real-world scenarios. Sustainability speakers and practitioners engage students in critical thought.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	1		Prerequisite(s): Executive Masters for Sustainability Leadership major
EMS	502	Global Context I	Leaders in any organization face an increasingly connected and transparent world where social and environmental issues must be weighed in everyday decisions. Explores iconic sustainability issues and trends and their impact on their organization, institutions, communities and stakeholders. Applies tools to identify the relevant risks and opportunities within their organizational context and investigates potential responses.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): Executive Masters for Sustainability Leadership or Master of Sustainability Leadership major, Corequisite(s): EMS 503; Pre- or corequisite(s): EMS 501 or SOS 501
EMS	503	Strategic Sustainability I	Sustainability requires that strategic thinking reaches beyond traditional forms and horizons of strategic planning, such as forecasting and prediction, in order to deal with expanded planning dimensions, emerging "wicked problems" and to identify flexible platforms for success. Explores the interface between strategy and sustainability, developing a framework for strategic sustainability that underpins authentic and transparent strategic efforts. Students engage in mapping, planning and prioritizing methods, tools and techniques to identify and assess strategic opportunities.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): Executive Masters for Sustainability Leadership or Master of Sustainability Leadership major; Corequisite(s): EMS 502; Pre- or corequisite(s): EMS 501 or SOS 501
EMS	504	Communications and Sustainability I	One of the greatest challenges for leadership in sustainability is multidisciplinary communications. Currently, sustainability itself lacks meaning and emotion, which leads to a lack of commitment and execution. Therefore, all future executives must be proficient communicators who can convey vision and human context to the organization's sustainability initiatives. Helps you survey your internal communications environment, understand students target audiences and their unique customer centricities and develops their voices through the use of proven story structure.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 502, 503. Corequisite(s): EMS 505
EMS	505	Sustainability Leadership I	The practice of leadership in sustainability requires leading in multidisciplinary roles across multiple scales of an organization. In many of today's organizations, leadership must identify, communicate and support novel organizational contexts as sustainability emerges. Enables students to meld powerful and traditional leadership skills while challenging the student's prior knowledge with multiple lens of leadership in a sustainability context. Students create a personal plan for their unique needs and personal growth toward sustainability leadership.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 502, 503. Corequisite(s): EMS 504
EMS	506	Global Context II	As material sustainability issues are identified and prioritized and as the organization applies sustainability as core success platform, the organization looks to mitigating risks outside of its control, shaping the risks it can control, and creating new opportunities and leveraging those identified in the process. Global context comes into focus not only in expanding resource relationships and concerns, but also across dimensions of time, responsibility, success and a growing need to engage with an ever-growing group of stakeholders and potential partners. Organizations and leaders must innovate and execute at all levels of the organization to match the evolving reality. Explores and applies global sustainability as a knowledge platform for ongoing success, organizational innovation and effective organizational leadership.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 504, 505; Corequisite(s): EMS 507
EMS	507	Strategic Sustainability II	As sustainability becomes a core strategic goal of any organization, it impacts all aspects of the organization from informing risk and reward to the definitions and dimensions of innovation and overall success. Uses reframing, re-visioning and backcasting via a sustainability lens as constructs for introducing strategic sustainability across all aspects of an organization—both internally and externally. Applies various methods such as natural capitalism, design for sustainability/method of sustainable product design, Anderson method, cradle-to-cradle and framework for strategic sustainable development to develop flexible action platforms for sustainable enterprises. Students create a strategic vision, action plan for an organization, including critical external partnerships with communities and institutions.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 504, 505. Corequisite(s): EMS 506

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EMS	508	International Immersive	The international immersive experience takes place in a compelling location where all the challenges and opportunities of sustainability are in play. It is designed as a dynamic vehicle to make real-world connections to sustainability leaders, projects and communities, and is among the most memorable experiences of the program. Students "see" and "feel" sustainability from another country and culture's perspective and see the overlap and conflict to their own context. Extending one's professional network to other host countries and generating a reflective experience and analysis report are experiential learning artifacts that are generated from this experience. Collaborative teams work through a sustainability case study and present their solutions.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 506, 507
EMS	509	Communications and Sustainability II	Marketing and communication professionals in all industries are attempting to keep up with the rapidly expanding landscape of multichannel communications. This is especially true in sustainability, given that the Chief Sustainability Officer must understand and appreciate the modes of communications across all platforms, not just in the consumer market. Maps internal, external and target audiences/markets; strategizes channels to reach them with sustainability stories; and creates a multichannel communications plan that incorporates modes of engagement for all audiences.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 506; EMS 507; Corequisite(s): EMS 510
EMS	510	Sustainability Leadership II	As sustainability emerges as a core strategic platform for an organization, leadership and sustainability intertwine; leadership opportunities--and responsibilities--greatly expand; thus requiring innovation. Individual leadership and organizational leadership are asked to find opportunity via extended definitions of critical systems; value webs, increased roles for diverse internal and external partnerships, and the need to lead within increasingly complex and unpredictable global systems. Engage students to challenge their prior definitions of systems, responsibility and community from the perspective of sustainability and leadership and provides a toolbox for leading with sustainability as a fundamental success platform.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 506; EMS 507; Corequisite(s): EMS 509
EMS	511	Global Context III	Sustainability leaders help their organizations recognize when material issues require solutions that extend beyond their control or capabilities, and when to look for, participate in and potentially lead industry, cross-industry, regional or other collaborative approaches. Global sustainability context becomes an increasingly proactive concept where individual and organizational responsibility and success extends to a global scale. Organizations organize themselves as agents of change toward sustainability that aligns with more traditional organizational success. Students learn from successes and failures of current and past attempts and assess the implications for this change in leadership perspective to their organizational context.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 509, 510. Corequisite(s): EMS 512
EMS	512	Strategic Sustainability III	Organizations that aim at sustainability come to recognize that they must be part of sustainable success on all scales, from local to global, from internal to external and for today and tomorrow. Tools such as resource plans, investment pathways, stakeholder engagement and policy influencers set the theatre for sustainability-oriented organization to challenge the status quo and advance agendas that embed both success and sustainability. Students apply their enhanced strategic sustainability skills to examine select case studies on international sustainability in corporate and nongovernmental agencies.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 509, 510. Corequisite(s): EMS 511
EMS	513	Communications and Sustainability III	Most stories of sustainability are driven and told with data as its central character. Unfortunately, data is nearly meaningless to our minds unless it is placed in an illuminating human context. The best chief sustainable storytellers bring meaning to data through the use of metaphor brought to life by thought-provoking narrative. Story grips the mind and propels people forward. Students develop proof of concepts for campaigns, expand social media presence and influence, create and record a 20-minute presentation in the style of a TedTALK, and become a leader in sustainable communications.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 511; EMS 512; Corequisite(s): EMS 514
EMS	514	Sustainability Leadership III	Lasting, sustainable change fully takes hold once ownership and accountability extends well into the organization and community. Engages the student to identify and apply pathways to inspire, persuade and influence others to act toward a shared global vision. Future orientation, reframing organizations to be globally scalable and still be locally focused, leadership best practices for diverse, multinational, and international human talents and redefining success and growth using sustainability as a success lens are great tasks that sustainability leaders face.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 511, 512. Corequisite(s): EMS 513

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EMS	515	Capstone I	Capstone project and gateway to starting innovative sustainability initiatives and thinking. Planning, components and deliverables of the capstone from the first in-person immersion in January. Students perform a proof of concept to show viability and applicability that serves as a springboard for postgraduation continuation of capstone project into their organizations; environments. The proof of concept also becomes the final component of the e-portfolio.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 513, 514
EMS	516	Capstone II - Sustainability Leadership Workshop II	Develops a proof of concept based on project proposal and feasibility study. Requires a TED-style final project presentation.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	1		Prerequisite(s): EMS 515
EMS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	0		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic	Y	IND	Y	Z1	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	School of Sustainability	School of Sustainability	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		First-Year Composition	Discovers, organizes and develops ideas in relation to the writer's purpose, subject and audience. Emphasizes modes of written discourse and effective use of rhetorical principles.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): TOEFL score 560PBT/250CBT/100iBT or higher; IELTS score >=6.5; ACT ENG score 19 or higher; SAT Verbal score >=470; Accuplacer score 5-7 (unless taken prior to May 12, 2009, then score of 8-10); or WAC 101 or 107 with C or better
ENG	101	First-Year Composition	Discovers, organizes and develops ideas in relation to the writer's purpose, subject and audience. Emphasizes modes of written discourse and effective use of rhetorical principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): TOEFL score 560PBT/250CBT/100iBT or higher; IELTS score >=6.5; ACT ENG score 19 or higher; SAT Verbal score >=470; Accuplacer score 5-7 (unless taken prior to May 12, 2009, then score of 8-10); or WAC 101 or 107 with C or better
ENG		First-Year Composition	Discovers, organizes and develops ideas in relation to the writer's purpose, subject and audience. Emphasizes modes of written discourse and effective use of rhetorical principles.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): TOEFL score 560PBT/250CBT/100iBT or higher; IELTS score >=6.5; ACT ENG score 19 or higher; SAT Verbal score >=470; Accuplacer score 5-7 (unless taken prior to May 12, 2009, then score of 8-10); or WAC 101 or 107 with C or better
ENG		First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG	102	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG		First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG		Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): English Placement Exam requirement: ACT English score of 26 or above OR SAT Verbal score of 620 or above OR Accuplacer11+ (prior to 05/09) or 8+ (new). Credit is allowed for only ENG 101 or ENG 105

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ENG	105	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): English Placement Exam requirement: ACT English score of 26 or above OR SAT Verbal score of 620 or above OR Accuplacer11+ (prior to 05/09) or 8+ (new). Credit is allowed for only ENG 101 or ENG 105
ENG		Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): English Placement Exam requirement: ACT English score of 26 or above OR SAT Verbal score of 620 or above OR Accuplacer11+ (prior to 05/09) or 8+ (new). Credit is allowed for only ENG 101 or ENG 105
ENG		First-Year Composition	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): TOEFL score of 560PBT/220CBT/83IBT or above; IELTS score of 6.5 or above; ACT English score 19 or above; SAT Verbal score of 470 or above; or Accuplacer score of 5 or above (unless test taken prior to May 12, 2009, then score 8 or above)
ENG	107	First-Year Composition	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): TOEFL score of 560PBT/220CBT/83IBT or above; IELTS score of 6.5 or above; ACT English score 19 or above; SAT Verbal score of 470 or above; or Accuplacer score of 5 or above (unless test taken prior to May 12, 2009, then score 8 or above)
ENG		First-Year Composition	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): TOEFL score of 560PBT/220CBT/83IBT or above; IELTS score of 6.5 or above; ACT English score 19 or above; SAT Verbal score of 470 or above; or Accuplacer score of 5 or above (unless test taken prior to May 12, 2009, then score 8 or above)
ENG		First-Year Composition	For students for whom English is not the native language. Critical reading and writing; emphasizes strategies of academic discourse. Research writing required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG	108	First-Year Composition	For students for whom English is not the native language. Critical reading and writing; emphasizes strategies of academic discourse. Research writing required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG		First-Year Composition	For students for whom English is not the native language. Critical reading and writing; emphasizes strategies of academic discourse. Research writing required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG		First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-3		Prerequisite(s): freshman standing; maximum 25 hours

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ENG		First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-3		Prerequisite(s): freshman standing; maximum 25 hours
ENG		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
ENG	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
ENG		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ENG		Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better
ENG	200	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better
ENG		Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better
ENG		World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU & H & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	201	World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & H & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	202	World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Introduction to Contemporary Literature	Poetry, fiction, drama, and possibly other genres.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	204	Introduction to Contemporary Literature	Poetry, fiction, drama, and possibly other genres.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	205	Introduction to Writing, Rhetorics and Literacies	How do we understand the ways in which people in systems--both small and large--social, political, and economic, throughout the world use language and other symbolic resources to carry out work? Three fields of study take this kind of questioning especially seriously: studies in writing, studies in rhetoric, and studies in literacy. Inquiry--that persistent, deliberate commitment to question and to build methods sufficient to that questioning--is a generative force in each of these fields of study. Familiarizes students with such questioning traditions and to help them judge for themselves what each is good for. The goal is to strengthen your own repertoire and decision-making power for producing and circulating work (widely defined across material, print, and digital media) that matters in our risk-ridden world. Quite simply, then, this is a course in asking good questions and in evaluating responses to situations that spur questioning.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	207	Elements of English Language and Cultures I	English communication and cultural awareness for international users of English. Relies on the many contexts of English use around the world to teach aspects of grammar, reading, writing, listening and speaking.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 107; ENG 108
ENG	208	Elements of English Language and Cultures II	English communication and cultural awareness for international users of English. Relies on the many contexts of English use around the world to teach aspects of grammar, reading, writing, listening and speaking.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 107 with C or better; ENG 108 with C or better
ENG		Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	210	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	213	Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better

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ENG	214	English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	215	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	216	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	217	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	218	Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	219	Newspaper Production	Students work on campus newspaper to learn basics of news and column writing, digital photography, and layout.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	221	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG		Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG		Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU & H	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	222	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & H	Pre/corequisite(s): ENG 200 with C or better if completed
ENG		Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	228	Introduction to Shakespeare		N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; credit is allowed for only ENG 228 or 294 (Shakespeare for Teachers) OR (Introduction to Shakespeare)
ENG	229	Love and Lust in Medieval Literature	The medieval period, roughly 600-1500, cannot reasonably be called the "dark ages." Indeed, the Middle Ages provides us with a corpus of literature replete with complex characters struggling to live and love, dealing with sin and lust, unity and diversity, faith and reason within a tumultuous cultural milieu and religious rigor, all of which are feeling the winds of changes. Explores medieval literature, noting the astonishing differences from our own time, as well as surprising similarities. Western civilization, our own 21st century, for better or for worse, is indebted to the love and lust of the medievals.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; credit is allowed for only ENG 229 or 294 (Love and Lust in Medieval Lit)
ENG	230	Introduction to Film Studies	Introduces the style and cultural significance of feature films.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	241	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & C	Pre/corequisite(s): ENG 200 with C or better if completed
ENG		Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Pre/corequisite(s): ENG 200 with C or better if completed
ENG		Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	242	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG		Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG		Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	243	Introduction to Writing Family History	Interdisciplinary writing course on theories, methodologies, and issues in writing family history.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	244	Introduction to Researching Family History	Introduces research methods in family history.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	245	Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	287	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	288	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	1-6		Prerequisite(s): Barrett Honors student; ENG 102, 105 or 108 with C or better
ENG	301	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Business Writing	Advanced interdisciplinary writing course designed to improve the workplace writing competence of W. P. Carey School of Business professional and preprofessional students. Lecture, discussion, case studies, cooperative learning, interactive, Internet, student presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	302	Business Writing	Advanced interdisciplinary writing course designed to improve the workplace writing competence of W. P. Carey School of Business professional and preprofessional students. Lecture, discussion, case studies, cooperative learning, interactive, Internet, student presentations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	303	Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	305	Classical and Biblical Backgrounds to Literature	Selected readings from the Bible and Greek and Latin literature in translation, emphasizing ideas, forms, and myths related to the development of English literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	307	Writing Science Fiction	Writing science fiction, primarily the short story.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	310	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 210 with C or better
ENG		Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 210 with C or better
ENG		Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 210 with C or better
ENG	311	Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	312	English in its Social Setting	Introduces the sociolinguistic study of the English language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU or SB	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		English in its Social Setting	Introduces the sociolinguistic study of the English language.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU or SB	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	313	Phonology and Morphology	Introduces English morphology, phonology, etymology, and phonetic aspects of rhyme, alliteration, and other sound-based literary devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	314	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	315	Medieval Literature in Translation	Medieval literature (insular and continental) in translation, from Beowulf to Malory (excluding Chaucer), emphasizing cultural and intellectual backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	316	Literary Readings of the Hebrew Bible	Literary analysis of two of the main genres of the Hebrew Bible: narrative art and poetry. Students learn the main literary conventions of biblical prose and poetry, and how these conventions are applied or subverted. Each class comprises the study of a literary aspect, close readings, and thematic discussions. Biblical texts are read only in translation. They are situated in the religious, literary and artistic traditions that have developed on their basis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only ENG 316, HEB 316, JST 316, REL 316 or HEB 394 (Literary Readings of the Bible)
ENG	317	Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	320	Medievalism in Modern Culture	Studies the representation of Medieval narratives, characters, themes, myths, and images in modern culture.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Medievalism in Modern Culture	Studies the representation of Medieval narratives, characters, themes, myths, and images in modern culture.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	321	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	323	Rhetoric and Grammar	Practical course taught in the computer lab. Emphasizes rhetorical strategies and grammar for writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	325	Restoration and the 18th Century	Writers and movements in nondramatic literature of the restoration and early 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	326	English Drama 1660-1800	English drama 1660-1800.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	
ENG		The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	328	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	329	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	330	19th-Century British Poetry	Romantic and Victorian poets studied in context.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	331	American Drama	Major works in the development of American drama from its beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
ENG	333	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
ENG		American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
ENG		The American Southwest in Literature and Film	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	334	The American Southwest in Literature and Film	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		The American Southwest in Literature and Film	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	335	American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	337	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	338	Protest Literature	Examines traditions of social protest literature across a variety of historical periods and literary and rhetorical genres.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, ENG 105, or ENG 108 with C or better; minimum 24 earned hours; credit is allowed for ENG 394 (Banned Literature), 338 or 440 (American Protest Novels)
ENG	342	20th-Century British and Irish Literature	Major works in the development of literature since 1900, studied in their historical and cultural contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	344	Intermediate Family History Research	How to locate records, analyze and interpret evidence, and write a family history narrative.	N	RSC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	345	Selected Authors or Issues	Different topics may be offered. Film topics with lab may carry 4 credits. May be repeated for credit when topics vary.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Selected Authors or Issues	Different topics may be offered. Film topics with lab may carry 4 credits. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	352	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 353 (or AFH 353) or ENG 353
ENG	353	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 353 (or AFH 353) or ENG 353
ENG		African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 353 (or AFH 353) or ENG 353
ENG		African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or ENG 354
ENG	354	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or ENG 354
ENG		African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or ENG 354
ENG	355	European Dramatic Traditions	Development of European drama since Aeschylus.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	356	The Bible as Literature	Readings in the Jewish and Christian Scriptures in modern translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Indigenous American Literature	Selected oral traditions and contemporary works by Indigenous American authors.	N	SEM	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	359	Indigenous American Literature	Selected oral traditions and contemporary works by Indigenous American authors.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG		Indigenous American Literature	Selected oral traditions and contemporary works by Indigenous American authors.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	360	Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	361	Scriptwriting	The art of scriptwriting using 10-minute plays as the platform. Designed to help students learn craft techniques and to expose them to the various forms of the 10-minute script. Includes lectures, writing assignments, discussion, and criticism.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): first-year composition; credit is allowed for only ENG 361 or 394 (Scriptwriting)
ENG		Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only ENG 363 or TCL 363
ENG	363	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only ENG 363 or TCL 363
ENG		Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only ENG 363 or TCL 363
ENG		Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	364	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		History of Film	Development of motion pictures.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3-4	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	365	History of Film	Development of motion pictures.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3-4	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		History of Film	Development of motion pictures.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3-4	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	366	Literature on Film	Studies literary texts and their adaptation to film.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	367	Environmental Issues in Literature and Film	Evaluates literary texts and films that address interconnected cultural, historical, and environmental issues.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Environmental Issues in Literature and Film	Evaluates literary texts and films that address interconnected cultural, historical, and environmental issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	368	Art of the Personal Essay	Writing personal essays drawing on both research and personal experience.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	369	Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	370	Science, Values, and the Public	Examines science, communication, and a range of public opinion to understand science as a discourse of profound social power.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; must have 35 or more earned hours; credit is allowed for only BIO 315 or ENG 370
ENG	371	Rhetoric of the Environmental Movement	Examines how language is used to conceptualize, clarify/obfuscate, and resolve problems among those who concern themselves with the disposition of natural resources.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	372	Document Production	Introduces document design and production. Practice in critique and in writing the content of publications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better

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ENG	373	Publishing in Literary Magazines	Analyzes the history, publishing preferences, editorial staff, and submission guidelines of literary magazines.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	374	Technical Editing	Fundamentals of editing technical and professional materials. Role of editors in analyzing, revising, and polishing manuscripts. Successful writer-editor dialogues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	375	Titans of Business	Explores leading CEOs and corporations from a humanities perspective.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Titans of Business	Explores leading CEOs and corporations from a humanities perspective.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	376	Writing a Personal History	Interdisciplinary writing course emphasizing theories, methodologies, and issues of composing personal histories.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	377	Editing Family History for Public Audiences	Fundamentals of editing family writing. Role of editors in analyzing, revising, and polishing manuscripts for publication.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	378	Environmental Creative Nonfiction	Lectures, discussion, and criticism concerning the literary history of nature writing and techniques of writing environmental creative nonfiction for publication.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Environmental Creative Nonfiction	Lectures, discussion, and criticism concerning the literary history of nature writing and techniques of writing environmental creative nonfiction for publication.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	379	Travel Writing	Studies the genesis of travel writing, what theories inform travel writing, and the various genres of travel writing today.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Travel Writing	Studies the genesis of travel writing, what theories inform travel writing, and the various genres of travel writing today.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	382	Digital Project Management for Humanities	Introduces Web design for the humanities; explores the use of the ADDIE process to create digital projects.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	383	Digital Media in the Humanities	Introduction to the digital arts is an introduction to the emerging "new media" with emphasis on still imaging, audio, video, multimedia and the World Wide Web.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	385	Career Development for English Majors	Theoretical and practical aspects of career planning related to skills and interests developed in English studies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	386	American Gothic	The development of modern American Gothic as a literary form from Poe to Oates. Emphasizes the short story.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Intermediate Creative Writing Workshop in Poetry: Form, Theory, and Practice	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 287 (Poetry) with C or better; credit is allowed for only ENG 310 (Intermediate Poetry) or ENG 387
ENG	387	Intermediate Creative Writing Workshop in Poetry: Form, Theory, and Practice	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 287 (Poetry) with C or better; credit is allowed for only ENG 310 (Intermediate Poetry) or ENG 387
ENG		Intermediate Creative Writing Workshop in Poetry: Form, Theory, and Practice	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 287 (Poetry) with C or better; credit is allowed for only ENG 310 (Intermediate Poetry) or ENG 387
ENG		Intermediate Creative Writing Workshop in Fiction: Form, Theory, and Practice	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 288 (210: Fiction) with C or better; credit is allowed for only ENG 310 (Intermediate Fiction) or ENG 388
ENG	388	Intermediate Creative Writing Workshop in Fiction: Form, Theory, and Practice	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 288 (210: Fiction) with C or better; credit is allowed for only ENG 310 (Intermediate Fiction) or ENG 388
ENG		Intermediate Creative Writing Workshop in Fiction: Form, Theory, and Practice	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 288 (210: Fiction) with C or better; credit is allowed for only ENG 310 (Intermediate Fiction) or ENG 388

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	390	Methods of Inquiry	Studies in writing, rhetoric and literacy are multiple and diverse because these areas deal with complicated ways people create meaning, circulate meaning, and understand meaning in a variety of contexts and a variety of modal formats. Examines ways of developing research problems and questions, designing studies and conducting, reading and evaluating research in the areas of writing, rhetoric and literacy. Qualitative methods (e.g., case study, ethnographic methods, interviewing); historical methods (e.g., archival, document analysis and artifact interpretation); rhetorical analysis and discourse analysis; feminist approaches to research and analysis; and recent advances in research in the fields of rhetoric, writing and literacy studies. Investigates the many attitudes and assumptions about creativity and cultural work that make methods of inquiry as controversial as they are significant to contemporary public life.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	391	Writing in Context	How do we understand the ways in which people use written language to carry out work in professional, academic, social and/or personal contexts? How does our understanding of the ways writing is produced for an audience shift between and among these different contexts? More importantly, how do writers adapt their writing practices in order to facilitate audience understanding as well as cultivate an audience's capacity for action? Familiarize students with rhetorical practices that position them to read, assess and respond to the rhetorical demands of a wide range of writing contexts. Strengthens students' existing rhetorical skill sets and problem-setting capacities for producing and circulating work (widely defined across material, print and digital media) that responds to a range of problems in an applied manner. Assesses the rhetorical demands of writing contexts and in developing and producing tailored, audience-specific texts that forward work in complex, interdisciplinary environments.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	392	History of Rhetorical Theory	Begins in ancient Greece with the rise of the art of public oratory (known as rhetoric) and ends in the present, an era dominated by mass media. Engages in a great deal of reading--lots of very old writings as well as some newer ones. Covers a great many topics and ideas; focuses by continually returning to the subject of public discourse. Challenging readings designed to emphasize the connection between systems of philosophy (or "worldview") and systems of communication. By focusing on big ideas, students become a better thinker and communicator in any chosen career.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	393	Theories of Literacy	While theories of literacy have, for the most part, been determined by the primacy of reading and writing script, more recent scholarship in literacy theory and history has served to challenge such limitations. Many contemporary perspectives on literacy view scripted text as one component of complex acts and practices of written communication that occur in social contexts. Studies that examine such communicative acts in their local contexts reveal that literate practices and the texts that are produced are imbued with social and cultural values and traditions and the needs and desires of individuals. As the statements above illustrate, theories of literacy themselves are embedded within the values and assumptions of individuals, institutions, and academic specialization. Examines some of these theories, their influences on academic scholarship and pedagogy, the ideological assumptions that inform them, and how we might view these theories within broader social-cultural landscapes.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	400	History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & H	Prerequisite(s): ENG 200 & one 200-level literature course with C or better, OR Letters and Sciences undergrad student; minimum junior standing & one 200-level (or higher) ENG course with C or better, OR New College undergrad major with minimum 45 hours
ENG		History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & H	Prerequisite(s): ENG 200 & one 200-level literature course with C or better, OR Letters and Sciences undergrad student; minimum junior standing & one 200-level (or higher) ENG course with C or better, OR New College undergrad major with minimum 45 hours
ENG	401	Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters and Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG		Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters and Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	403	Semantics	Program and methods of contemporary formal semantics. Characterizes knowledge of meaning as knowledge of truth conditions. The goal of semantics is thus to uncover the rules that allow the speakers of a language to know under what conditions any sentence is true; or in other words, to construct a theory of truth for natural language. Simple fragments including: predication, quantification, definite descriptions, simple temporal and modal expressions, and attitude verbs.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 314 with C or better; Credit is allowed for only ENG 403 or ENG 414
ENG	404	Studies in Second Language Acquisition	Specialized topics in second language teaching and learning, including theory, pedagogy, curriculum, and assessment.	Y	LEC	Y	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 and 213 with C or better OR 1 year language study and minimum 56 hours
ENG	410	Writing for Publication	Lectures and conferences concerning techniques of writing for publication.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 and one 200-level literature course with C or better, OR New College undergraduate student with minimum 45 hours
ENG	411	Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 310 with C or better
ENG		Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 310 with C or better
ENG	412	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 310, 388 or 411 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	412	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 310, 388 or 411 with C or better
ENG		History of English Language	Development of English from the earliest times to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites:ENG 200 and one 200-level literature course OR New College undergraduate student with minimum 45 hours. Credit is allowed for only ENG 413 or LIN 517
ENG	413	History of English Language	Development of English from the earliest times to the modern period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites:ENG 200 and one 200-level literature course OR New College undergraduate student with minimum 45 hours. Credit is allowed for only ENG 413 or LIN 517
ENG	414	Studies in Linguistics	Specialized topics in linguistics including phonology, syntax, semantics, pragmatics, discourse, language variation, and change.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 200 and 213 with C or better OR 1 year language study and minimum 56 hours
ENG		Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters and Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	415	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR Letters and Sciences or New College undergraduate student with minimum 45 earned hours
ENG		Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters and Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG		Chaucer in Middle English	Yearly alternate between Chaucer's The Canterbury Tales and Troilus and Criseyde.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 and one 200-level literature course with C or better OR Letters and Sciences or New College undergraduate with minimum junior standing and one 200-level (or higher) English course with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	420	Renaissance Drama	Topics, authors, and themes in the drama of the Tudor and early Stuart periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	421	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	424	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	425	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	425	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	426	British Culture and Empire	Examines British imperial culture in art and literature, 1870-1914, and postcolonial theory.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: One course in ARS, ENG, or HST at 200 level or higher with B or better
ENG	427	Studies in 18th-Century Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	428	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): one course in ARS, ENG, or HST at 200 level or higher with B or better; Credit is allowed for only ARS 435 or ARS 533 or ENG 428
ENG	429	Studies in European Literature and Culture	Literary, cultural, and historical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better; Credit is allowed for only ENG, SLC or THE 429
ENG	430	Studies in Victorian Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	430	Studies in Victorian Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	431	Whitman and Dickinson	Evaluates the 19th-century American Literary Renaissance through the specialized examination of its poetry and authors in their historical context.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	432	The American Renaissance	Novels, poetry, short fiction, and criticism of the major literary figures of the early to mid-nineteenth century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	433	Southern Writers	Analyzes Southern culture through the eyes of the region's novelists, short story writers, poets, filmmakers, photographers, and song writers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	433	Southern Writers	Analyzes Southern culture through the eyes of the region's novelists, short story writers, poets, filmmakers, photographers, and song writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	434	Studies in the Literature and Culture of the Americas	Literature and culture of North America, South America, and the Caribbean. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	435	Literatures and Cultures of Immigration and Diaspora	Specialized topics in literary and cultural representations of immigration and diaspora studied in an interdisciplinary context.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: A 200-level ENG course with C or better; Minimum 56 hours
ENG	436	Studies in Anglophone Literature and Culture	Literary, social, and cultural issues of English-speaking former colonial territories. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	437	The American Novel, 1900 - 1960	Developments in theory and practice of major novelists.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	438	American Novel Since 1960	Major novelists of the period. Developments in theory and practice.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	440	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	440	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	442	Studies in 20th-Century British and Irish Literature and Culture	Major literary genres (novel, poetry, and drama) in their cultural and historical contexts. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	444	Studies in American Romanticism	Fiction, poetry, and essays of such 19th-century authors as Hawthorne, Emerson, Melville, Thoreau, Fuller, Whitman, and Dickinson. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	445	Studies in American Realism	Writers and influences that shaped the development of literary realism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	447	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200; one ENG 200-level literature course, or SLC 202 or FMS 100 and FMS 200; Credit is allowed for only ENG 447, FMS 442 or SLC 450
ENG	448	Studies in Irish Literature and Culture	Themes and problems pertaining to Irish literature, film, and social and cultural history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	450	The British Novel	Focuses on the British novel from the 18th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	452	Studies in the Novel	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	453	Studies in the American Novel	Poetics and politics of the novel, 18th through 21st centuries. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	454	Gender and Literature	Focuses on the representation of gender in literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	455	Contemporary Women Writers	Critical examination of literature by contemporary women writers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	455	Contemporary Women Writers	Critical examination of literature by contemporary women writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	457	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	457	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	458	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Credit is allowed for only ENG 458 or FMS 464 or TCL 464
ENG	459	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & G	Prerequisite(s): ENG 200 and one other 200-level Literature course with C or better; Credit is allowed for only AFR 459 (or AFH 459) or ENG 459
ENG	460	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Hispanic, and Asian American.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR Letters and Sciences or New College undergraduate student with minimum 45 earned hours; Credit is allowed for only ENG 460 or WST 467
ENG	461	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR Letters and Sciences or New College undergraduate student with minimum 45 earned hours
ENG	461	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR Letters and Sciences or New College undergraduate student with minimum 45 earned hours
ENG	462	Africana Literature	Focuses on the literature of the African Diaspora, including texts from the Caribbean, the Americas, and Africa. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR Letters and Sciences or New College undergraduate student with minimum 45 earned hours
ENG	463	African American Literature	Thematic and cultural study of African American literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR Letters and Sciences or New College undergraduate student with minimum 45 earned hours
ENG	464	Great Directors	Studies the work of one or more influential directors.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	465	Studies in Film	Advanced topics in cinema.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	466	Studies in International Film	Studies non-American narrative film.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	467	American Film Musicals	A cultural history of American film musicals.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	468	Environmental Literary Criticism	Evaluates the disparate critical practices that constitute what is the emerging literary project known as "ecocriticism" or "environmental literary criticism."	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Environmental Literary Criticism	Evaluates the disparate critical practices that constitute what is the emerging literary project known as "ecocriticism" or "environmental literary criticism."	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	469	Science and Literature	Historical and theoretical links between science and literature, from Francis Bacon to the present, examined in cultural context. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Pre-requisites: ENG 200 and one other 200-level Literature course with C or better
ENG	470	Symbols and Archetypes in Children's Literature	Various critical approaches and recurring themes studied in relation to classical and contemporary children's literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG		Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	REC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level lit course with C or better, OR Letters and Sciences undergrad with minimum 56 hours and one 200-level (or higher) English course with C or better, OR New College undergrad with minimum 45 hours
ENG	471	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	REC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level lit course with C or better, OR Letters and Sciences undergrad with minimum 56 hours and one 200-level (or higher) English course with C or better, OR New College undergrad with minimum 45 hours
ENG		Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level lit course with C or better, OR Letters and Sciences undergrad with minimum 56 hours and one 200-level (or higher) English course with C or better, OR New College undergrad with minimum 45 hours
ENG		Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR Letters and Sciences or New College undergraduate student with minimum 45 earned hours
ENG	472	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR Letters and Sciences or New College undergraduate student with minimum 45 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	472	Studies in Postmodernism	Literary, social, and cultural topics in postmodernism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Pre-requisites: ENG 200 with C or better; one 200-level literature course with C or better, or Letters and Sciences or New College undergraduate student with minimum 45 earned hours
ENG		Methods of Teaching English: Composition	Methods of instruction, organization, and presentation of appropriate content in the teaching of composition and other writing skills.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	480	Methods of Teaching English: Composition	Methods of instruction, organization, and presentation of appropriate content in the teaching of composition and other writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG		Methods of Teaching English: Composition	Methods of instruction, organization, and presentation of appropriate content in the teaching of composition and other writing skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG		Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	REC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Pre-requisites: ENG 200 with C or better; one 200-level literature course with C or better, or Letters and Sciences or New College undergraduate student with minimum 45 earned hours
ENG	482	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	REC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Pre-requisites: ENG 200 with C or better; one 200-level literature course with C or better, or Letters and Sciences or New College undergraduate student with minimum 45 earned hours
ENG		Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Pre-requisites: ENG 200 with C or better; one 200-level literature course with C or better, or Letters and Sciences or New College undergraduate student with minimum 45 earned hours
ENG	483	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR New College or Letters and Sciences undergraduate student and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	485	Digital Tools	Digital (online, electronic) tools as best utilized in language arts curriculum and instruction for junior and senior high schools. Addresses many practical classroom matters; broadens knowledge of Web 2.0 opportunities for teaching and learning. Creates a detailed inventory of the digital tools familiar to secondary students, and compares these to what a clever English teacher can access in a public school classroom. Imaginations, studies, and designs digital tools to enhance student achievement. Uses digital tools to increase student access to history and culture and opportunities for individuals to find and articulate their voices, as well as opens avenues for their creativity. Empowers the English language arts classroom with critical understandings of media, culture and public relations (digital information manipulation) and develops secondary students from passive consumers to literate participants in democracy.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course with C or better
ENG		Digital Tools	Digital (online, electronic) tools as best utilized in language arts curriculum and instruction for junior and senior high schools. Addresses many practical classroom matters; broadens knowledge of Web 2.0 opportunities for teaching and learning. Creates a detailed inventory of the digital tools familiar to secondary students, and compares these to what a clever English teacher can access in a public school classroom. Imaginations, studies, and designs digital tools to enhance student achievement. Uses digital tools to increase student access to history and culture and opportunities for individuals to find and articulate their voices, as well as opens avenues for their creativity. Empowers the English language arts classroom with critical understandings of media, culture and public relations (digital information manipulation) and develops secondary students from passive consumers to literate participants in democracy.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course with C or better
ENG	486	Teaching Text	Approaches to texts (poetry, nonfiction and fiction) as best utilized in language arts curriculum and instruction for junior and senior high schools. Language arts teachers want all of their students to love literature and become immersed in the texts they assign (poems, short stories, plays, nonfiction and informative texts, and novels). Explores activities and philosophies for building a strong reading workshop in the secondary language arts classroom. Through identifying proficient readers, conducting thoughtful conversations about students and reading, and using a variety of ways to invite readers into books, designs and experiences reading workshops based on innovative and effective teaching strategies. Offers hands-on strategies for supporting struggling readers and for teaching reading from a critical lens.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course with C or better; Credit is allowed for only ENG 486 or 598 (Teaching Text)
ENG		Teaching Text	Approaches to texts (poetry, nonfiction and fiction) as best utilized in language arts curriculum and instruction for junior and senior high schools. Language arts teachers want all of their students to love literature and become immersed in the texts they assign (poems, short stories, plays, nonfiction and informative texts, and novels). Explores activities and philosophies for building a strong reading workshop in the secondary language arts classroom. Through identifying proficient readers, conducting thoughtful conversations about students and reading, and using a variety of ways to invite readers into books, designs and experiences reading workshops based on innovative and effective teaching strategies. Offers hands-on strategies for supporting struggling readers and for teaching reading from a critical lens.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course with C or better; Credit is allowed for only ENG 486 or 598 (Teaching Text)
ENG	487	Advanced Creative Writing Workshop in Poetry	Advanced writing of poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 387 (Poetry) with C or better; Credit is allowed for only ENG 411 (Poetry) or 487
ENG	488	Advanced Creative Writing Workshop in Fiction	Advanced writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 388 (Fiction) with C or better; Credit is allowed for only ENG 411 (Fiction) or 488
ENG	489	Culturally Sustaining Pedagogy	Methods of designing and implementing culturally responsive secondary curriculum and instruction using students' cultural backgrounds and languages as an asset in the teaching of English language arts. Students gain a repertoire of techniques and sources for curriculum content, instruction design and assessment techniques in the English language arts that capitalizes on the students' prior knowledge and includes community input and collaboration.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Pre-requisite: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	489	Culturally Sustaining Pedagogy	Methods of designing and implementing culturally responsive secondary curriculum and instruction using students' cultural backgrounds and languages as an asset in the teaching of English language arts. Students gain a repertoire of techniques and sources for curriculum content, instruction design and assessment techniques in the English language arts that capitalizes on the students' prior knowledge and includes community input and collaboration.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course
ENG	490	Literary Forms: Theory and Practice in Poetry	Types, history, analysis of traditional forms, and contemporary adaptations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 487 (Poetry) with C or better; Credit is allowed for only ENG 490 or 495 (Poetry)
ENG	491	Literary Forms: Theory and Practice in Fiction	Types, history, analysis of traditional forms, and contemporary adaptations.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 488 (Fiction) with C or better; Credit is allowed for ENG 491 or 495 (Fiction)
ENG		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6		Prerequisite(s): Barrett Honors student
ENG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-6		Prerequisite(s): Barrett Honors student
ENG		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
ENG		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6	L	Prerequisite(s): Barrett Honors student
ENG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	Department of English	1-6	L	Prerequisite(s): Barrett Honors student
ENG		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
ENG		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-6		Prerequisite(s): Barrett Honors student
ENG		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-7	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-7	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-3		Prerequisite(s): ENG 102, 105, or 108 with C or better

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ENG		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	501	Approaches to Research	Theories, methods and/or methodologies as well as qualitative and/or quantitative approaches to the specific discipline. Familiarizes students with the areas of research.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ENG 501 or LIN 501
ENG	502	Contemporary Critical Theories	Studies the principles and techniques of contemporary theory and criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Contemporary Critical Theories	Studies the principles and techniques of contemporary theory and criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	504	Cross-Cultural Studies	Theoretical and analytical issues for comparative research across distinct cultural regions and traditions.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Cross-Cultural Studies	Theoretical and analytical issues for comparative research across distinct cultural regions and traditions.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	506	Methods and Issues in Teaching Language	Developing the language skills of native and non-native speakers through a process approach and advanced writing workshops in junior and senior high schools.	N	REC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Methods and Issues in Teaching Language	Developing the language skills of native and non-native speakers through a process approach and advanced writing workshops in junior and senior high schools.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	507	Methods and Issues in Teaching Composition	Up-to-date theory, practice, and implementation of secondary writing instruction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	510	Linguistics	Overview of linguistics, its subfields, and some of its applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Students who have credit for BLE 537, may not enroll in LIN 510
ENG	513	Semantics	Current approaches to linguistic meaning with particular attention to English.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	525	Teaching Second Language Writing	Provides a critical introduction to the field of second language writing as well as issues and strategies in the teaching of second language writing in a wide variety of contexts. After exploring various instructional contexts as well as the characteristics of different types of students and their texts, considers various instructional practices and strategies, focusing on course and assignment designs, reading-writing connection, teacher and peer feedback, grammar instruction, classroom assessment, plagiarism and text borrowing strategies, and negotiating language differences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) Credit is allowed for only LIN 525, 591 (Teaching 2nd Language Writing) or ENG 525
ENG	530	Old English	Study of Old English grammar, syntax, and phonology, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	531	Old English Literature	Intensive literary, linguistic, and cultural study of Old English literature.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Old English Literature	Intensive literary, linguistic, and cultural study of Old English literature.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	532	Middle English Dialects	Study of the principal dialects of Middle English, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	533	Studies in Medieval Literature	Selected topics in English literature from the 11th through the 15th centuries.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Studies in Medieval Literature	Selected topics in English literature from the 11th through the 15th centuries.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	534	Studies in Renaissance Literature	Selected topics and literary works studied in the contexts of English Renaissance culture.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Studies in Renaissance Literature	Selected topics and literary works studied in the contexts of English Renaissance culture.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ENG	535	Studies in 18th- and 19th-Century British Literature	Selected topics, issues, figures, and genres in British literature and culture of the 18th and 19th centuries.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Studies in 18th- and 19th-Century British Literature	Selected topics, issues, figures, and genres in British literature and culture of the 18th and 19th centuries.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	536	Studies in American Literature before 1900	Selected topics, issues, figures, and genres in 17th-, 18th-, and 19th-century American literature, including the literature of conquest and contact.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Studies in American Literature before 1900	Selected topics, issues, figures, and genres in 17th-, 18th-, and 19th-century American literature, including the literature of conquest and contact.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	537	Studies in Modern and Contemporary British Literature	Selected topics, issues, figures, and genres in British literature and culture after 1900.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Studies in Modern and Contemporary British Literature	Selected topics, issues, figures, and genres in British literature and culture after 1900.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	538	Studies in Modern and Contemporary American Literature	Selected topics, issues, figures, and genres in American literature and culture after 1900.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Studies in Modern and Contemporary American Literature	Selected topics, issues, figures, and genres in American literature and culture after 1900.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	539	Studies in Modernist and Postmodernist Literature and Theory	Selected topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Studies in Modernist and Postmodernist Literature and Theory	Selected topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	540	Teaching Young Adult Literature	Issues and new approaches in teaching contemporary literature in high school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Teaching Young Adult Literature	Issues and new approaches in teaching contemporary literature in high school.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	542	Studies in North American Ethnic Literatures	Selected works studied in their cultural contexts from authors representing ethnic experiences in the United States.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Studies in North American Ethnic Literatures	Selected works studied in their cultural contexts from authors representing ethnic experiences in the United States.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	544	Studies in Colonial and Postcolonial Literature	Selected topics, periods, theories, and figures in works by authors representing colonial and postcolonial regions and/or experiences.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Studies in Colonial and Postcolonial Literature	Selected topics, periods, theories, and figures in works by authors representing colonial and postcolonial regions and/or experiences.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	550	Translation	Surveys theories and practices of translation into English. Considers target, audience and market.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Translation	Surveys theories and practices of translation into English. Considers target, audience and market.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	551	Rhetorical Traditions	Examines rhetorical traditions spanning ancient to contemporary rhetorics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Rhetorical Traditions	Examines rhetorical traditions spanning ancient to contemporary rhetorics.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	552	Composition Studies	Selected topics in the history and theories of composition.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Composition Studies	Selected topics in the history and theories of composition.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	553	Technologies of Writing	Critical study and cultural analysis of information technologies and their effects on various writing practices.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Technologies of Writing	Critical study and cultural analysis of information technologies and their effects on various writing practices.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	554	Rhetorics of Race, Class, and Gender	Study of interdependent relationships of race, class, and gender in rhetorical constructions of self and community.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Rhetorics of Race, Class, and Gender	Study of interdependent relationships of race, class, and gender in rhetorical constructions of self and community.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	556	Theories of Literacy	Examines various theories of literacy, their embedded values and assumptions, and their influences on academic scholarship and pedagogy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ENG	550	Theories of Literacy	Examines various theories of literacy, their embedded values and assumptions, and their influences on academic scholarship and pedagogy.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	557	Computer-Assisted Language Learning	Explores the field of computer-assisted language learning. Traces the development of computer-assisted language learning (CALL) over the last three decades. Focuses on research that explores how computer technology can help facilitate second language development; relies primarily on empirical data to do so. Examine established as well as new research methods in CALL. Participants participate in one research study and apply theoretical and practical aspects of CALL in these projects.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only APL 557, ENG 557 or LIN 591 (Intro to Computer Assisted Language Learning)
ENG	560	Genre Studies	Critical analysis and study of works from a single genre or comparative analysis and study of multiple genres.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Genre Studies	Critical analysis and study of works from a single genre or comparative analysis and study of multiple genres.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	561	Film Studies	Analysis and study of film genres, cinematic techniques, and problems of interpretation and representation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Film Studies	Analysis and study of film genres, cinematic techniques, and problems of interpretation and representation.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	562	forms of Poetry	Types, history, criticism, and schools of theory of metrical form. Analyzes lyric, narrative, and dramatic poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		forms of Poetry	Types, history, criticism, and schools of theory of metrical form. Analyzes lyric, narrative, and dramatic poetry.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	563	Forms of Fiction	Types, history, criticism, and schools of theory in the forms of fiction. Analyzes narrative and dramatic structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Forms of Fiction	Types, history, criticism, and schools of theory in the forms of fiction. Analyzes narrative and dramatic structure.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	571	Foundations for Teaching English Learners	Provides teachers with foundational knowledge of English language learner education including: identification and knowledge of English language learners in school contexts, the role of culture in learning, principles of second language acquisition and teaching, historical and current perspectives and policies related to English learner education, and the role of parents and communities in the education of English learners.	N	LEC	Y	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 580 (1 hour); Credit is allowed for only ENG 571 or ENG 598 (Foundations for Teaching English Learners)
ENG	572	Strategies for Teaching English Learners	Supports teachers through a review of core knowledge of strategies and correlated assessments for the instruction of English learners. Teachers learn to assess EL language needs and apply appropriate teaching strategies for supporting learning English and content. Primary emphasis is in the integration of EL language and learning needs and implementation of lesson planning, strategies and appropriately leveled instruction. Teachers complete a semester-long inquiry on integrating course content into their teaching practices.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 571; Pre- or corequisite(s): ENG 580 (2 hours); Credit is allowed for only ENG 572 or ENG 598 (Strategy/Assessment/Cor e for Teaching Eng Learners)
ENG	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	581	Methods of Teaching Secondary Writing	Emphasizes methods of planning, teaching, and assessing appropriate content in the instruction of composition and related skills in secondary classrooms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Credit is allowed for only ENG 481 or 581
ENG	582	Pedagogy	Overview of diverse theories of English instruction, including composition/rhetoric, linguistics and literacy, with emphasis upon development and implementation for high school- and community college-level instructors.	N	SEM	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): admission to any graduate program
ENG	583	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		

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ENG	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	0-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	0-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	597	Graduate Capstone Seminar	The capstone seminar is required for graduate students who must complete a culminating experience for a degree or certificate program.	N	RSC	N	OPT	Liberal Arts and Sciences	Department of English	1-3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Graduate Capstone Seminar	The capstone seminar is required for graduate students who must complete a culminating experience for a degree or certificate program.	N	RSC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG		Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	602	Advanced Studies in Theory and/or Criticism	Seminar courses on the principles, strategies, and applications of critical, cultural, and/or literary theory and/or criticism.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ENG	603	Advanced Studies in Comparative Literature	Seminar courses on the problems, methods, and principles of comparative analysis.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	604	Interdisciplinary Cultural Studies	Seminar courses on work from literature, anthropology, and/or other disciplines, with an emphasis on cultural influences and functions.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	606	Advanced Studies in English Education	Current research, issues, and trends in English education.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	625	Advanced Studies in Second Language Writing	Provides opportunities to explore advanced research topics as well as current issues and controversies in the field of second language writing-- an interdisciplinary field of inquiry simultaneously situated in applied linguistics, rhetoric and composition, and teachers of English to Speakers of Other Languages.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ENG or LIN 625
ENG	632	Advanced Studies in Medieval and Renaissance Literature and Culture	Seminar in works of the Medieval or Renaissance periods, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	635	Advanced Studies in British Literature	Seminar courses on works produced in or about England, Scotland, and Wales, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	636	Advanced Studies in American Literature	Seminar courses on works produced in or about the United States, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	639	Advanced Studies in Modernism and Postmodernism	Seminar courses on topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	642	Advanced Studies in Ethnic, Anglophone, or Post-Colonial Literatures	Seminar courses that consider the influence of cultural or geopolitical developments on the production and circulation of texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	651	Advanced Studies in History and Theories of Rhetoric	Selected topics in the history and/or theory of rhetoric.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	652	Advanced Composition Studies	Selected topics on particular composition theories, practices, pedagogies, and figures.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	654	Advanced Studies in Rhetoric, Writing, Technology, and Culture	Advanced study of theoretical, methodological, and pedagogical issues concerning the interrelationships among rhetoric, culture, writing, and writing technologies.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	655	Disciplinary Discourses	Investigation of professional and disciplinary issues related to linguistics and applied linguistics.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ENG 655 or LIN 655
ENG	656	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	662	Poetic Genres	Creative writing courses in the long poem, the erotic image, death and transfiguration, reading and influence, and others.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	664	Mixed Genres	Creative writing courses in the prose poem, magical realism, the literature of obsession.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	665	Creative Methods	Creative writing courses in theory of the novel, poetics, story into film, and others.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	667	Issues in the Writing Professions	Focuses on career preparation, resources, the role of writing in the community, creative writing, and the Internet.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ENG	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ENV	201	Fundamentals of Environmental Science	Examines the functioning of the earth system and how it has changed over long and short time scales. Emphasizes understanding global processes and how human activities can disrupt these processes, changing the ability of our global environment to support life. Also emphasizes important feedbacks between biological and physical processes and their effects on the biosphere. Discusses the response of natural and managed ecosystems to global change along with prospects for the future.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181 and 182 with C or better; CHM 116 with C or better
ENV	310	Soil Science	Fundamental principles of soil science, including physical, chemical, biological and ecological properties. Applies these principles to explain the importance of soil as both a natural resource and ecosystem. Discusses the role of soils as the heart of terrestrial ecosystems, both natural and managed, and the importance of this key natural resource to environmental health and biological productivity. Explores how human activity and global change are impacting this vital natural resource and ecosystem that is crucial to life on earth. The laboratory component also introduces applications and standard methodology for investigating these principles.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisite(s): BIO 320 with C or better; CHM 116 with C or better; PHY 101 or higher with C or better
ENV	345	Spatial Analysis in the Environmental Sciences	Develops an understanding of the methods, tools and technologies used to collect, display, analyze and interpret spatial data in environmental science and natural resource management. Provides overview of geographic information system (GIS) applications in these fields. Basics of integrating the global position system (GPS) and remote sensing (RS) into GIS to solve problems in environmental science and natural resource management.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ENV 201 with C or better
ENV	385	Environmental Impact Assessment	An understanding of federal and state environmental laws, including the scientific processes that are incorporated into decision making, is critical for a variety of careers in the environmental sciences. Provides an overview of these laws and processes and develops the specific written and oral communications skills needed for many environmental, biophysical and natural science professions.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ENV 201 with C or better
EPA	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	532	Becoming an Informed Consumer of Educational Research	Development of critical analyses skills in the examination and synthesis of educational research.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: EPA 555
EPA	555	Translating Research for Educational Change	Teaches educators how to translate research to promote educational change in their schools and districts. Three concepts emerge to empower practitioners to translate research to their individual schools and communities: (1) a needs assessment to understand the context (student population, community, networks); (2) an emphasis on the generalizability of research to provide an understanding of which findings are most applicable to specific contexts at which times and under which conditions; and (3) explicit training on ways of knowing to encourage practitioners to develop their own theoretical perspectives and test them against the academic research.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	556	Data Analysis for Education Decision Makers	Prepares educators to use the sources of information (i.e., results, reports and interactive programs) at their disposal to make educational decisions. Dynamic content is adapted based on the real-world information sources brought forth by the course participants.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EPA	559	Systematic Inquiry for Problem Solving	Trains participants to produce a policy analysis aimed at addressing a problem they identify within their own organizations. Participants identify a problem, gather, analyze data and evidence to draw conclusions, and clearly and succinctly report their findings and recommendations to policymakers.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	565	Critical Topics in Education Policy	Critical topics in contemporary educational policy debates in the USA. Explores the dominant ideological and theoretical perspectives about what should be the purposes of schooling. Students analyze the humanist, core-curriculum, vocational, pragmatic as well as the standards-based, market-driven, professionally led, and networked models of reform, theories of change, implementation challenges, and the critiques leveled against these approaches. Students analyze critical topics such as policy formation, leadership, teachers unions, academic performance and community involvement. Encourages students to learn critical "policy skills" and reach reflexive and research-based conclusions about what are the requirements to develop "good school systems" and what their their individual and collective contributions could be.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	MaryLouFulton Teachers College	Dean, Mary Lou Fulton Teachers College	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		
EPA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	795	Continuing Registration		N	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EPA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	700	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisite: EPD 710, 712 or 714 with C or better
EPD	710	Current Research in Design	Review and critical evaluation of contemporary literature and research in design, environment and the arts.	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisite: Design, Environment and the Arts PhD OR Design, Environment and the Arts (Digital Culture in Design) PhD OR Environmental Design and Planning PhD OR Environmental Design and Planning (Healthcare and Healing Environments) PhD
EPD	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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ERM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
ERM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
ERM	301	Environmental Management	Focuses on knowledge and skills necessary to manage environmental programs. Perspectives include regulatory, individual, corporate, and consulting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		
ERM	302	Water and Wastewater Treatment Technology	Explores the development of treatment technologies. Addresses regulatory standards. Emphasizes theory and practice of system design, lab analysis standards and procedures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: CHM 101; MAT 170, or MAT 210
ERM	303	Environmental Regulations	Explores environmental laws, regulations, and directives. Addresses air, land, and water.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		
ERM	364	Toxicology and Biohazards in Emergency Management	Introduces poisons. Dose response routes of exposure and toxicokinetics. Diseases associated with natural disasters. Clinical presentation of treatments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		
ERM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
ERM	401	Hazardous Waste Management	Definition of hazardous waste, RCRA and CERCLA regulations, hazardous waste classification system. Overview of hazardous waste management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		
ERM	402	Unit Treatment Technologies	Addresses various treatment technologies for contaminated air, water, and soil. Emphasizes design based upon medium, type of contamination, and concentration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): CHM 101 (or 113); MAT 170 or higher
ERM	406	Environmental Chemistry	Examines reactions, transport, and fates of hazardous chemicals in water, soil, air, and living organisms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: CHM 101 (or 113) and MAT 170 or higher
ERM	407	Occupational Hygiene	Overview of occupational health hazards, including recognition, evaluation, and control. Includes regulatory status and health standards.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		
ERM	426	Environmental Issues	Explores the science and policy implications of contemporary problems that threaten the environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		
ERM	428	International Environmental Management	Emphasizes technological and economic pressures experienced by developing countries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3	G	
ERM	480	Senior Project	Capstone project experience refining skills in communication, research and information retrieval, critical analysis and criticism, and demonstrating technical competence in each student's area of study.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): senior standing; Pre- or corequisite(s): GIT 413 or Applied Science (Graphic Information Technology) BAS major or Applied Science (Internet & Web Development) BAS major
ERM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		
ERM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-6		Prerequisite(s): Barrett Honors student
ERM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
ERM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-7		
ERM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
ERM	501	Principles of Hazardous Materials and Waste Management	Foundation for courses in curriculum. Topics include definitions of toxic and hazardous substances and wastes, RCRA classification, and OSHA criteria.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	502	Regulatory Framework for Toxic and Hazardous Substances	Examines federal, state, and local regulations for hazardous materials and wastes. Includes history and trends in regulatory development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	503	Principles of Toxicology	Interaction of chemicals with life and environment. Mechanisms of toxic action, dose-response relationships, toxicity testing models, predictive toxicology, and epidemiology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ERM	506	Chemistry of Hazardous Materials	Chemistry and toxicology of hazardous chemicals. Topics include proper handling, storage, transportation, and disposal.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	507	Industrial Hygiene	Emphasizes chemical hazards in industrial settings. Topics include recognizing and measuring hazards, control techniques, and regulatory standards.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	520	Sustainability and Sustainable Development	Explores broad field of environmental sustainability with U.S. and international coverage of green living practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	522	Air Pollution and Toxic Chemicals	Examines issues in the measurement analysis and control of toxic chemicals in air pollution.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	523	Soils and Groundwater Contamination	Theoretical and practical hydrogeology as it applies to cleaning up contamination. Investigative techniques, monitoring, risk assumptions, and assessment methodology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	527	Environmental/Resources Regulations Concepts	Environmental regulations related to water, land use, endangered species, NEPA and other policy issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	528	International Environmental Management	Studies environmental issues and laws outside the U.S., impact of free trade, and multinational corporations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	540	International Environmental Law and Policy	Studies international environmental agreements, enforcement mechanisms, and the role of NGOs and international organizations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	501	Social Theory and the Environment	Investigates key conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	502	Political Ecology: Theory and Research	Investigates key theories and research of political ecology through the conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	504	Analysis of Large-Scale Socio-Technological Systems	Provide skills and methods to analyze the design and management of large-scale socio-technological systems and the societal impacts of large-scale technological systems change. Emphasizes assessing the intertwining of lives and livelihoods in large-scale technological systems and the risks and vulnerabilities associated with large-scale systems failures, including the effects of both technological failures and natural hazards.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	510	Urban Environments	Investigates major issues and themes on the urban environment, from urban sprawl to environmental justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	513	Institutions	Studies formal and informal institutional arrangements for the governance of natural resources using case studies, experiments, and formal models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	514	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student

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ESS	540	Statistical Modeling for Sustainability	Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to begin conducting empirical analyses in their domains of interest; bring students to a high level of competency in using a cutting-edge statistical software package (Stata) for data management and data analysis tasks; expose students to applications of statistical methods in the economics/policy/social science sustainability literatures in order to develop an understanding for how statistical tools are operationalized in the research world; and develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations and command of statistical tools that constitute quality empirical research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only AML, ESS or SOS 540
ESS	577	Interdisciplinary Writing Seminar	If you want your work to make a difference in the world, you need to be able to communicate your ideas to diverse audiences in a way that is interesting and accessible. Teaches students to write clearly, persuasively and ethically to people in their disciplines, in other disciplines, and outside academia. Approaches writing as a way to think critically and refine ideas, as well as to communicate them to others.	N	SEM	Y	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	2		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is only allowed for ESS 577 or SOS 577 or SOS 598 (Interdisciplinary Writing) or SOS 598 (Writing Seminar)
ESS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ESS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EST	115	Digital Systems I	Introduces digital electronics. Topics include number systems and codes used in digital systems, Boolean algebra, logic gates, logic families, and combinational and memory circuits.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		
EST	160	Introduction to Electronic Systems	Introduces the components, devices, and practical design principles that are used to create competitive electronic systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Credit is allowed for only EST 160 or 194 (Intro to Electronic Systems)
EST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EST	200	Project Lab	Provides theoretical and practical overview of principles of measuring instruments and the main objective is to build good lab disciplines.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	2		Pre-requisites: Sophomore standing
EST	210	Circuit Analysis I	Parallel/Series circuits, ohm's law, network theorems, capacitors/inductors and transient analysis. Overview of electronic devices, BJTs, FETs, op-amps.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisites: MAT 266 (or 271); PHY 112 (or 131)
EST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EST	310	Circuit Analysis II	Electronic device analysis and introduction to design. Power supplies, diode circuits, FETs, BJTs, op-amps. Emphasizes frequency response.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 210
EST	315	Digital Systems II	Digital electronics systems, HDL circuits and systems design techniques, and device applications.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 115 and 210; Credit is allowed for only EST 315 or 394 (Digital Electronics II)
EST	345	Planning and Delivering Engineering Projects	Project-based, hands-on course teaches team building, planning, soft skills, tracking progress, and powerful methods that deliver successful, on-time projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 200
EST	350	Microcontroller Applications	Interfacing of microcontrollers to sensors, switches, indicators, and other human interfaces using the C programming language. Applications involve the integration of both hardware and software. Also addresses applications dealing with open- and closed-loop applications.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 315; Credit is allowed for only EST 350 or 394 (Adv Micro Controllers)

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EST	370	Sensors	Overview of sensor technology, including mechanical, magnetic, radiation, thermal, chemical, and biological applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 200; EST 210; UET 331
EST	372	Wireless Communication Systems	Components and signal processing for modern wireless communication systems, including major applications, problems, and new technologies.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EST 310 or Information Technology major with IFT 100
EST	380	Electronic Devices	Covers materials, structures, and technology for the design, production, and application of the major categories of electronic devices.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: UET 331; Credit is allowed for only EST 380 or 394 (Intro to Electronic Devices)
EST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EST	410	Electronic System Design	Analysis and design of Op-amps, power amplifiers, and digital logic families. Feedback design using frequency response. Computer analysis and design.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 310; Credit is allowed for only EST 410 or 494 (Electronics Systems Design)
EST	465	Statistical Process Control	Introduces statistics, seven QC tools, and control charts for data analysis and interpretation; process capability, 6-sigma, lean manufacturing, and quality system.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Fulton Schools of Engineering undergraduate student; Senior standing; Credit is allowed for only EST 465, 494 (Statistical Process Control) or 565
EST	470	Capstone Design I	Small-group projects designing, building, evaluating, and analyzing components, assemblies, and systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 345; EST 370; EST 372
EST	471	Capstone Design II	Continuation of a small-group project encompassing designing, building, evaluating, and analyzing components, assemblies, and systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 470
EST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		
EST	490	Electronics Project	Individual or small group projects in applied electronics; emphasizes lab practice or hardware solutions to practical problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): Fulton Schools of Engineering undergraduate student; min GPA 2.25; OR Fulton Schools of Engineering graduate student
EST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
EST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student
EST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-7	L	Prerequisite(s): Fulton Schools of Engineering undergraduate student; min GPA 2.25; OR Fulton Schools of Engineering graduate student
EST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-3		
EST	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Fulton Polytechnic School graduate student; minimum 15 hours graduate level courses

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EST	565	Statistical Process Control	Seven QC tools and control charts for data analysis and interpretation; process capability, 6-sigma, lean manufacturing, quality system, case study and lab experiment.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate (degree seeking or nondegree seeking) student; Credit is allowed for only EST 465, 565 or 598 (Statistical Process Control)
EST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Pre-requisites: MS in Technology graduate student
EST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
ETH	100	Ethnic and Indigenous Lives	Undertakes an introductory comparative analysis of ethnic groups to understand cultural diversity within the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	
ETH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ETH	300	Principles of Ethnic Studies	Familiarizes students with a range of analytical and theoretical frameworks in the field of ethnic studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	C	
ETH	310	Critical Research Methods	Examines methodological approaches common to programs in such disciplines as American Studies, Ethnic Studies, and Women's Studies. Critical qualitative, historical, archival, and feminist methodological approaches to the study of diverse United States populations comprise the focus of this course.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	Pre-requisite: Minimum 40 hours
ETH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ETH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
ETH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ETH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		
ETH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
EVO	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	520	Evolution and Ecology of Emerging Infectious Diseases	Applying principles and concepts from Ecology, Evolution, and Epidemiology for studying emerging infectious diseases. Emphasizing the interplay of these areas. Intended for life sciences majors and first year graduate students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BIO 494 (Emerging Infectious Diseases) or EVO 520 or MIC 520
EVO	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EVO	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	600	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	601	Principles of Evolution	Introductory course for graduate students; covers the principles of evolutionary biology from theoretical, empirical, and historical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	610	Research Areas of Evolution	Broadly conceived description of the current research areas of evolutionary biology. Expected of all first-year evolution students.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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EVO	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	100	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Credit is allowed for only EXW, HSC or KIN 100
EXW	101	Foundations in Exercise Science and Wellness	Student-centered instructional course designed to excite and propel the student into the development of a successful academic and professional career path in the field of exercise science and wellness. Presents a general overview of the career opportunities for students in the field with group and individual assignments that enable students to more thoroughly explore options related to their goals. Divided into 3 major sections: academic preparation, professional development and career exploration. Helps students develop their own individual blueprint for accomplishing their professional goals and understand the skills they need to develop along the way to be successful.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		
EXW	102	Principles and Foundations of Health Education and Health Promotion	Designed for students who anticipate working as a health educator in clinical, governmental, worksite/corporate, research-based, or other professional settings. Students gain an understanding of the selected historical, cultural, philosophical, professional and ethical issues in the practice of health education.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		
EXW	105	Physical Activity Instruction: Beginning	Beginning instruction in a variety of physical activities such as aerobics, aquatics, racquet sports, physical conditioning, and golf. Y grade only. May be repeated for credit. 2 hours per week.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		
EXW	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
EXW	194	Special Topics		Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
EXW	212	Instructional Competency Laboratory	Methods of instructing and leading fitness activities including aerobic, resistance, and flexibility activities.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Prerequisite(s): Exercise and Wellness or Physical Education major
EXW	214	Flexibility Instructional Competency Laboratory	Science and methods of instruction related to flexibility exercises and activities.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Prerequisite(s): Exercise and Wellness or Physical Education major.
EXW	216	Muscular Strength Instructional Competency Laboratory	Science and methods of instruction related to resistance training and muscular strength activities.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Pre-requisites: Exercise and Wellness or Physical Education major
EXW	218	Cardiovascular Instructional Competency Laboratory	Science and methods of instruction for cardiovascular exercise and fitness activities.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Pre-requisite: Exercise and Wellness or Secondary Education (Physical Education) major

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EXW	284	Exercise and Wellness PreInternship	Professional development course designed to help students prepare for their respective senior-year internships and post-graduate career fields, while developing and enhancing professional practice skills. Students engage in individual assessment and group learning with student peers through activities such as required readings and self assessments, career-related exploration assignments and networking. Utilizes on-campus resources, such as Career Services and the Writing Center, for support and assistance with course work and assignments. Focuses on developing long-term professional and interpersonal competencies career preparation, professional self marketing, and workplace professionalism.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		
EXW	290	Foundations of Health Promotion and Wellness	Introductory analysis of the roles, responsibilities and theories of professional fields of study related to health promotion, physical activity, fitness and wellness.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Pre/Co-requisites: EXW 100 or KIN 100; Minimum 30 earned hours
EXW	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
EXW	302	Fundamentals of Wellness	Overview of fundamental health, exercise and wellness concepts. Emphasizes personal wellness assessment and application.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	
EXW	310	Computer Skills and Technology for Exercise and Wellness	Applies computer technology to principles of social marketing, tailored communication, e-health consumerism, and statistical analysis.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	CS	Pre-requisites: Exercise and Wellness student; MAT 114, 117, 119, 142 or 170 with C or better
EXW	311	Special Populations in Exercise and Wellness	Introduces the challenged population and surveys the agencies that work with special populations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		
EXW	315	Physiological Foundations of Movement	Studies human movement with emphasis on physiological function of the body in response to physical activity and fitness training.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 201 and 202 with C or better
EXW	316	Physiological Foundations of Movement Laboratory	Investigates theories and methods of exercise physiology in a laboratory and/or applied setting.	N	LAB	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s) with C or better: BIO 201, 202. Corequisite(s): BS Exercise and Wellness major: EXW 315
EXW	320	Management and Leadership in Exercise and Wellness	Studies management, leadership, legal, ethical, and programmatic theories and applications in fitness and wellness settings.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: ENG 102, 105 or 108; Minimum 30 hours
EXW	322	Spa Management I	History of the spa industry. Overview of different types of spas, spa programs and services, facilities and equipment, operational procedures and systems, the wellness component of spas, and computer applications in spa operations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		
EXW	325	Fitness for Life	Analyzes physical fitness and benefits of exercise with emphasis on application of strategies for fitness and wellness evaluation, behavior change, and lifelong program planning.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: ENG 101; Minimum 30 hours
EXW	330	Kinesiological Foundations of Movement	Study and consideration of human movement with emphasis on kinesiology principles and their application to movement and fitness.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	4		Pre-requisites: BIO 201 with C or better
EXW	335	Physical Activity and Fitness Concepts	Topics are designed for the physical activity and health education professional and focus on application of basic exercise physiology and nutritional concepts in the design and implementation of exercise and physical activity programs to increase physical function and improve health risk factors.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 201 and 202 with C or better
EXW	340	Health Behavior Theory	Focuses on health behavior change theories and concepts that are necessary for planning, implementing and evaluating health education and health promotion programs.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): PSY 101 (or PGS 101); minimum 45 hours
EXW	342	Health Behavior Change	Examines major theories of health behavioral change. Develops intervention strategies and techniques employed to facilitate health behavioral change.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: PSY 101 (PGS 101); minimum hours 45
EXW	344	Physical Activity in Health and Disease	Examines the role of physical activity and fitness in the development of morbidity and mortality throughout the human life span.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): BIO 202; Pre- or corequisite(s): EXW 101 or 102 (or EXW 290 or 300)
EXW	348	Methods of Health Education	Intended for the pre-professional health educator to learn how to develop sound, effective, and appropriate presentation methods to create learning experiences that facilitate voluntary changes leading to health-enhancing behaviors. Focuses on the knowledge and skills necessary to understand learning and the diverse learner; structure the learning environment; develop appropriate behavioral learning objectives; select appropriate instructional methods; and develop quality lesson, presentation, and unit plans with sound strategies for evaluating learning.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre- or corequisite(s): COM 225; EXW 101 or 102 (or EXW 290 or 300)
EXW	350	Substance Abuse and Addictive Behavior	In depth study of the pharmacology and effects of addictive substances and the psychosocial risk factors and consequences of substance abuse.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 201; BIO 202; PSY 101 (PGS 101)

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EXW	380	Body Image and Wellness	Explores body image in American culture from physical, psychological, historical, and societal perspectives.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: PSY 101 (PGS 101) with C or better; Minimum 30 hours
EXW	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
EXW	400	Stress Management for Wellness	Examines the stress response and management from a behavioral perspective as it pertains to individuals or groups.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 202; PSY 101; 45 minimum hours
EXW	410	Obesity Perspectives and Prescriptions	Provides a structure for understanding, critiquing and synthesizing the information and misinformation about obesity, weight loss and health. Explores topics: the obesity epidemic; health consequences of obesity; fitness and fatness; etiology of weight gain; health implications of weight loss; psychological, cultural, social and political considerations of obesity; and a review of the application of prevention and treatment of obesity. Examines a wellness perspective about obesity by considering obesity as a normal physiological response within a pathological environment.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: BIO 202; PSY 101. Credit is allowed for only EXW 410 or EXW 494 (Obesity Perspectives and Prescriptions)Pre-req for EXW 410
EXW	412	Pediatric Obesity	Covers a variety of aspects related to pediatric obesity including the causes and consequences in terms of physiologic, genetic, psychosocial, environmental and economic. Also discusses potential interventions such as behavioral, pharmacologic, surgical and public health and policy. Evidenced-based course where research guides class lectures and discussions.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 315 or KIN 340; Credit is allowed for only EXW 412 or KIN 446 or EXW 494 (Pediatric Obesity) or KIN 494 (Pediatric Obesity)
EXW	420	Exercise Testing	Theoretical basis and practical application of pre-exercise screening, exercise testing, estimates of energy expenditure, and interpretation of results.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	4		Pre-requisites: EXW 214, 216, 218 and 315 with C or better
EXW	425	Exercise Prescription	Theoretical basis for and application of general principles of exercise prescription to various ages, fitness levels, and health states.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: EXW 214, 216, 218, 315, and 330 with C or better; Pre/Co-requisites: EXW 420 with C or better if completed
EXW	434	Fitness and Strength Conditioning	Applied course covering advanced fitness, strength and conditioning concepts and techniques. Applies to professionals working with individuals in whom a major goal of their physical activity program is to maximize human performance potential either for personal fitness goals or success in specific sports or for applications in occupational athletes (military, fire and police). Guides in development of techniques and skills critical to safe, effective and motivating instruction of advanced speed, power, agility and conditioning exercises and programs for varying individuals and teams. Includes both lecture and participatory application labs. Expects students to search and analyze the literature on advanced fitness conditioning concepts and techniques. Addresses a significant number of core competencies identified for the NSCA Certified Strength and Conditioning Specialist (CSCS) examination.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 216; minimum 75 hours; Pre- or corequisite(s): EXW 315 or 330; Credit is allowed for only EXW 434 or EXW 494 (Sports and Fitness Conditioning)
EXW	436	Community Health	Applies major concepts of community health. Focuses on populations, settings and social issues related to community health. Basics of epidemiology, disease prevention, and health promotion. Explores community health concepts related to organizing and building community coalitions and health programs. Also explores school health, maternal, infant and child health, minority health, and environmental influences on community health.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 101 or 102 (or 290 or 300) with C or better; EXW 342 with C or better
EXW	444	Epidemiology	Introduces epidemiological concepts and prepares the student to read, comprehend, and report epidemiological research.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 101 or 102 (or EXW 290 or 300); any CS statistics course with C or better
EXW	446	Health Promotion and Program Evaluation	Applies theory-based concepts and methods of health promotion and program evaluation.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 101 or 102 (or EXW 290 or 300) with C or better; EXW 342 with C or better
EXW	450	Social Determinants of Health and Health Behavior	Examines the social determinants (e.g., early childhood, family, schools, worksites, built and food environments, and socio-economic status) of health and health behavior, particularly physical activity behavior and eating.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	(L or SB) & C	Prerequisite(s): EXW 101 or 102 (or 290 or 300) with C or better; PSY 101 (or PGS 101) with C or better

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EXW	452	Health Advocacy in Health Education	Links advocacy for individual patients/consumers (patient advocacy) with advocacy for groups of patients/consumers (policy advocacy). Identifies and explores specific skills needed by community health educators, pre-professional primary/secondary health teachers and health education specialists for developing a practice of advocacy in their work. Methods, techniques and resources used in advocating in health promotion.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 45 hours
EXW	454	Health Promotion Program Planning and Implementation	Applies theory-based concepts and methods of health promotion (HP). Covers selected topics in HP across a variety of domains of health. Program planning concepts include the use of planning frameworks, needs assessments, and the use of theory in health promotion program planning. Also covers practical issues related to health promotion program implementation such as resource management and program marketing.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 101 or 102 (or EXW 290 or 300); EXW 342; Pre- or corequisite(s): EXW 444 with C or better if completed
EXW	456	Health Promotion Program Evaluation	Covers program evaluation concepts including how to plan an evaluation, how to analyze and interpret data, and how to report evaluation results. Students learn a basic framework for conducting a program evaluation, various research/evaluation designs, and data analysis and statistics. Topics are covered in enough detail so that the student may understand how inferences are made regarding program evaluation.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: EXW 444; Pre/Co-requisite: EXW 454
EXW	460	Resistance Training Application and Theory	Fosters critical thinking as it applies to resistance training theory.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: EXW 216 and 315 with C or better
EXW	466	Health Promotion Program Management and Administration	Uses a dynamic team process to build knowledge and skills for the effective administration of health promotion program proposals. Areas of emphasis are strategic planning, managing fiscal resources, demonstrating leadership, developing human resources, facilitating community partnerships, formative and summative evaluation. Aligns with specific objectives required for the Certified Health Education Specialist offered by the National Commission for Health Education Credentialing.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: EXW 454; Pre/co-requisite: EXW 456
EXW	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): 2.00 GPA; Exercise & Wellness concentration: EXW 420 and 425 with C or better OR Health Promotion concentration: EXW 348 and 456 with C or better OR Health Education and Health Promotion major: EXW 348 and 454 and 456
EXW	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6		Prerequisite(s): Barrett Honors student
EXW	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6	L	Prerequisite(s): Barrett Honors student
EXW	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
EXW	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-7	L	
EXW	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
EXW	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	501	Research Statistics	Statistical procedures; sampling techniques, hypothesis testing, and experimental designs as they relate to research publications.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	534	Sports and Fitness Conditioning	Bases of sports and fitness conditioning, including aerobic and anaerobic power, strength, flexibility, and analysis of conditioning components for sports and fitness.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	535	Advanced Exercise Assessment and Prescription	Theory and practice of laboratory methods in applied exercise physiology. Procedures for assessment and prescription for individuals with chronic disease.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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EXW	536	Physiological Aspects of Physical Activity and Chronic Disease	Role of physiological mechanisms associated with acute and long-term physical activity and its influence on chronic disease and wellness.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	538	Obesity, Exercise and Health	Critically examines scientific and medical evidence concerning obesity, exercise, and health across the life span.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	542	Health Promotion	Theory and research concerning fitness and wellness programs in nutrition, physical activity, smoking cessation, and stress management.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	544	Fitness/Wellness Management	Development of the fitness/wellness industry. Planning, organizing, promoting, and managing fitness/wellness programs.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	560	Cardiopulmonary Rehabilitation	Exercise testing and prescription for cardiac and pulmonary patients as well as pharmacology, electrocardiography, pathophysiology of chronic diseases, and leadership of patients in cardiac rehabilitation and pulmonary rehabilitation programs.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	562	Functional Assessment and Exercise Prescription for Older Adults	Assessment of functional capacity and prescription of exercise that is appropriate for older adults including healthy, frail, diseased and very old.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): MS Clinical Exercise Physiology or Exercise and Wellness major
EXW	564	Aging and Lifestyle Behaviors	Provides an overview of health behaviors in older adults. Centers on the perceptions and behaviors of older adults in reference to illness prevention, health promotion and reactions to acute and chronic illness and the context in which these behaviors occur. Specifically examines the psychological, familial, cultural and contextual factors which influence older adults' personal health practices and illness behaviors. Considers the older person as an individual in a complex system, engaged in decision making and his/her subsequent actions to maintain or improve health status. Solidifies concepts through the use of in-class case studies and discussions.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: EXW 542
EXW	565	Cardiovascular and Pulmonary Physiology	In-depth study of the physiology of exercise with special regard to cardiovascular and pulmonary responses in healthy and chronically diseased individuals.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): MS in Clinical Exercise Physiology major
EXW	568	Management and Treatment of Chronic Disease for the Clinical Exercise Physiologist	Investigates the physiology, pathophysiology and treatment options for a variety of diseases that the clinical exercise physiologist routinely encounters in the work environment. Prepares students to qualify for ACSM Clinical Exercise Physiologist certification.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: EXW 560
EXW	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	597	Capstone Project	For non-thesis students in the MS degree program to provide a culminating field experience or non-research project for students to apply the coursework and healthy aging concepts.	N	RSC	N	YGB	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: EXW 500, 501, 536, 542 and 591
EXW	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	635	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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EXW	640	Analysis of Variance for Exercise and Wellness	Analyzes variance methods with an emphasis on research measures of human performance.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	641	Qualitative Research Methods	Introductory overview of qualitative research methods frequently used in education and health. Emphasizes analysis of research and practical application.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	642	Exercise Epidemiology	Physical activity, exercise, and physical fitness and the development of chronic disease.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: EXW 500 with C or better; EXW 501 with C or better
EXW	643	Correlation/Regression/Multivariate Statistics	Graduate-level statistics course for PhD/master's students who will be doing research in the area of exercise and wellness.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	645	Advanced Applied Methods and Data Analysis	Heavily applied focus on implementing research methods and statistical modeling techniques in the health promotion sciences. Addresses practical issues in specifying, interpreting and presenting research findings using appropriate statistical techniques. Addresses reporting standards (e.g., CONSORT, STROBE, PRISMA) and practical issues related to manuscript submission. Covers analytical methods including multiple regression and logistic regression, ANOVA, mediation and moderation, exploratory factor analysis, multilevel models for hierarchical data and intensive longitudinal data, basic time-to-event analyses (i.e., survival), and meta-analysis; also remains flexible to address critical and emerging methodologies in the health promotion sciences. Covers statistical methods in a conceptual nature with a focus on the use of statistical software packages (primarily SPSS) and interpretation of outputs.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 640, 643
EXW	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	701	Advanced Research Methods	Provides doctoral students in Nutrition and Health Promotion with instruction in methods to enhance scientific writing skills in the health sciences and guidance through the process required to organize and submit a fundable research grant proposal.	N	SEM	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 700
EXW	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS		Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
FAS	101	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
FAS		Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
FAS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
FAS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
FAS		Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only FAS 264 or SOC 264

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FAS	207	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only FAS 264 or SOC 264
FAS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
FAS	301	Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
FAS		Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
FAS	324	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & H	Credit is allowed for only FAS or SOC 324
FAS	331	Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
FAS		Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
FAS		Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
FAS	332	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
FAS		Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
FAS	360	Black Families in the Diaspora	Within a historical, cultural, social-economic, and international context, the institution of Black families begins with their lives in Africa, South America, and the Caribbean and follows the cultural continuities and adaptations impacting the structure and functioning of contemporary African America families. Theoretical models provide focus to studying voluntary and involuntary migration, family labor force involvement, gender roles, marital relations, parenting, kinship and community networks. Throughout the course attention is given to the role of social policies in shaping the well-being of Black families.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Prerequisite(s): AFR 200 (or AFS 200) or FAS 101; Credit is allowed for only AFR 360 (or AFS 360) or FAS 360
FAS	361	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Prerequisite(s): SOC 101 or SOC 301 or CDE 232; SOC 390; Credit is allowed for only FAS 361 or SOC 391
FAS	370	Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & C	Credit is allowed for only AFR 370 (or AFS 370) or FAS 370
FAS		Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Credit is allowed for only AFR 370 (or AFS 370) or FAS 370
FAS	390	Supervised Research Experience	Practical, firsthand experience within current faculty research projects in family studies or child development. Y grade only; may be repeated for total of 6 hours.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		
FAS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
FAS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
FAS	403	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	421	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC). Credit is allowed for only ALD 431, 531 or FAS 421
FAS	431	Parent-Adolescent Relationships	Dynamics of the relationships between parents and adolescents. Developmental characteristics of adolescence and the corresponding adult stage.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FAS	435	Advanced Marriage and Family Relationships	In-depth examination of research, issues, and trends relating to marriage and family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Pre-requisites: Minimum 30 hours; SOC 101, PSY 101(PGS 101), FAS 101 or FAS 331 with C or better; Credit is allowed for only SOC or FAS 435
FAS	436	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	440	Fundamentals of Marriage and Family Therapy	Introduces the fundamental orientations of marriage and family therapy.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
FAS	460	Leadership, Research, and Collaboration in Community Change	First course in Community Action Research Experience (CARE) sequence. Students develop a project proposal in collaboration with a community-based organization.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: Minimum 60 hours; Credit is allowed for only FAS 460, SOC 460 or FAS 498 (Leadership Research & Collaboration in Change)
FAS	461	Community Action Research Experience Research Internship	Second course in Community Action Research Experience (CARE) sequence. Students apply leadership, professional collaboration, project management and research skills in conducting an approved community action research project.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: FAS 460 (or SOC 460); Minimum 60 hours. Credit is allowed for only FAS 461 or SOC 461
FAS	472	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
FAS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
FAS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6	L	Prerequisite(s): Barrett Honors student
FAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
FAS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
FAS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
FAS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-7		
FAS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		
FAS		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
FAS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEL	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	503	Academic Professional Development	Becoming and working as a academic, including how to write a vita, choose a thesis topic, or find dissertation data.	N	REC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	505	Applied Regression Analysis	Multiple linear regression topics relevant to social science data analysis. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 505

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FAS	507	Categorical Data Analysis	Logistic regression and related topics relevant to categorical data analysis in social sciences. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 507
FAS	508	Structural Equation Analysis for the Social Sciences	Theory and application of structural equation modeling. Path analysis and latent variable models such as CFA, multiple group analysis and models for longitudinal data. Projects involve conducting analyses and writing results.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 508
FAS	509	Event History Analysis	Proportional hazards models and other methods for analyzing longitudinal data and establishing hazard rates of events for exploratory variables.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 509
FAS	512	Secondary Data Analysis	Works with existing data to produce a publishable article.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 512
FAS	531	Theoretical Issues in Family Sciences	Historical and current approaches to theory development, evaluation, and application in family studies.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	539	Research Issues in Family Interaction	Critical review of current and past research in the area of family dynamics. Emphasizes interactional processes within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	570	Introduction to Marriage and Family Therapy	Introduces major marriage and family therapy orientations. Reviews history, theory, application, and outcome research for each orientation.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	571	Assessment in Marriage and Family Therapy	Assessment and outcome evaluation of couples and families involved in marital and family therapy.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	572	Advanced Techniques in Marriage and Family Therapy	In-depth review of assumptions and advanced techniques associated with contemporary marriage and family therapy approaches.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	573	Dysfunctional Families	Critical review of current theory and empirical evidence connecting marital and family interaction patterns with aberrant behavior.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	574	Family Theory for Marriage and Family Therapy	Examines the theoretical orientations within the family therapy field, including the evolution, premises, and assumptions of each.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	575	Applied Issues in Couples - Therapy	Examines issues unique to therapeutic work with couples, including lifespan transition, multicultural issues, divorce, parenting, and remarriage. Seminar. Enroll requirements: Pre-requisites: Admission into MAS-MFT program.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	576	Applied Issues in Human Development for MFT: Psychopathology	Recognition and diagnosis of maladaptive behavior according to DSM criteria across human development.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	577	Applied Issues in Children and Adolescents in Marriage and Family Therapy	Examines developmental factors that lead to disorders in children and adolescents, with an emphasis on a systemic framework.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	578	Applied Issues in Sexuality for Marriage and Family Therapy	Examines the major methods used to assess and treat sexual issues and the treatment of sexual disorders.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	579	Applied Research in Marriage and Family Therapy	Critical examination of research concepts, quantitative and qualitative research designs, and applicability in clinical settings.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	581	Professional Issues and Ethics	Examines legal and ethical concerns of marriage and family therapists, emphasizing licensing standards and the Code of Ethics.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	586	Capstone I	Professional exploration and goal specification for non-thesis capstone project.	N	PRA	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): 3 hours in any CDE, FAS or SOC 500-level course with C or better; Credit is allowed for only FAS 586 or SOC 586
FAS	587	Capstone II	Develops professional expertise and area of focused interest.	N	RSC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): FAS 586 or SOC 586. Credit is allowed for only FAS 587 or SOC 587

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FAS	588	Capstone III	Applies developed expertise and knowledge to professional goal.	N	PRA	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): CDE 501 or SOC 501; CDE 531 or SOC 585; FAS 500 or SOC 500; FAS 587 or SOC 587; 12 additional graduate-level hours in CDE, FAS, and/or SOC; Credit is allowed for only FAS 588 or SOC 588
FAS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS		Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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FAS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	123	ASU Financial Literacy	A practical approach to financial challenges faced by ASU students. Emphasizes financial choices likely to be encountered while at ASU, as well as issues to be encountered immediately upon graduation. Topics include credit cards, student loans, credit scores, saving, investing, insurance, transportation, housing, taxes, goal setting and budgeting.	N	LEC	N	YGB	W.P. Carey School of Business	Department of Finance	1		Credit is allowed for only FIN 123 or 191(ASU Financial Literacy)
FIN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-3		
FIN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
FIN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
FIN	300	Fundamentals of Finance	Theory and problems in financial management of business enterprises.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s) with C or better: ACC 231, 232 or 261; ECN 212; ECN 221, ECN 231, IEE 380 or STP 280; MAT 211, 266 or 271; Non-Business min. 2.5 GPA and min. 56 hours; Pre- or corequisite: ACC 241, 242 or 271; Credit for only FIN 300, 302 or 303
FIN	302	Managerial Finance	Theories and techniques used for business decisions in working capital management, capital budgeting, financial control, and long-term financing.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisites: W.P. Carey Finance major; with C or better: ACC 231, 232 or 261; ECN 211 or 213; ECN 212 or 214; ECN 221 or 231; MAT 211 or 271; Pre- or corequisite: ACC 241, 242 or 271 with C or better if completed. Credit allowed for only FIN 302 or 303
FIN	303	Honors Finance	Covers basic principles of finance, practical tools for financial decision making, and evaluation methods employed by the firm.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisites: W.P. Carey Honors student; with C or better: ACC 231, 232 or 261; ECN 211 or 213; ECN 212 or 214; ECN 221 or 231; MAT 211 or 271; Pre- or corequisite: ACC 241, 242 or 271 with C or better if completed. Credit allowed for only FIN 302 or 303
FIN	331	Financial Markets and Institutions	Analyzes financial markets and intermediaries. Theory of financial intermediation, interest rate theory, money and capital market instruments, and government regulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey BS major or Business minor; with C or better: ACC 231 or 232 or 261; ECN 211 or 213; ECN 212 or 214; ECN 221 or 231; MAT 211 or 271; Pre- or corequisite(s): ACC 241 or 242 or 271 with C or better if completed
FIN	361	Advanced Managerial Finance	Builds on FIN 302. Advanced material on capital budgeting, cost of capital, CAPM, asset valuation, capital structure, and financial policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: W.P. Carey Finance BS student; FIN 302 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FIN	380	Personal Financial Management	Dynamic analysis of personal financial planning, including time value of money, stock and bond investment, and retirement and estate planning.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: Minimum 2.00 GPA; Minimum 56 hours OR Non-degree student with minimum 2.00 GPA OR Graduate student. Not for Finance major credit
FIN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey BS non-Finance major; FIN 300 (or 302 or 303) with C or better
FIN	421	Security Analysis and Portfolio Management	Security analysis theory and practice. Selection and management of financial asset portfolios. Securities markets and portfolio risk-return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey Finance BS major; ACC 340 with C or better; FIN 303 or 361 with C or better; FIN 331 with C or better
FIN	427	Derivative Financial Securities	Study of stock options, index options, convertible securities, financial futures, warrants, subscription rights, and arbitrage pricing theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: W.P. Carey Finance BS student; FIN 421 with C or better
FIN	431	Management of Financial Institutions	Asset/liability and capital management in financial institutions. Influence of market factors and regulatory agencies. Emphasizes commercial banks.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey Finance BS major; ACC 340; FIN 303 or 361 with C or better; FIN 331 with C or better
FIN	456	International Financial Management	Exchange rate determination, financial markets, managing multinational corporations, capital budgeting, and hedging currency risk exposure from an international perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3	G	Prerequisite(s): W.P. Carey Finance BS major; ACC 340 with C or better; FIN 303 or 361 with C or better; FIN 331 with C or better; OR Honors student in Finance: FIN 303 and 331 with C or better
FIN	461	Financial Cases and Modeling	Case-oriented capstone course in managerial finance. Contemporary issues of liquidity management, capital budgeting, capital structure, and financial strategy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3	L	Prerequisite(s) with C or better: ACC 340; FIN 303 (or FIN 361), 331; minimum 67 hours; BS Finance major. Pre- or corequisite(s): FIN 421 with C or better if completed
FIN	471	Investment Portfolio Management	Under faculty supervision, students manage over \$500,000 of the ASU Foundation's assets over the course of the year. Must take for a total of 3 hours.	N	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-3		Pre-requisite: FIN 303 or 361 with C or better
FIN	472	Investment Banking Industry Scholars	Provides conceptual basis for performing analysis, providing advice and making decisions in elite financial services firms. Must take for a total of 3 hours.	N	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-3		Prerequisite(s): application and selection process. Credit is allowed for only FIN 472 or FIN 494 (Investment Banking Industry Scholars)
FIN	481	Honors Seminar in Finance	Honors course covering topics that include theory and applications concerning managerial finance, investments, and financial institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey Finance BS major with Honors status; ACC 340 with C or better; FIN 303 or 361 with C or better; FIN 331 with C or better
FIN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P. Carey BS student; FIN 300, FIN 302 or 303 with C or better
FIN	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	W.P. Carey School of Business	Department of Finance	1-6		Prerequisite(s): Barrett Honors student
FIN	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	W.P. Carey School of Business	Department of Finance	1-6	L	Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FIN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Finance BS student; ACC 315 or ACC 303 or ACC 340, FIN 331, and FIN 303 or FIN 361 all with C or better
FIN	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-6		Prerequisite(s): Barrett Honors student
FIN	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-7		Pre-requisites: W.P. Carey Finance students with professional status; FIN 331 and 361 with C or better; ACC 315 or 340 with C or better
FIN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Finance	1-3		Pre-requisites: W.P. Carey Finance students with professional status
FIN	502	Managerial Finance	Develops analytical techniques and financial theories used to make optimal decisions in a corporate setting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2-4		Pre-requisites: ACC 502 with C or better; ECN 501 with C or better
FIN	520	Valuation Techniques	Improves the understanding of valuation concepts and how to apply them. Shows how to value assets using free cash flow and economic value-added methods.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	525	Investment Strategies	Presents the fundamental principles of risk and return, portfolio diversification, asset allocation, efficient markets, active portfolio management, portfolio evaluation. Reviews selected alternative investment strategies such as hedge fund investments.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	530	Derivatives	Intermediate- to advanced-level course in derivative assets such as options, forward and futures contracts, swaps and financial engineering.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	540	Advanced Financial Management	Offers a comprehensive exploration of the revolutionary developments occurring in the world's financial markets.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	545	Advanced Corporate Finance	Studies major decision-making areas and selected topics in corporate finance. Attempts to develop decision-making ability in these areas using both lectures and cases.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W. P. Carey degree-seeking graduate student; Credit is allowed for only FIN 545 or 591 (Advanced Corporate Finance)
FIN	550	Fixed Income	Intermediate- to advanced-level course in fixed income instruments and associated relative valuation of the securities.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	555	Entrepreneurial Finance	Provides an overview of the economics and institutions involved in entrepreneurial finance. Focuses on the financing of new ventures. Consists primarily of case analysis, supplemented with in-class exercises and lecture material.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W. P. Carey degree-seeking graduate student
FIN	560	International Finance	Examines the financial issues of an international investment decision. Main topics include foreign exchange market, investment alternatives in the international capital markets, and the management of foreign exchange risk.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	565	Risk Management in Banks and Financial Institutions	Provides a risk management view of financial institutions (also known as financial intermediaries). Traditionally, banking courses have focused on an overview of the financial services industry, sector by sector, concentrating on balance sheet presentations and overlooking management decision making and risk management. In contrast, this course emphasizes a risk management approach.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W. P. Carey degree-seeking graduate student
FIN	575	Finance Capstone	Provides a culminating experience as a step in completing the degree. Applies finance principles related to the investment, risk management and financing policies of the firm to develop decision-making ability in these areas. Emphasizes analysis of finance problems through selected readings and case studies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W. P. Carey degree-seeking graduate student; Credit is allowed for only FIN 575 or 591 (Finance Capstone)
FIN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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FIN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: FIN 502 with C or better
FIN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	781	Theory of Finance	Fundamental tools of financial economics; asset pricing, arbitrage, option pricing, capital structure, dividend policy, asymmetric information, and transaction-cost economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	782	Theory of Finance II	Fundamentals of corporate finance, contract theory, agency problems, and game theory applications in Finance.	N	SEM	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: W. P. Carey degree-seeking Graduate student
FIN	783	Empirical Asset Pricing	Asset pricing models in finance; efficient market hypothesis, empirical factor models, option pricing basics.	N	SEM	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: W. P. Carey degree-seeking Graduate student
FIN	785	Financial Economics of Capital Markets	Asset pricing theory, equilibrium asset pricing models, and the equity premium puzzle; incomplete and imperfect markets.	N	SEM	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: W. P. Carey degree-seeking Graduate student
FIN	786	Corporate Finance	Issues in corporate finance covering topics that impinge on corporate finance, financial contracting, intermediation; empirical corporate finance; microstructure.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: W. P. Carey degree-seeking graduate student
FIN	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FIN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Finance	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FMP	201	Film: The Creative Process I	History, elements, and techniques of theatrical film: cinematography, directing, acting, scriptwriting, producing, and criticism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	
FMP	220	Film and Media Post-Production I	Required 45-hour lab designed to teach students how to use the Avid Media Composer editing program and supporting software with an emphasis on editing techniques and workflow. Part of the Avid Learning Partner program, taught by a Certified Avid Instructor. Satisfies the Media Composer 100-level certification as part of Avid's official curriculum. Upon completion of this course, students take an exam to become an Avid Certified User.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Film and Media Production student
FMP	222	Education in Film	Critically examines how teachers, students, administrators and educational issues are dramatized and represented in popular media. Explores professional teacher preparation, socio-cultural contexts of education systems and learning, and the use of cinema as social critique.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L	Prerequisite(s): ENG 101 (or ENG 102) with C or better. Credit is allowed for only FMP 222 or FMP 294 (Education in Film)
FMP	250	Sex and Violence in Film and TV: Ethics Survey	Sex and violence portrayals in media; examines societal evolution, technological development, market imperatives, production codes, and industry realities and practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		
FMP	255	Media Authorship	Surveys the manipulation, editing, compression, encoding and search engine optimization of digital sound and video media.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	CS	Credit is allowed for only FMP 255 or 294 (Media Authorship)
FMP	261	Introduction to Screenwriting	Basic skills of screenwriting including exercises in conflict and resolution, plot points, and theories of three-act structure and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: ENG 101, 105 or 107 with C or better
FMP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
FMP	300	Focus on Film	Specialized study of prominent film artists, techniques, and genres. Emphasizes the creative process.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: ENG102, 105 or 108 with C or better
FMP	318	Directing for Film	In-depth analysis of directing theory, textual analysis, visualization, shot composition and spatial connection, staging, rehearsal techniques, and camera movement.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Film and Media Production student; FMP 320 with C or better
FMP	320	Film and Media Post-Production II	In-depth analysis of editing theory, storytelling, nonlinear editing techniques and equipment, basics of visual and audio effects and color grading using the Avid Media Composer editing program and supporting software with an emphasis on storytelling and aesthetics. Part of the Avid Learning Partner program, taught by a Certified Avid Instructor. Satisfies the Media Composer 200-level certification as part of Avid's official curriculum. Upon completion of this course, students take an exam to become an Avid Certified Professional.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s) with C or better: FMP 220; FMP 300 (Film Production Part 1 or Film Production: Film & Media Part 1 or THE 400); BA Film (Film & Media Production) major
FMP	330	Professional and Technical Writing for Film/TV Industry	Professional (noncreative) writing skills that prepare students for a career in the entertainment industry.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 220 with C or better; Minimum 56 hours; Credit is allowed for only FMP 330 or 494 (Prof & Tech Writing for Film, Media & TV Industry)
FMP	345	Cinematography I	Cinematographer's role, photographic and visual theory, framing, shot composition, cameras and equipment, crew management, basic lighting for film and video.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: FMP 220 and FMP 300 OR FMP 394 (Non-Linear Editing for Film and Media)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FMP	365	Developing a Series	Acquaints students with the development process for episodic series (network, cable, Web, on-demand). Also explores the many facets of the television industry (creative, financial, cultural, historical) and surveys the advances in television content along with an analysis of the cultural impact of television on society.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): FMP 261 with B or better; Digital Culture (Film) or Film major or Film & Media Production minor or Film & Media Production concentration; junior or senior standing. Credit is allowed for only FMP 365 or 394 (Developing a TV Series)
FMP	380	Film Production Crew	Provides a practical, on-set experience for all Film (Filmmaking Practices) majors.	N	PRA	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		Pre-requisites: BA Film (Filmmaking Practices) major; 2.50 ASU cumulative GPA; FMP 300 with C or better; Credit is allowed for only FMP 380 or 494 (Film Production Crew)
FMP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
FMP	398	Capstone Development	Provides the opportunity for all Film and Media Production majors to conceive, develop and complete the intellectual property that will form the basis of their required final capstone projects for FMP in the School of Theatre and Film at Arizona State University.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisites:
FMP	417	Business Ethics in Entertainment	Business and ethical practices of the entertainment industry; analysis of ethical decision-making techniques.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		
FMP	465	Series Writers Workshop	Offers selected students the opportunity to develop and refine material for a proposed episodic series through collaborative workshops and writing sessions that are equivalent to the development processes utilized in various industry paradigms (network, cable, Internet/on-demand).	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: FMP 365 or 394 (Developing a TV Series) with C or better; Digital Culture (Film) or Film major or Film & Media Prod. minor or BIS (Film & Media Prod.); minimum junior standing. Credit for only FMP 465 or 494 (Television Writing Workshop)
FMP	475	Producing Series	Function and responsibilities of episodic series producers and production executives for television-based platforms (network, cable, internet/on-demand). Explores a close examination of the business of television, specifically budget, license fees, distribution, and union obligations. Other topics include the structure of studios and networks, producing and marketing series for traditional and new media platforms, and general entertainment business practices.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Film (Film & Media Production) or Film (Filmmaking Practices) major; minimum junior standing. Credit is allowed for only FMP 475 or FMP 494 (Producing Television)
FMP	480	Film Production Capstone I	Preparation for final project: screenplay, budget, shooting schedule, production lists and reports for preproduction of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Film & Media Production student; FMP 318 with C or better; THE 220 with C or better
FMP	481	Film Production Capstone II	Final project shooting and postproduction: shooting, editing picture, sound, effects and music; audience screening of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Film & Media Production student; FMP 480 with C or better
FMP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
FMP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): Barrett Honors student
FMP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Prerequisite(s): Barrett Honors student
FMP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Pre-requisites: Film and Media Production student or Filmmaking Practices student or Film and Media Production minor

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FMP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-7		
FMP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		Pre-requisites: Film & Media Production or Filmmaking Practices student
FMP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FMP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FMP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Pre-requisite: Fine Arts Graduate student
FMS	100	Introduction to Film	Introduces the narrative structure, visual style, and cultural elements of film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	
FMS	110	Introduction to New Media	Explores the cultural effects of new media technologies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	
FMS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-3		
FMS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
FMS	200	Film History	Introduces the technological, aesthetic, social, and economic aspects of international film history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & H	
FMS	202	Religion and Popular Culture	Explores various intersectoral intersections between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	
FMS	209	Screenwriting Fundamentals	Studies the creativity and the technique of screenwriting for the conventional narrative film and for TV; student writing exercises culminate in a script for micro cinema.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		
FMS	270	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	Credit is allowed for only FMS 270or TCL 270
FMS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
FMS	300	Television and Cultural Studies	Applies cultural studies theory and method to the study of American television history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better
FMS	302	U.S. Media Now	Examines the business of contemporary U.S. film, television, and new media and its relationship to artistic vision and production through research and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: FMS 100, ENG 101 and 102
FMS	309	Intermediate Screenwriting	Utilizing the elements of storytelling, students develop and write a treatment and the first act of a screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies conc; ENG 102(or 105 or 108) with C or better; FMS 100 with C or better; FMP 261 (or FMS 209 or THP 261) with C or better
FMS	312	Film, Media, and Politics Today	Examines how entertainment technologies inform political innovation and campaigning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		
FMS	313	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	340	Contemporary American Film and Popular Culture	Analyzes American films, television programs, and music as popular cultural documents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better

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FMS	345	Asian Pacific Americans and Film	In-depth examination of the representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C & H	Pre-requisite: APA 200, APA 210, or FMS 100, or minimum 30 hours. Credit is allowed for only APA 345 or FMS 345
FMS	351	Emerging Digital Media	Analyzes modern cultural and digital technologies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Pre-requisites: ENG 102, 105 or 108 with C or better
FMS	352	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	C	
FMS	354	Critical Studies in Animation	Provides critical and practical tools for analyzing mainstream, experimental, and hybrid animation aesthetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: FMS 100
FMS	370	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Credit is allowed for only FMS 370 or TCL 370
FMS	374	American Visions: Innovators in Popular Media	In-depth examination of the career of an innovator in media, whether a producer, director, or scriptwriter, through his/her status as a unique storyteller of the American experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105, or 108 with C or better; Minimum 45 hours
FMS	376	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or REL 376
FMS	377	Baseball, Film, and American Dreams	Critical viewing and analysis of both narrative and documentary baseball film. Genre typically explores American values and national culture, and changes in our concepts of gender roles, race, aging, social class.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: FMS 100, ENG 101 and 102
FMS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
FMS	409	Advanced Screenwriting	Utilizing the elements of storytelling, students outline, develop, and write a feature-length screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies concentration; ENG 102, 105 or 108 with C or better; FMS 100 with C or better; FMS 309 with C or better
FMS	411	Screenwriting Adaptation Studies	Explores the many issues related to narrative adaptation across movies and other media such as television, various Internet phenomena and gaming.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s) with C or better: ENG 102, 105 or 108; FMS 200; Film and Media Studies major, minor or BIS Film and Media Studies concentration; Credit is allowed for only FMS 411 or 494 (Screenwriting Adaptation Studies)
FMS	426	Films of India	Examines classic, Bollywood and diasporic films of India from 1950 to the present.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ARS 444, ARS 544, FMS 426, ARS 494 (South Asian Cinema) or ARS 494 (Films of India)
FMS	427	Identity and World Film	Examines how films around the world represent gender, race, ethnicity, and sexual orientation through the lens of genres and their variations and how genres reinforce or critique stereotypes.	N	PRA	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Minimum 55 hours; One 200-level course in literature, art history, history, or film and media studies with a grade of B- or better; Credit is allowed for only ARS 440, FMS 427, ENG 465, ARS, ENG or FMS 494 (Identity and World Film)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FMS	430	Artists in Film: Artists' Biopics	Examines artists' "biopics," biographical films about artists, chronologically from the subgenre's first appearance in 1936 to recent films. Explores relationships between film and history and between film and myths of creativity; major directors' attraction to artists' biopics; stereotypes of artists (e.g., genius, deviant); and how notions of creativity are inflected by gender, race and national identity. Assignments include weekly readings and film viewings and one short paper; optional documentaries and films are also available.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): a least one course at the 200 level or above in ARS, ENG, FMS, HST with B or better; Credit is allowed for only ARS 443, 494 (Artists Biopics) or FMS 430
FMS	440	Los Angeles: Movies and Culture	Explores film treatment of the historical culture of Los Angeles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies concentration; ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	441	Global Cinema	Examines how film represents three important dimensions of globalization: its relationship to national culture, terrorism, and immigration.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & G	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	442	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200; ENG 200-level literature course, or SLC 202 or FMS 100 and FMS 200; Credit is allowed for only ENG 447, FMS 442 or SLC 450
FMS	445	The Holocaust in German-Mediated Memory	Examines representations of the Holocaust from across different media (literature, film, architecture, memoir, photography) and from across multiple generations of German engagement with this period in history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only FMS 445 or GER 445 or JST 445 or SLC 445 or GER 494 (Holocaust and German Media or Holocaust and German Mediated Memory)
FMS	446	Weimar-Era German Film	Examines early film production in Germany during the period of the Weimar Republic.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only FMS 446 or GER 446 or SLC 446 or GER 494 (Weimar German Cinema) or GER 494 (Studies in German Film)
FMS	450	Technology, Culture, and Media	Studies the socio-political relationships among technology, culture, and media.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	460	Masculinity and Film	Examines the representation of masculinity and the male body in film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	461	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440
FMS	464	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Credit is allowed for only FMS 464, ENG 458 or TCL 464
FMS	465	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 465
FMS	466	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	C	Credit is allowed for only FMS or TCL 466

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FMS	468	Crime and Violence in American Film	Addresses three primary aspects of crime and violence in film: representation, societal attitudes, effects on audience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies concentration; ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	470	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 470
FMS	471	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	
FMS	482	Entertainment Industries	Uses historical methodologies to critique emerging trends in the business of new media storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies concentration; ENG 102 (or ENG 105 or 108) with C or better; FMS 100 with C or better
FMS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
FMS	486	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
FMS	487	Religion and Film	Uses a transdisciplinary approach to explore cinematic representations of religious institutions, belief, and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	490	Capstone Seminar	Capstone seminar.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: BA Film and Media Studies major; minimum 56 hours; ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-6		Prerequisite(s): Barrett Honors student
FMS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of English	1-6	L	Prerequisite(s): Barrett Honors student
FMS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
FMS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-7		
FMS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-3		
FMS	502	Hollywood Film Historiography (Online)	This course is offered online only. Explores historiographic and critical scholarship on Hollywood as an industrial, cultural, and aesthetic enterprise.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	503	Media Industries	Examines the business of contemporary U.S. media practices including film, television, Web-based media, music, video games, mobile phones, and other interactive media. Explores the changing economic structures of these media industries and their relationship to artistic vision and production.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students

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FMS	504	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	REC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Master of Liberal Studies student or MAS in American Media and Popular Culture student. Credit is allowed for only MLS or FMS 504
FMS	507	Crime and Violence in American Film (Online)	This course is available online only. Focuses on historiographic and critical scholarship on three aspects of crime and violence in American film: (1) regulation and censorship; (2) representation and society; and (3) theories about the effects on audiences of viewing crime and violence in films.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	508	Race and Gender in American Film	Investigates the diverse ways in which race and gender are represented in American film history and culture. In a broader context, also analyzes how the meaning of race and gender, and their intersectionality, has shifted and changed across time and space, and how cinema has contributed to these shifts. Gives attention to the relationships among visual style, narrative structure, generic convention and identity. Students become more literate about the power of film to reflect and refract ideologies of race and gender, and to analyze how these identities impact the experiences of individuals and groups in our society.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only FMS 508 or FMS 598 (Race and Gender in American Film)
FMS	511	Fundamentals of Cinema & Television Narrative Online	Studies the creativity and the technique of screenwriting for the conventional narrative film and for television. Student writing exercises culminate in a script for micro-cinema. Seminar. Pre-requisite: online student in MAS American Media and Popular Culture	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	512	Intermediate Cinema and Television Narrative (online)	Focuses on the feature-length screenplay; students complete the first act and treatment of an original feature.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	520	Cultural History of US Television: Theory & Method	Engages both the theory and methods of cultural studies as implemented in television studies and U.S. television history (from the 1940s to the present).	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
FMS	522	Los Angeles: Movies and Culture	Focuses on historiographic and critical scholarship of industry, genre and representation in post-war, self-reflexive Hollywood cinema.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FMS	523	Film Authorship	Explores the notion of authorship in film, television, and digital media by engaging with a number of critical methodologies such as auteurism, structuralism, post-structuralism, feminism.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	527	Identity and World Film	Examines how films around the world represent gender, race, ethnicity, and sexual orientation through the lens of genres and their variations and how genres reinforce or critiques stereotypes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 540, FMS 527 or (ARS 494, ENG 465, FMS 494 or ARS 598 Identity and World Film)
FMS	543	Artists in Film: Artists' Biopics	Examines artists' "biopics," biographical films about artists, chronologically from the subgenre's first appearance in 1936 to recent films. Explores relationships between film and history and between film and myths of creativity, major directors' attraction to artists' biopics; stereotypes of artists (genius, deviant, etc.); and how notions of creativity are inflected by gender, race and national identity. Assignments include weekly readings and film viewings and one short paper; optional documentaries and films are also available.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ARS 443 or ARS 543 or FMS 430 or FMS 543 or ARS 598 (Artists in Film: Biopics)
FMS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FMS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FMS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
FOR	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		

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FOR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
FOR	210	Sociology of Murder	Sociological perspectives on various forms of murder and types of murderers. Also considers forms of punishment for murder.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SB	Credit is allowed for only FOR 210 or SOC 210
FOR	286	Principles of Forensic Science	Introduces and surveys the practices and procedures used by forensic scientists in the modern crime laboratory. Students apply lecture topics to forensic-themed laboratory activities.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisite(s): BIO 181, 182; CHM 113, 116
FOR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
FOR	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	PRA	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		
FOR	350	Computer Forensics	Concepts of computer forensics, forensic analysis techniques, computer forensic tools and software for forensic investigators, network forensics, data forensics, mobile device forensics, malware forensics, cyber crimes and fraud, computer security incident response.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: ACO 100 with C or better
FOR	375	Analytical Chemistry for Life Sciences	Presents an analysis of chemicals, including the theoretical and practical considerations regarding the separation, detection and quantitative determination of chemicals. Illustrates the application of different analytical procedures using some of the common chemicals of concern in the forensics and environmental fields.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 234 and 238 with C or better; Credit is allowed for only FOR or LSC 375
FOR	376	Analytical Chemistry for Life Sciences Lab	Provides hands-on experience with sample extraction, sample clean-up, and instrumental analysis of common chemicals. Largely focuses on the application of analytical chemistry methods to the fields of forensics and the life sciences. Mainly uses the solvent and solid-phase analyte extraction methods; gas chromatography-mass spectrometry, FTIR and NMR, generally determines analyte identification.	N	LAB	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	2		Pre-requisites: CHM 234 and 238 with C or better; Co-requisites: FOR 375 or LSC 375; Credit is allowed for only FOR or LSC 376
FOR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
FOR	400	Comparative Forensics	Familiarizes students with the comparative methods used in the forensic analysis of fingerprint, questioned document and firearms evidence. Discusses the theory and principles of individualization as assessed in forensic casework. Exposes the operation and theory of the scientific instruments used when performing comparative analysis. Reinforces learning objectives through case studies, practical exercises, outside projects and guest lectures.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181; BIO 182; CHM 113; CHM 116; Pre- or corequisite(s): BIO 305 or FOR 286; Credit is allowed for only FOR 394 (Comparative Forensics) or FOR 400
FOR	401	Forensic Toxicology	Focuses on toxicology as it pertains to forensic science. Topics include: the history of toxicology; the pharmacodynamics and pharmacokinetics of drugs and alcohol in the human body; as well as the legal applications of toxicology. Also discusses ethics, quality control and quality assurance, and courtroom testimony (as they relate to forensic toxicology). May address other topics such as environmental toxicology, poisons, and current topics related to forensic toxicology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181; BIO 182; CHM 113; CHM 116; Pre- or corequisite(s): BCH 371; BIO 305 or FOR 286; Credit is allowed for only FOR 394 (Forensic Toxicology) or FOR 401
FOR	406	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L or HU	Prerequisite(s): ENG 101 or 105 or 107 with C or better. Credit is allowed for only FOR 406 or IAS 406 or PHI 406
FOR	410	Professional Practices in Forensic Science	Focuses on professional practices as they relate to the forensic scientist or forensics professional working in a modern crime laboratory (public or private). Topics include quality assurance programs and practices; ethics and analytical bias; the audit and accreditation processes; and the relationship with forensic science and the courtroom, to include courtroom testimony procedures. Includes oral mock court scenarios, as well as enhancing writing skills appropriate to the forensic sciences.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: BIO 305 or FOR 286; ENG 102 or 105 or 108
FOR	420	Modern Practices in Forensic Science	In-depth treatment of the practices and procedures used by forensic scientists in the modern crime laboratory. Students apply lecture topics to forensic-themed laboratory activities.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181; BIO 182; BIO 305 or FOR 286; CHM 113; CHM 116; Pre- or corequisite(s): BCH 371; BCH 372; LSC 347; LSC 348
FOR	447	Molecular Genetics Laboratory	Investigative lab involving DNA isolation, PCR, gel electrophoresis, enzyme digestion and ligation, transformation, and hybridization analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): minimum 45 hours; Credit is allowed for only FOR 447 or LSC 447

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FOR	454	History of Genocide	Examines the individuals and institutions responsible for the most infamous episodes of state-sanctioned violence in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	G & H	Prerequisite(s): minimum 45 hours. Credit is allowed for only FOR 454 or HST 454
FOR	475	Principles of Toxicology	Presents the fundamental principles of toxicology and its application to both human and environmental situations. Starts with the means of defining and quantifying toxic effects through dose response curves (e.g. LD50, EC50, LOEL, NOEL). Then focuses on absorption pathways for toxicants as well as the degradation metabolism pathways for toxicants. Finally focuses on the mechanism of toxic action for common poisons and environmental pollutants. Emphasizes toxicants that students are likely to encounter in forensics and environmental fields.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: BCH 361 (or BCH 371 or LSC 394: Modern Concepts in Biochemistry) and BIO 353. Credit is allowed for only FOR or LSC 475
FOR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): minimum 45 hours
FOR	485	Forensic Science Capstone	Culmination course integrating all components of Forensic Science major courses demonstrating knowledge and competency in the field of forensic science. Includes Forensic Science Assessment Test (FSAT) preparation and FSAT completion.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 305 or FOR 286; FOR 410; 6 additional hours of upper-division FOR coursework; senior standing
FOR	486	Peer Mentoring in the Forensic Sciences	Advanced students learn and apply mentoring skills in teaching labs.	N	SEM	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): minimum 45 hours
FOR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		
FOR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	
FOR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
FOR	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		
FOR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7		
FOR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
FRE	101	Elementary French	Intensive aural/oral drill in class and lab; basic grammar supplemented by simple prose readings.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in FRE 101 if credit with C or better earned in FRE 101, 102, 201, 202, 305 (or FRE 205), 311, 312, 321, 322, 411 or 412
FRE	102	Elementary French	Intensive aural/oral drill in class and lab; basic grammar supplemented by simple prose readings.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Prerequisite(s): FRE 101. Students may not enroll in FRE 102 if credit with C or better earned in FRE 102, 111, 201, 202, 305 (or FRE 205), 311, 312, 321, 322, 411 or 412
FRE	110	Intensive French I	Proficiency-based course that provides an intensive introduction to the French language and culture. Introduces the language and culture through a variety of topics from everyday life. Focuses on the development on all four communicative skills. Class time is spent mainly on communicative activities based on active listening and speaking practice of everyday French as used in different social situations, with much use of various print, video and Web-based media.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		
FRE	111	Fundamentals of French	Primarily for students with two years of high school French who need review to enter second year study.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Students may not enroll in FRE 111 if credit with C or better earned in FRE 101, 102, 201, 202, 305 (or FRE 205), 311, 312, 321, 322, 411 or 412

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FRE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
FRE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	201	Intermediate French I	Grammar review, with emphasis on development of skills of speaking, reading, writing, and listening comprehension.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in FRE 201 if credit with C or better earned in FRE 202, 305 (or FRE 205), 311, 312, 321, 322, 411 or 412
FRE	202	Intermediate French II	Continuation of grammar review with emphasis on development of skills in speaking, reading, writing, and listening comprehension.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in FRE 202 if credit with C or better earned in FRE 305 (or FRE 205), 311, 312, 321, 322, 411 or 412
FRE	210	Intensive French II	Second semester of an intensive, proficiency-oriented language course designed to develop functional proficiency in French in a dynamic communicative environment. Class time is spent mainly on a variety of communicative activities based on active listening and speaking practice of everyday French as used in different social situations, with much use of various print, video and Web-based media.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		Prerequisite(s): FRE 102 or 110 or 111 with C or better
FRE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	305	Readings in French Literature	Survey of francophone literature designed to teach reading with facility and comprehension. Vocabulary building, familiarity with literary terms, their meaning and use, and introduction to textual analysis of literary genres are major elements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	FRE 202 with C or better. Students may not enroll in FRE 305 if credit earned in FRE 321 or 322
FRE	311	Oral and Written Expression I	Practices interpersonal and interpretive writing and speaking, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): FRE 202 with C or better
FRE	312	Oral and Written Expression II	Practices presentational writing and speaking, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): FRE 202 with C or better
FRE	315	French Phonetics	Practice and theory of French pronunciation. Emphasizes standard French, although an overview of regional varieties is offered.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: FRE 311
FRE	319	Business French	Introduces the structure, vocabulary, and practices of the French business world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: FRE 312
FRE	321	French Literature	Representative masterpieces and significant movements of French literature of the Middle Ages through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & H	Pre-requisites: FRE 305; FRE 312
FRE	322	French Literature	Literature of the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: FRE 305; FRE 312
FRE	325	French Language and Culture Through Film	Reviews French vocabulary and grammar through French films, with emphasis on listening comprehension and oral and written production.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s) with C or better: FRE 311, 312
FRE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	411	Advanced Spoken French	Improvement of spoken French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: FRE 311; 6 hours of 300-level French
FRE	412	Advanced Written French	Improvement of composition skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: FRE 312; 6 hours of 300-level French
FRE	415	French Civilization I	Political, intellectual, social, economic, and artistic development of France from its origins to the end of the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: 6 hours of upper-division French
FRE	416	French Civilization II	Political, intellectual, social, economic, and artistic development of France from the 18th century to present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	pre-requisites: 6 hours of upper-division French
FRE	421	Structure of French	Phonology, morphology, syntax, semantics, and varieties of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): FRE 311, 312; SLC 201
FRE	422	Applied French Linguistics	Applies linguistic theory and second-language acquisition theory to teaching of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 213 or SLC 201; FRE 311 or FRE 312
FRE	423	French Syntax	Analyzes French syntactic structure by contemporary theoretical models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 213 or FRE 421 or SLC 201
FRE	441	French Literature of the 17th Century	From 1600 to 1660.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 321; 6 hours of 300-level French courses
FRE	442	French Literature of the 17th Century	From 1660 to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H	Pre-requisites: FRE 321; 6 hours of 300-level French courses

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FRE	445	French Literature of the 18th Century	Contributions of the philosophers and the development of the novel and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: FRE 321; 6 hours of 300-level French courses
FRE	451	French Poetry of the 19th Century	From Romanticism to Parnassian poetry to Symbolism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	452	French Novel of the 19th Century	From Constant, Hugo, Balzac, Stendhal, and Sand to Flaubert and Zola, with emphasis on major literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	453	Theater of the 19th Century	From Romantic drama to the Symbolist Theater. Representative plays of Hugo, Musset, Vigny, Dumas, Becque, Rostand, Feydeau, and Mirbeau.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	461	Modern Narrative	Representative authors from Gide to the new Nouveau Roman.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	462	Modern Poetry	Representative authors from Mallarme to Bonnefoy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	471	The Literature of Francophone Africa and the Caribbean	Selected prose, poetry, and drama of black authors from Africa and the Caribbean.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	472	Franco-Canadian Civilization	Study of the civilization of Quebec in particular through its history, language, literature, music, and customs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): 6 hours of 300-level French courses
FRE	480	Translation Theory and Practice	Theoretical and practical approaches to the fundamentals of meaning-based translation.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: FRE 412
FRE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
FRE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
FRE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
FRE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
FRE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	510	Introduction to Textual Analysis	Introduces various oral and written techniques aimed at explicating literary texts. Required of all French graduate students focusing on literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FRE 494 (Introduction Textual Analysis) or 510
FRE	521	History of the French Language	Principal phonological, morphological, and semantic developments of French from Latin to present, with emphasis on Old and Middle French. Some familiarity with Latin is recommended.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	550	French for Reading Knowledge	Teaches non-speakers of foreign language, or those with only basic notions of the language, how to read in a foreign language at an advanced level. Consists of a concise overview of grammar as well as reading comprehension practice for students who plan to take the Graduate Foreign Language Exam or others who would merely like to learn to read in a foreign language. Focuses only on reading and not on listening, speaking or writing as in a traditional language course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only FRE 494 (French for Reading Knowledge) or FRE 550 or FRE 598 (French for Reading Knowledge)
FRE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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FRE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	790	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	100	Introduction to Engineering	Introduces the engineering design process; working in engineering teams; the profession of engineering; engineering models, written and oral technical communication skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	2		
FSE	104	EPICS Gold Feasibility and Planning	First of a sequence of three one-credit service-learning courses in which EPICS GOLD groups are formed from students potentially representing all engineering, computer science and construction disciplines as well as other ASU majors, including sustainability, business, liberal arts, sciences and others. Groups of 4-5 students work together to assess the feasibility and sustainability of their proposed plans for long-term projects that solve problems and benefit clients and often, the larger community. Project work centers on the engineering, technology, computing, sustainability, business and other needs of a not-for-profit community partner; interdisciplinary group interaction is an integral element for the project success.	N	LEC	N	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): Fulton Schools of Engineering student. Credit is allowed for only FSE 104 or 194 (EPICS Gold I)
FSE	150	Perspectives in Grand Challenges for Engineering	Explores social dimensions of developing engineering solutions to meet local and global challenges. Introduces National Academy of Engineering (NAE) Grand Challenges for engineering and Grand Challenge Scholars Program.	N	LEC	N	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3	SB	Prerequisite(s): admission to the Engineering Grand Challenge Scholars Program. Credit is allowed for only FSE 150 or FSE 194, Perspectives on Grand Challenges for Engineering Prerequisite(s): admission to the Engineering Grand Challenge Scholars Program. Credit is allowed for only FSE 150 or FSE 194, Perspectives on Grand Challenges for Engineering
FSE	181	Technological, Social, and Sustainable Systems	Introduces the importance and role of technological, social, and sustainable systems in the modern world. Provides a framework for the theory and practice of sustainable engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3	HU	Credit is allowed for only SOS 181, FSE 181, or CEE 181
FSE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		

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FSE	201	Engineering Undergraduate Teaching Assistant	Theory and rationale of active learning and teaching strategies that stimulate intellectual development. Leadership, teaching, teamwork and communication skills needed to facilitate effective undergraduate learning in engineering. Implementation of these skills in a classroom setting.	N	PRA	Y	YGB	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): Ira a Fulton School of Engineering major; minimum sophomore standing
FSE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		Prerequisite(s): Barrett Honors student
FSE	301	Entrepreneurship and Value Creation	In-depth application of entrepreneurial concepts including opportunity recognition, value creation, and new business management. Students learn how to identify the needs of a market and problem solve to meet those needs through innovation. Students learn common mistakes made in the new venture process and how to work to avoid these mistakes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3		Prereq(s): Business undergrad: ACC 241 or 242 with C or better OR Engineering juniors OR non-business junior; min 2.50 cum ASU gpa; MGT 290 with C or better; Pre- or coreq(s): MGT 340 w/C or better if completed; Credit allowed only for FSE 301 or MGT 360
FSE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Prerequisite(s): Fulton Engineering undergraduate student
FSE	399	Cooperative Work Experience	Work periods with industrial firms or government agencies alternated with full-time course work. Not open to students from other colleges.	N	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		Prerequisite(s): Fulton Engineering undergraduate student
FSE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		Prerequisite(s): Barrett Honors student
FSE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Prerequisite(s): Barrett Honors student
FSE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		Prerequisite(s): Barrett Honors student
FSE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
FSE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
FSE	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	501	Technology Entrepreneurship	Fundamental principles and concepts of technology entrepreneurship.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
FSE	502	Strategic Enterprise Innovation	Strategies, techniques, and practices of process, product, and management innovation across the enterprise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3		Pre-requisite: School of Engineering Graduate student
FSE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	590	Reading and Conf	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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FSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	594	Conf and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Prerequisite(s): Fulton Engineering graduate student
FSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	600	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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FSE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GBL	10	Business English Communications I	This course is designed to introduce students to the challenges of the degree bearing MGM/MAGAM programs at Thunderbird. Each class focuses on a different language communication fundamental (reading, writing, listening, speaking, and cultural adaptation) and overlaps content themes in order to prepare the student with the necessary business vocabulary, the communication skills, and the expectations required for success in a post graduate situation.	N	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	NC Thunderbird School of Global Management	0		
GBL	11	Business English Communications II	This course is a continuation of GBL 10 in that it further develops the students to meeting the challenges of the degree bearing MGM/MAGAM programs at Thunderbird. Students may enter into GBL 11 directly with a TOEFL score of 95 Internet-Based test or better. Each class continues to improve upon one or more of the different language communication fundamentals (reading, writing, listening, speaking, and cultural adaptation) and overlaps content themes in order to prepare the student with the necessary business vocabulary, the communication skills, and the expectations required for success in a post graduate situation.	N	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	NC Thunderbird School of Global Management	0		
GBL	20	Language Foundations	Entry-level course explores the grammatical, syntactic and cultural underpinnings of the English language for international students studying English as a foreign language.	N	LEC	N	GNA	Office of the Provost	Global Launch	0		
GBL	22	Special Programs Training		N	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	24	Special Programs Field-Based Learning		N	LEC	N	GNA	Office of the Provost	Global Launch	3		
GBL	25	Special Programs English for Specific Purposes		Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	26	Special Programs Project Work		N	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	27	Special Programs Current Issues and Topics		Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	28	Academic Culture	Multidisciplinary approach to American academic culture. Designed for international students who will be matriculating into an American university and explores such themes as study skills, using academic resources and participating fully in academic life.	N	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	40	Basic 1 Listening/Speaking	On completing the Basic 1 Listening/Speaking course, a student will be able to (1) follow directions and comprehend main ideas and supporting details of short, simple passages and conversations spoken slowly; and (2) speak informally to express basic needs, habits and descriptions in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	41	Basic 1 Reading/Writing	On completing the Basic 1 Reading/Writing course, a student will be able to (1) recognize main ideas and find supporting details in selected reading passages of a few pages; and (2) produce a guided writing with a personal point of view, demonstrating level-appropriate control of grammar, word forms, and punctuation.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	42	Basic 1 Structure	This course covers helping verbs, pronouns, adjectives, count/non-count nouns, and tenses (present, present progressive and simple past).	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	43	Basic 1 Communication	International students studying English as a foreign language study the fundamentals of English communication.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		

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GBL	50	Basic 2 Listening/Speaking	On completing the Basic 2 Listening/Speaking course, a student will be able to follow instructions, directions, and comprehend the main ideas and supporting details of 1-3 minute announcements and conversations with controlled speech and delivery; and (2) speak informally in basic social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	51	Basic 2 Reading/Writing	On completing the Basic 2 Reading/Writing course, a student will be able to (1) recognize main ideas, find supporting details, and recognize the organizational pattern in short and page-length reading passages; and (2) produce a composition, based on a model, with a personal point of view, demonstrating level-appropriate control of grammar, word form, and punctuation.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	52	Basic 2 Structure	Learn grammar for everyday writing and speaking--present, progressive and future tenses, irregular verbs in the past tense, modal verbs, pronouns, order of adjectives, and comparisons.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	53	Basic 2 Communication	Learn to communicate effectively at the basic level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	60	Intermediate 1 Listening/Speaking	On completing this course, a student will be able to (1) comprehend the main ideas and supporting details of 1-5 minute listening passages, conversations, instructions, and directions with controlled speech and delivery; and (2) speak informally in common social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	61	Intermediate 1 Reading/Writing	On completing this course, a student will be able to (1) recognize the main ideas and find supporting details in selected reading passages of a few pages; and (2) produce an organized composition, with a personal or an objective point of view, demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	62	Intermediate 1 Structure	Improve grammar for everyday writing and conversation, present perfect and present perfect continuous and future tenses, noun clauses and grammar to cover frequency, duration, possibility and necessity.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	63	Intermediate 1 Communication	International students studying English as a foreign language continue to build on the fundamentals of English communication, including working on vocabulary expansion, pronunciation, idiom decoding, fluency and verbal accuracy.	N	LEC	N	GNA	Office of the Provost	Global Launch	3		
GBL	64	Intermediate 1 Business: Introduction	International students studying English as a foreign language, learn the fundamental vocabulary, concepts and cultural customs of business in an American context.	N	LEC	N	GNA	Office of the Provost	Global Launch	3		
GBL	70	Intermediate 2 Listening/Speaking	On completing this course, a student will be able to (1) comprehend the main ideas and supporting details of 5-10 minute general topic listening passages with modified speech and delivery; and (2) speak formally and informally on a variety of general topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	71	Intermediate 2 Reading/Writing	On completing this course, a student will be able to recognize the main ideas and supporting details and distinguish between fact and opinion in a reading passage of several pages; and (2) produce a composition, based on a writing task, with an objective point of view demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	72	Intermediate 2 Structure	Focus on an overview of all the tenses. This course also covers passive voice and sequence of tenses with adverbial clauses.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	73	Intermediate 2 Communication	Learn to communicate effectively at the intermediate level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	74	Intermediate 2: Business Management	International students studying English as a foreign language discover key concepts and ideas related to business management. Students have the opportunity to speak, read and write about, as well as listen to, accessible levels of business management materials, including work and motivation, company structure and recruitment.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	75	Intermediate American Culture Studies Special Topic		Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	76	Intermediate Bridge to ASU		N	LEC	N	GNA	Office of the Provost	Global Launch	3		
GBL	80	Advanced 1 Listening/Speaking	On completing the Advanced 1 Listening/Speaking course, a student will be able to comprehend the main ideas and supporting details of brief academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		

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GBL	81	Advanced 1 Reading/Writing	On completing the Advanced 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details and determine logical inferences in selected general reading passages of several pages; and (2) produce a composition, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	82	Advanced 1 Structure	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	90	Advanced 2 Core Listening/Speaking	On completing this course, a student will be able to (1) comprehend the main ideas and supporting details of complex but abbreviated academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	91	Advanced 2 Core Reading/Writing	On completing this course, a student will be able to (1) recognize the main ideas and supporting details, and determine logical inferences in authentic and selected academic and general reading passages of several passages; and (2) produce a well-developed essay, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	92	Advanced 2 Structure	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	93	Advanced Communication Special Topic	Learn to communicate effectively at the advanced level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	94	Business English Special Topic	Learn to communicate effectively in a variety of business situations and develop English skills necessary for success in today's business world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	95	Advanced American Culture Studies	Learn about American culture and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	96	Academic English Studies Special Topic	Learn the Academic English necessary for success at an American university or college.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	98	Professional English Special Topic	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	X99	International Teaching Assistants Training	Offered to international students who are candidates for a teaching assistantship. Non-credit semester-long seminar addresses language improvement, teaching skills and cross-cultural training.	N	LEC	Y	AUD	Office of the Provost	Global Launch	3		
GCU		Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments.	N	LEL	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	
GCU	102	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU		Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
GCU	113	United States and Arizona Social Studies	Introduction to the United States and Arizona from the integrated social science perspectives of history, geography, and government.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & H	Credit is allowed for only GCU 113, HST 113, or GCU 194, US & AZ for Aspiring Elmyr Ed
GCU	114	World Social Studies	Introduction to the world from the integrated social science perspectives of history, geography, and government.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G & H	Credit is allowed for only HST or GCU 114
GCU		World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	SB & G	
GCU	121	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	SB & G	
GCU		World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	4	SB & G	
GCU	171	The Thread of Energy	Follows the thread of energy through every aspect of our lives. Discusses the technical, social, legal, and policy contexts of all energy resources, including present and unconventional fossil fuels, nuclear power, and renewable resources. Addresses energy use throughout history, the influence of energy on quality of life, the role it plays in political strategies and environmental quality, how it shapes our neighborhoods and cities, its contribution to our personal comfort and national security, and how its importance is reflected in the worlds of business and the humanities. Its dual role is as a stand-alone introduction to energy, and as a first step to more advanced studies of energy in the natural, technical, and social sciences.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	Credit is allowed for only GCU or SOS 171

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GCU	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GCU	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
GCU	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
GCU	241	The Global Economy in Transition	Production, distribution, and consumption of various types of commodities of the world and relationships to the activities of humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	Pre-requisite: Minimum 15 hours
GCU	253	Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and diffusion and division of the world into cultural areas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU		Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and diffusion and division of the world into cultural areas.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
GCU	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
GCU	322	Geography of U.S. and Canada	Spatial distribution of relevant physical, economic, and cultural phenomena in the United States and Canada.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & C	
GCU	323	Geography of Latin America	Spatial distribution of relevant physical, economic, and cultural phenomena in South, Middle, and Caribbean America. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as numerous analytical essays and an in-depth research paper, in addition to regular tests and quizzes, are required.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	Pre-requisite: Minimum 45 hours
GCU	325	Geography of Europe	Broad and systematic overview of Europe, emphasizing physical, economic, and cultural phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	326	Geography of Asia	Spatial distribution of relevant physical, economic, and cultural phenomena in Asia, excluding the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	328	Geography of Middle East and North Africa	Spatial distribution of relevant physical, economic, and cultural phenomena in the Middle East and North Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	332	Geography of Australia and Oceania	Spatial distribution of relevant physical, economic, and cultural phenomena in Australia, New Zealand, and Pacific Islands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	344	Geography of Hispanic Americans	Examines the homelands, migrations, settlements, landscapes, roles, and selected cultural traditions of Hispanic Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & C	
GCU	350	The Geography of World Crises	Contemporary world crises viewed from a perspective of geographic concepts and techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	351	Population Geography	Demographic patterns; spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	Pre-requisites: MAT 117, 119, 142, 170 or 210 with C or better; Credit is allowed for only GCU 351 or SBS 351
GCU	356	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356
GCU	357	Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU		Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
GCU	359	Cities of the World I	Historical evolution of urban patterns and structures in the Middle East, India, Southeast Asia, China, Japan, and Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G & H	
GCU	360	Cities of the World II	Historical evolution of urban patterns and structures in Latin America, North America, Sub-Saharan Africa, and Australasia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	361	Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU		Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
GCU	364	Energy in the Global Arena	Production, transportation, and consumption of energy, emphasizing the electric power industry and its environmental problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	373	Introduction to Geographic Information Science	Introduces theoretical and computer-based aspects of Geographic Information Systems, involving data analysis and map generation.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	4	SG	Pre-requisite: PSY 230 or SBS 304
GCU	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
GCU	414	Teaching Geography Standards	Introduces Arizona Geography Standards for K-12 educators, emphasizing exciting curricula and illustrated with best practices by master teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GCU	421	Geography of Arizona and Southwestern United States	Geography of the Southwest with an emphasis on Arizona. Divided into physical geography, history, people, and economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & C	
GCU	424	Geography of Mexico and Middle America	Central America and Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	425	Geography of the Mexican American Borderland	Geography of a binational and bicultural region. Examines settlement, boundary issues, ethnic subregions, population change, industrial development, and urban growth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	(L or SB) & G	
GCU	426	Geography of Russia and Surroundings	Examines the geography of Russia and other post-Soviet states.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	432	Geography of China	Examines the physical, economic, cultural, social, demographic, agricultural, political, historical, and environmental aspects of the geography of China.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	433	Geography of Southeast Asia	Examines the biophysical and social features of Southeast Asian nations and peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GCU	441	Economic Geography	Spatial distribution of primary, secondary, and tertiary economic and production activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU	442	Geographical Analysis of Transportation	Networks, modes, economics, and flows at the urban, national, and international scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU	474	Public Land Policy	Geographic aspects of federal public lands, policy, management, and issues. Emphasizes western wilderness and resource development problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12	G	Pre-requisite: Junior standing; Credit is allowed for only GCU 485 or GPH 485 or LAP 485 or POR 485 or PUP 485 or 585
GCU	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
GCU	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Prerequisite(s): Barrett Honors student
GCU	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
GCU	496	Geographic Research Methods	Scientific techniques used in geographic research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	Pre-requisites: GPH 111, GCU 102, GCU 121 and GIS 205 with C or better
GCU	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
GCU	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		

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GCU	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GCU		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
GCU	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	514	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GCU 514 or SOS 514
GCU	515	Human Migration	Economic, political, social, and geographic factors underlying population movements. Migration selectivity, streams and counter-streams, labor migration, and migration decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	529	Contemporary Geographic Thought	Comparative evaluation of current philosophy concerning the nature and trends of geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	542	Geographical Analysis of Transportation	Examines the geographical aspects of transportation systems. Looks at the geography of networks; transport costs and rates; different modes of transport, trade, economic development, and technology. Studies the movement of freight and passengers at the individual, urban, national, and international scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	585	Geographic Research Design and Proposal Writing	Prepares students to undertake creative geographic research culminating in the generation of new knowledge. Serves as a foundation for the student in achieving the objective of a productive and successful degree. To accomplish this, instruction stresses a research framework, ethical practice, and the generation of an original research proposal. Specific learning objectives are: to produce an area of specialization statement, literature review, problem statement, description of methods and final proposal; to develop the skills needed to conceive and plan a research project; to communicate ideas effectively in written and oral form; to develop and articulate informed opinions about research designs; to learn about academic publishing format and process; and to understand and engage in ethical research practices.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: Graduate student
GCU	586	International Field Studies	Organized field study in specified international locations.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only GCU 485 or 586 or GPH 485 or 585 or LAP 485 or 585 or POR 485 or PUP 485 or 585
GCU	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU		Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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GCU	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	596	History of Geographic Thought	Historical development of geographic thought from pre-Greek days to the early 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	671	Introduction to Geographic Teaching	Intensive course in geographic education, scientific method in research on geographic education, research trends, resources for teaching, best practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	672	Physical Geography for Teachers	Transfer of matter and energy exhibited in the Earth's climate, hydrology, soils, biogeography, and landforms; case studies; virtual field trips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	673	Human Geography for Teachers	Analyzes cultural, economic, urban, historical, transportation, population, political, and development geography; case studies; virtual field trips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	674	Geographic Techniques for Teachers	Introduces geographic techniques, including GPS, GIS, remote sensing, cartography, qualitative, and field methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	675	World Geography for Teachers	Systematic overview of geographic knowledge about different world regions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	676	North American Geography for Teachers	Systematic overview of geographic knowledge about different North American regions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	677	Geography Across the Curriculum	Intensive course on intergrating reading, writing, and mathematics standards with geography content; selected case studies; best practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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GCU	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	101	Elementary German	Reading, writing, speaking, and understanding of basic German, with emphasis on pronunciation and grammar.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Credit is allowed for only GER 101 or 111
GER	102	Elementary German	Reading, writing, speaking, and understanding of basic German, with emphasis on pronunciation and grammar.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: GER 101 with C or better; Credit is allowed for only GER 102 or 111
GER	110	Intensive German I	Students learn to read, listen, write and speak German. Develops ability to communicate in German using a variety of tools. Uses German to ask and answer questions; name and describe persons, things, places and events; deals with certain situations; narrates orally and in writing; writes letters and postcards; fills out forms; and comprehends some texts. Expands knowledge of the cultures of the German-speaking countries. Students contribute to the class discussions what they might already know.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	
GER	111	Fundamentals of German	Primarily for students with two years of high school German who need review to enter second-year study.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Pre-requisites: GER 101 with C or better; Credit is allowed for only GER 102 or 111
GER	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Maximum 25 hours
GER	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	201	Intermediate German	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: GER 102 or 111 with C or better
GER	202	Intermediate German	See GER 201	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: GER 201 with C or better

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GER	210	Intensive German II	Helps develop reading, writing, listening and speaking skills and strategies with activities both inside and outside of class. Guides student further into learning about the cultures of the German-speaking countries.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Prerequisite(s): GER 102 or 110 or 111 with C or better
GER	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	310	Advanced German Grammar	Intensive, contextualized advanced German grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 202 with C or better
GER	311	German Conversation	Expansion of idiom through oral practice dealing with contemporary articles, essays and stories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: GER 202 with C or better
GER	312	Readings in German Culture	Provides strategies for building reading proficiency in German through longer cultural texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 310 with C or better
GER	313	German Composition	Intensive practice in writing, emphasizing style and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 310 with C or better
GER	315	Germanic Mythology	Religious and spiritual beliefs and practices of the ancient Germanic peoples as reflected in their culture, including the pantheon of their gods, as well as the reception of these beliefs through and including contemporary times.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisites: ENG 102, 105, or ENG 108 with C or better; Credit is allowed for only GER 315 or 394 (Germanic Mythology)
GER	319	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 310 with C or better
GER	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	412	Advanced German	Improvement of writing and speaking ability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 313 with C or better
GER	415	German Civilization	Aspects of political, social, and cultural life of the German-speaking world from the beginning through 1600.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Pre-requisite: A 300-level German course
GER	416	German Civilization	From 1600 through 1945.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Pre-requisite: A 300-level German course
GER	421	German Literature Survey, 800-1800	From the beginning to Classicism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): 6 hours of 300-level German courses with C or better
GER	422	German Literature Survey, 1800-Today	From Romanticism to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): 6 hours of 300-level German courses with C or better
GER	431	German Humor	Popular and literary texts (collections of jokes, pranks and comedies) in the print and visual media provide a basis of comparison for students to reflect critically on the function of humor in German culture from the sixteenth century until the present. Exposes the different types and functions of German humor and understands both the historical and the contemporary theoretical debate on the study of (German) humor. Taught almost exclusively in German, with reading and writing assignments done in the target language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: Two 300-level GER courses with C or better; Credit is allowed for only GER 431 or 494 (German Humor and Comedy)
GER	441	Fairy Tales	Foundational fairy tale texts collected by the Brothers Grimm and written by Hans Christian Andersen and their modern permutations reflect basic human desires, fears and aspirations as well as the values of the period in which they are written. These stories and their variants in popular culture across the globe permit students to reflect critically on the functions of fairy tales in both past and present civilizations. Students perceive the ways in which ancient tales can be utilized for various purposes and understand the contemporary theoretical debate on the study of fairy tales and their role in popular culture. Course taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ENG 102, 105 or 108 with C or better; one other ENG or GER upper-division course with C or better. Credit is allowed for only GER 441, GER 494 Fairy Tales, or SLC 441
GER	445	The Holocaust in German-Mediated Memory	Examines representations of the Holocaust from across different media (literature, film, architecture, memoir, photography) and from across multiple generations of German engagement with this period in history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only FMS 445 or GER 445 or JST 445 or SLC 445 or GER 494 (Holocaust and German Media or Holocaust and German Mediated Memory)

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GER	446	Weimar-Era German Film	Examines early film production in Germany during the period of the Weimar Republic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only FMS 446 or GER 446 or SLC 446 or GER 494 (Weimar German Cinema) or GER 494 (Studies in German Film)
GER	447	German Modernism	Examines examples of modernism in literature, art and film from German-speaking Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only GER 447 or SLC 447 or GER 494 (German Modernism)
GER	453	German Literary Masterpieces on Film	Film and literature in their correlation to each other and to cultural, political, and social trends in German-speaking countries. Special arrangements for graduate students and those without a knowledge of German.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	
GER	455	Multi-Kulti: Multiculturalism Through Film	Examines how ethnic identities are perceived, constructed and marketed as well as how they perceive themselves and the "others." Critically engages with such concepts as migration, assimilation, citizenship, hybridity and authenticity. Focuses on exemplary films, including comparisons with minority experiences in other countries. Through film and other material on the topic, will learn to contextualize recruitment of guest workers, xenophobia and racism, citizenship law, immigration and national identity, the institutions of multiculturalism, religion, the private sphere, multiilingualism, popular culture and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GER 455 or SLC 455 or GER 494 (Multi-Kulti: Multiculturalism in Central Europe) or SLC 494 (Multi-Kulti: Multiculturalism in Central Europe)
GER	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
GER	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
GER	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
GER	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GER	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	521	History of German Language	Linguistic development of German from the earliest records to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	550	German for Reading Knowledge	Teaches non-speakers of foreign language, or those with only basic notions of the language, how to read in a foreign language at an advanced level. Consists of a concise overview of grammar as well as reading comprehension practice for students who plan to take the Graduate Foreign Language Exam or others who would merely like to learn to read in a foreign language. Focuses only on reading and not on listening, speaking, or writing as in a traditional language course.	N	LEC	Y	GNA	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only GER 494 (German for Reading Knowledge), GER 598 (German for Reading Knowledge), or GER 550
GER	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GER	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GIS	201	Spatial Thinking	Introduces spatial thinking, a cross-disciplinary foundation for geographic information science (the science of dealing with spatial/geographical data; their manipulation, interpretation and use in problem solving); geospatial technologies (the specific technologies underpinning geographic information science); and spatial analysis (the science of solving spatial problems).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GIS	205	Geographic Information Technologies	Introduces modern geographic information technologies, including cartography, GIS, remote sensing, global positioning systems, and statistical analyses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	CS	
GIS	211	Geographic Information Science I	History and basic aspects of GIS including map and data file structure, conversions, and synthesis with a computerized environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	CS	
GIS	220	Mathematical Principles in GIS	Covers the basic math principles needed to excel in GIS and spatial analysis.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: MAT 265 (or MAT 270) with C or better
GIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GIS	311	Geographic Information Science II	GIS as a basis for microcomputer spatial analysis and synthesis. Includes digitizing, database organization, spatial retrieval, and graphics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	CS	Prerequisite(s): GIS 211 with C or better
GIS	321	Programming Principles in GIS	Basic principles of programming for GIS in python covering data processing, analysis, and application development.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: CSE 110
GIS	322	Spatial Data Structures and Algorithms	Fundamental data structures and algorithms for the integration, management, processing and analysis of geographically referenced data.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: GIS 321
GIS	341	Introduction to Cartography and Georepresentation	Study and creation of maps. Fundamental mapping principles (projection, scale, generalization, symbolization) and computer-based cartographic production.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	CS	Prerequisite(s): minimum 45 hours
GIS	351	Air Photo Interpretation	Subset, remote sensing, includes photography, films, aerial geometry, image components, stereoscopy, photogrammetry, ground truthing; interpret physical, cultural, economic, intelligence information.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): minimum 45 hours
GIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GIS	412	Spatial Decision Support Systems	Theoretical and technical requirements for implementing spatial decision support tools.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): CSE 110 with C or better; GIS 311 with C or better
GIS	431	Spatial Databases	Covers data modeling concepts, the relational data model for the storage and retrieval of spatial and nonspatial information. The data retrieval emphasizes the industry-standard query language SQL and Spatial Query Languages.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: GIS 311; GIS 322

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GIS	441	Geographics: Interactive and Animated Cartography and Geovisualization	Advanced cartography, stressing influence and application of the computer on geographic representation. Emphasizes creation of maps for the Internet.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	CS	Prerequisite(s): GIS 321
GIS	461	Optimization Fundamentals for Spatial Analysis	Covers the fundamentals of optimization for spatial analysis. Reviews elements of calculus, matrices, and basic linear algebra. Introduces linear programming, integer programming and branch and bound, and heuristics. Provides the basics for use and application of GIScience and spatial analysis methods. Objectives include: reviewing basics of math, calculus and linear algebra; introducing optimization approaches, including linear programming, integer programming and heuristics; and applying these methods to structured problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: MAT 270 (or 271 or 272) with C or better; Credit is allowed for only GIS 461, 561, PUP 481, 581, GCU 494 (Optimization Fundamentals) or 598 (Optimization Fundamentals)
GIS	462	Location Analysis and Modeling	Provides a technical overview of location theory in the context of GIScience, focusing on analysis and modeling issues. Relies upon applications associated with emergency service planning, natural resource management, retail site selection, among others, to make connections among models, spatial information, and interpretation of findings. Explores utilization and implementation considerations using GIS. Objectives include: exposing a range of location analysis and modeling approaches; applying approaches in combination with GIS and optimization software; and carrying out an application-oriented study relying on acquired skills.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): GIS 211 or 461. Credit is allowed for only GIS 462 or GIS 562 or PUP 482 or PUP 582 or PUP 598 (Location Modeling)
GIS	470	Statistics for Geographers	Statistical techniques applied to the analysis of spatial distributions and relationships. Introduces models and theory in geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	CS	Prerequisite(s) with C or better: MAT 117 (or MAT 119, 142, 170, 210, 211, 251, 265 or 270)
GIS	471	Geographic Information Analysis	Basics of spatial data analysis. Topics include point pattern analysis, spatial autocorrelation, spatial regression, and kriging.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: GIS 470
GIS	472	Spatial Regression Analysis	Students gain insight into the scope of spatial regression methods, apply them in an empirical setting, and properly interpret the results of spatial regression analysis.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: GIS 471; Credit is allowed for only GIS 472 or GPH 598 (Spatial Regression)
GIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GIS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GIS	501	GeoDesign in Practice	Covers the basic topics of GeoDesign in practice including data, analysis, geocoding, mapping and projected implementation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): GIS 601 and 602 (or PUP 576)
GIS	505	GeoDesign Principles	Systematic exploration and evaluation of alternative complex human-environmental systems using spatially and temporally explicit theories, data and methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): GIS 601 and 602, or PUP 576; Credit is allowed for only GIS 505 or PUP 505
GIS	512	Spatial Decision Support	Designs and implements a spatial decision support system and analyzes and understands the theoretical underpinnings that form these systems.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only GIS 412 or GIS 512
GIS	515	GIS Workshop	GIS as a tool to address large, multifaceted problems.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GIS 515 or PUP 576

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GIS	521	Geographic Information Science III	In-depth look at programming within GIS. Focuses on programming and methodology, utilizing specific software, and basic scientific computing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	531	Spatial Databases	Advanced data modeling concepts, the relational data model for the storage and retrieval of spatial and non-spatial information. Data retrieval emphasizes the industry-standard query language SQL and spatial query languages. Covers research topics for graduate students.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only GIS 431 or GIS 531
GIS	561	Optimization Fundamentals for Spatial Analysis	Covers the fundamentals of optimization for spatial analysis. Reviews elements of calculus, matrices and basic linear algebra. Introduces linear programming, integer programming and branch and bound, and heuristics. Provides the basics for use and application of GIScience and spatial analysis methods. Objectives include: (1) review basics of math, calculus and linear algebra; (2) introduce optimization approaches, including linear programming, integer programming and heuristics; and (3) apply these methods to structured problems.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only GCU 494 (Optimization Fundamentals) or GCU 598 (Optimization Fundamentals) or GIS 461 or GIS 561 or PUP 481 or PUP 581
GIS	562	Location Analysis and Modeling	Provides a technical overview of location theory in the context of GIScience, focusing on analysis and modeling issues. Relies upon applications associated with emergency service planning, natural resource management, retail site selection, among others to make connections among models, spatial information and interpretation of findings. Explores utilization and implementation considerations using GIS. Objectives include: (1) exposure to a range of location analysis and modeling approaches; (2) ability to apply approaches in combination with GIS and optimization software; and (3) capability of carrying out an application-oriented study relying on acquired skills.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GIS 561; Credit is allowed for only GIS 462, 562, PUP 482, 582, or 598 (Location Modeling)
GIS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GIS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	601	Introduction to Geographic Information Systems	Introduces GIS theory and practice for professionals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): MAS Geographic Information Systems major

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GIS	602	Intermediate GIS	Introduces visualization, spatial analysis and open source tools.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): MAS Geographic Information Systems major
GIS	603	Spatial Statistics and Modeling	Introduces spatial statistics and modeling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): MAS Geographic Information Systems major
GIS	604	Implementation in the Corporate and Public Sectors	GIS use in the corporate and public sectors including proposal development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): MAS Geographic Information Systems major
GIS	605	GIS Project Planning and Implementation	Moving from project proposal to implementation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): MAS Geographic Information Systems major
GIS	606	GIS Project Presentation	Development of technical reports and presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): MAS Geographic Information Systems major
GIS	610	Programming the GIS Environment	Programming fundamentals for desktop GIS and custom applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): MAS Geographic Information Systems major
GIS	630	GIS Technologies	Uses technology for GIS data collection and management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: graduate MAS-GIS major
GIS	640	GIS for Business	Uses of GIS in business practice including site suitability, demographic data and business analyst.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): MAS Geographic Information Systems major
GIS	650	GIS for the Internet	Programming GIS for the Internet and mobile applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): MAS Geographic Information Systems major
GIS	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GIS	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	135	Graphic Communications	Technologies and processes involved in the design, image generation, transmission, and industrial production of graphic information.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		
GIT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-3		
GIT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GIT	210	Creative Thinking and Design Visualization	Fundamental methods, concepts, and techniques of creative thinking, design visualization, and problem solving, including communication and societal influences.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		
GIT	211	Introduction to Video Game Art	2D and 3D art assets for video games. Areas covered: classic pixel art, seamless texturing and tiling, sprite animation, 3D virtual studio, box modeling.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Credit is allowed for only GIT 211 or 294 (Intro to 2D-3D Video Game Art)
GIT	215	Introduction to Web Authoring	Graphic user interface planning and evaluation using industry-standard languages; graphics, color layout and file format considerations.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		
GIT	230	Digital Illustration in Publishing	Raster and vector illustration in publishing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		
GIT	237	Web Content Design	User-centered design principles for visual content on the World Wide Web with emphasis on usability, page architecture, search engine optimization, coding, scripting and interactivity.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 215; GIT 230 or Prerequisite(s): BAS in Graphic Information Technology or BAS in Internet and Web Development student
GIT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		
GIT	295	Introduction to Technical Imaging	Explores imaging technologies utilized in industry. Covers basic imaging concepts, chip technologies, optics, motion analysis, high-speed video, thermal imaging, and science relating to light and latent imaging.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: Undergraduate student; Credit is allowed for only GIT 295 or 294 (Introduction to Technical Imaging)
GIT	303	Digital Publishing	Web and print publication design and production using industry-standard composition software, proofing, and output devices.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: GIT 230 or BAS student in Graphic Information Technology or Internet/Web Development.
GIT	312	3-D Computer Graphics Modeling and Representation	3-D modeling applications: modeling for video games, mapping techniques, texturing, box modeling, geometric representation, strategies and assemblies.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3	CS	Pre-requisites: GIT 211 or GIT 294 (Intro to 2D-3D Video Game Art)
GIT	314	Multimedia Design, Planning and Storyboards	The creative process of generating ideas, conceptualizing projects, planning, designing, story boarding, and presenting interactive multimedia products.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisites: GIT 210, GIT 215 and GIT 230 OR CST 200 and IFT 301 OR BAS student in Graphic Information Technology or Internet/Web Development
GIT	315	Digital Video Techniques	Covers video production, including planning, pre-production, production, post-production and online video technologies and how video is an integral part of the graphic information industry. Concentrates on commercial and client-driven video production.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 230; Credit is allowed for only GIT 315 or GIT 294 (Intro to Video Content)
GIT	333	Printing Technology	Theory and application of sheet and web press technology for offset-lithography, flexography, screen process, and digital printing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite: GIT 303
GIT	334	Image Editing and Manipulation	Theory and application of advanced image editing and raster techniques for reproduction and dissemination.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 230 or Graphic Information Technology or Internet/Web Development BAS major
GIT	335	Computer Systems Technology	Computer technology: hardware, software, storage, networking, Internet, telecommunications, and information systems. Requires independent research.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisites: Minimum 45 hours; Not for credit for the BS/GIT degree
GIT	340	Information Design and Usability	Design and technology solutions for increasing Website usability and methods of organizing information to improve the user experience.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): junior standing; Credit is allowed for only GIT 340 or GIT 494 (Information Design and Usability)
GIT	384	Commercial Photography	Digital image capture, and output in a commercial studio emphasizing publishing workflow.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisites: GIT 230 or BAS student in Graphic Information Technology or Internet/Web Development
GIT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		

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GIT	402	New Media Internet Technologies	Project-based exploration of new media Internet technologies from a graphic technology prospective. Emphasizes how, why, and when new media can be used to enhance a Web site and the user's experience.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 237 (or GIT 337) OR BAS student in Graphic Information Technology or Internet/Web Development. Credit is allowed for only GIT 402, 502 or 494 (New Media Internet Technologies)
GIT	411	Computer Animation	3-D computer animation methods: rigging for video games, principles of animation, loops, skinning, blending , advanced modeling and motion.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: GIT 312
GIT	413	Professional Portfolio Design and Presentation	Digital media portfolio design and production: planning, audience analysis, media selection, authoring, media formats, production, copyright considerations, marketing, and delivery. Requires capstone group project.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): Graphics Information Technology major; senior standing; GIT 303
GIT	414	Web Site Design and Internet/Web Technologies	Web site design, authoring, standards, protocols, tools, and development techniques for commercial client-sided Web-based graphic information systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 237 or Applied Science (Graphic Information Technology) BAS or Applied Science (Internet & Web Development) BAS major; Credit is allowed for only GIT 414 or GIT 515 or GIT 598 (Website Design and Internet/Web)
GIT	417	Advanced Web Markup and Scripting	Industry-standard programming languages and techniques to create interactive graphic information Web sites and applications.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 237 or Applied Science (Graphic Information Technology) BAS or Applied Science (Internet & Web Development) BAS major; Credit is allowed for only GIT 417 or GIT 519 or GIT 598 (Advanced Internet Programming)
GIT	418	Multimedia Authoring, Scripting and Production	Production of multimedia projects using industry-standard authoring applications: client considerations and project documentation; user interface design, interactivity, media, and databases.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: GIT 417
GIT	432	Graphic Industry Business Practices	Business practices related to press/prepress/Web industries; trade customs, cost analysis, marketing and management approaches.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: Graphics Information Technology Senior student
GIT	435	Website and E-Commerce Strategies	Internet Web site management, security, marketing, and e-commerce business models.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: GIT 414
GIT	437	Color Reproduction Systems	Scientific analysis for the engineering of color reproduction systems and color models used in the graphics industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: GIT 334
GIT	450	Digital Workflow in Graphic Industries	Digital production system analysis for content creation, automation output of graphic information to print and Web, including networking and job tracking.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 303; GIT 237 (or GIT 337) OR Graphic Information Technology BAS or Internet & Web Development BAS major
GIT	480	Senior Project	Capstone project experience refining skills in communication, research and information retrieval, critical analysis and criticism, and demonstrating technical competence in each student's area of study.	N	LEC	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): minimum 90 hours; Pre- or corequisite(s): GIT 413 or Applied Science (Graphic Information Technology) BAS major or Applied Science (Internet & Web Development) BAS major
GIT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-12		
GIT	490	Advanced Commercial Photography	Studio-based class focusing on set design, advanced photographic techniques, raw workflow, marketing, business, and digital rights management.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: GIT 384

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GIT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-6		Prerequisite(s): Barrett Honors student
GIT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-6	L	Prerequisite(s): Barrett Honors student
GIT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		
GIT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-7		
GIT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-3		
GIT	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	502	New Media Internet Technologies	Project-based exploration of new media Internet technologies from a graphic information technology prospective. Emphasizes how, why and when new media can be used to enhance a Web site and the user's experience while maintaining branding cohesively across all technologies.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only GIT 402, 502 or 598 (New Media Internet Technologies)
GIT	515	Website Design and Technologies	Standards, tools and techniques for creating websites, with emphasis on designing for multiple devices and systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only GIT 414 or GIT 515 or GIT 598 (Website Design and Internet/Web)s
GIT	519	Advanced Scripting for the Web	Uses industry-standard markup and scripting languages to develop interactive websites and applications.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only GIT 417 or GIT 519 or GIT 598 (Advanced Internet Programming)
GIT	538	Personnel Development for the Graphics Industry	Employee training and development specific to production and management in the graphics industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): graduate student in Technology (Graphic Info Tech)
GIT	540	Cross-Media Design Solutions	Universal design theory, creative problem solving, and case study applications for print, Web, and new media products of the graphics industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): graduate student in Technology (Graphic Info Tech)
GIT	542	Usability and User Experience	Design and technology solutions focusing on how information is organized graphically to communicate and how website usability is employed to improve human interaction with inline information.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): graduate student in Technology (Graphic Info Tech)
GIT	573	Color Metrology	In-depth study and analysis of systems used to manage color reproduction in the graphic arts industry and information technology.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisites: Degree- or Nondegree-seeking graduate; Credit is allowed for only GIT 573 or 598 (Color Reproduction Systems)
GIT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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GIT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Graphic Information Technology	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	101	Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	
GLG		Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	
GLG	102	Introduction to Geology II (Historical)	Basic principles of applied geology and the use of these principles in the interpretation of geologic history. Both GLG 102 and 104 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SG & H	
GLG	103	Introduction to Geology I-Laboratory	3 hours lab, some field trips. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SQ	
GLG		Introduction to Geology I-Laboratory	3 hours lab, some field trips. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	
GLG	104	Introduction to Geology II-Laboratory	Lab techniques involving map interpretation, cross sections, and fossils. Both GLG 102 and 104 must be taken to secure SG general Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SG	Co-requisite: GLG 102
GLG	108	Water Planet	Overview of the processes that control water supply to natural ecosystems and human civilizations. Part I introduces the basic science that helps us understand the water planet, including the hydrologic cycle, glaciers and ice; rivers, oceans, and natural hazards associated with water such as flooding, landsliding and tsunamis. Part II covers some of the management and resource allocation topics that face humanity today, including droughts, groundwater contamination, impacts on fisheries, conflicts over water, patterns of water use, and effects of global climate change on future water supplies. Uses water issues facing Arizona and California as examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4	SQ	Credit is allowed for only GLG 108 or SOS 182
GLG		Water Planet	Overview of the processes that control water supply to natural ecosystems and human civilizations. Part I introduces the basic science that helps us understand the water planet, including the hydrologic cycle, glaciers and ice; rivers, oceans, and natural hazards associated with water such as flooding, landsliding and tsunamis. Part II covers some of the management and resource allocation topics that face humanity today, including droughts, groundwater contamination, impacts on fisheries, conflicts over water, patterns of water use, and effects of global climate change on future water supplies. Uses water issues facing Arizona and California as examples.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	Credit is allowed for only GLG 108 or SOS 182
GLG	110	Dangerous World	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SG & G	
GLG		Dangerous World	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SG & G	
GLG	111	Dangerous World Laboratory	Basic geological processes and concepts. Emphasizes geology-related environmental problems concerning Arizona. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SG	
GLG		Dangerous World Laboratory	Basic geological processes and concepts. Emphasizes geology-related environmental problems concerning Arizona. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SG	

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GLG	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GLG	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	301	Earth Science in Arizona and the Southwest	Place-based application of geology and allied Earth system sciences to explore and interpret the landscapes, rocks, geologic history, climate, resources, and natural hazards of Arizona and the Southwest. Integrates case studies of the interactions of Southwest cultures and societies (past and present) with Earth systems, and inquiry into the future sustainability of Southwestern communities and lifeways.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): ENG 101, 105 or 107 with C or better; GLG 101, GLG 102, GLG 110, GPH 111 or SES 121; MAT 117 or higher. Credit is allowed for only GLG 301, GLG 394 (Earth Sci in AZ & SW) or SOS 372
GLG	304	Minerals, Energy, and Society	Studies the science and technology of the minerals and energy industries, how these industries interact with society, and how these interactions may change in the future.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: ENG 101 (or 105 or 107) with C or better; GLG 101 (or 102 or 110) or GPH 111 or SES 121 or Junior standing; Credit is allowed for only GLG 304, 394 (Minerals, Energy & Society) or SOS 373
GLG	305	Dynamic Earth	Emphasizes the link between Earth's interior and surface, focusing on Earth systems and cycles, such as observation and modeling of the geometry and motions of Earth's rigid outer shell, the tectonic plates, and how they are coupled to the geologic record, the nature of Earth's internal structure, and convective motions within the planet. Specific topics include: (1) essentials of Earth's dynamic interior (models for physical and chemical evolution); (2) essentials of lithosphere evolution (cooling of oceanic plates, the age of the Earth, and continent formation); (3) multi-scale tectonics (plate tectonics, continental deformation, mountain building, tectonic context of metamorphism); (4) essentials of volcanism in a tectonic context; (5) geodynamic context of plate boundaries; and (6) chemical cycles (role of the solid crust and mantle for transporting, storing, and cycling water and minerals). Provides an essential global context for studies of Earth and Environmental Science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s) with C or better: BIO 100 (or BIO 181 or 182 or 281 or 282 or CHM 101 or 107 or 113 or 114 or PHY 101 or 111 or 121 or 150); GLG 101 or SES 121; MAT 170 or 171 or 210 or 251 or 265 or 270. Credit is allowed for only GLG 305 or GLG 310
GLG	310	Structural Geology	Geologic structures and the mechanical processes involved in their formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): GLG 101 or SES 121 with C or better; MAT 170, 171, 210, 251, 265 or 270 with C or better; Credit is allowed for only GLG 305 or GLG 310
GLG	321	Mineralogy	Crystal chemistry, crystallography, mineral identification, origin and occurrence of minerals, systematic mineralogy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		Prerequisite(s): CHM 113 (or both CHM 111 and 117 or 114) with C or better; MAT 170, 210, 265 or 270 with C or better;
GLG	325	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s) with C or better: BIO 100 (or BIO 182 or 282 or GLG 101 or SES 121); CHM 101 (or CHM 113 or 114). Credit is allowed for only BIO 325 or CHM 385 or GLG 325

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GLG	327	Earth's Critical Zone	The Earth's near surface environment (the "critical zone") supports most life and is the dynamic interface between the solid Earth and its fluid envelopes where much of the geologic record is produced. We now know that we face rapid climate change and the consequences of changes in land use, water resources, and ecosystems. Critical to planning a response to, or mitigation of, environmental change is understanding how the Earth surface works. Focuses on how changes to the environment manifest themselves in the critical zone—in the form and function of the Earth's surface (landforms, water resources, soils, ecosystems). Offers a quantitative introduction to the form and function of the processes impacting the Earth's critical zone to build an understanding of the interactions of physical, chemical and biotic processes in shaping the surface and determining fluid, solute and sediment fluxes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisites with C or better: GLG 101 & 103 or SES 121 & 123; MAT 170 or 171 or 210 or 251 or 265 or 270; PHY 101 or 111 or 121 or 150 or CHM 101 or 107 or 113 or 114 or BIO 100 or 181 or 182 or 281 or 282. Credit is allowed for only GLG 327 or SOS 374
GLG	362	Geomorphology	Land forms and processes that create and modify them. Lab and field study of physiographic features.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: GLG 101 or SES 121 with C or better; MAT 266 or 271 with C or better
GLG	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	400	Earth and Space Exploration Colloquium	Presentation of recent research by faculty and guests. Written assignments required. 1 semester hour required for Geological Sciences majors; may be repeated for a total of 2 semester hours.	N	LEC	Y	YGB	Liberal Arts and Sciences	School of Earth and Space Exploration	1		
GLG	404	Fundamentals of Planetary Geology	Surveys planetary topics, including impacts, tectonics, and volcanism on planetary objects, and use of spacecraft data, including geological mapping.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): GLG 101 (or GLG 102) or SES 121 (or SES 122) with C or better
GLG	406	Geology of Mars	Geological evolution of Mars through analyses of spacecraft data, theoretical modeling, and study of terrestrial analogs; emphasizes current work. Possible field trips to examine Arizona geology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		
GLG	410	Computers in Geology	Geological computer skills including data processing, visualization, presentation, numerical analysis, software and hardware applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	CS	Pre-requisites: GLG 101 or SES 121 with C or better
GLG	418	Geophysics	Solid earth geophysics; geomagnetism, gravity, seismology, heat flow. Emphasizes crust and upper mantle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: MAT 272 or 267 with C or better; PHY 131 and 132 or PHY 151 with C or better
GLG	419	Geodynamics	Emphasizes application of continuum principles to geological problems, including lithospheric stresses, heat transfer, fluid mechanics, and rock rheology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite(s): MAT 267 or MAT 272 with C or better; PHY 131 and 132 (or PHY 151) with C or better
GLG	420	Volcanology	Distribution of past and present volcanism, types of volcanic activity, mechanism of eruption, form and structure of volcanoes, and geochemistry of volcanic activity.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite: Engineering, Math or Science major; Minimum Junior standing
GLG	422	Planetary Volcanology	Studies the effects of planetary environments and magma compositions on styles of volcanism and the nature of volcanic products on the terrestrial planets and outer planet satellites. Overview of volcanism on specific planetary objects, analysis of spacecraft image data, basic mathematical volcanic modeling, and reviews of key papers.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): AST 111 or AST 112 or GLG 101 or 102 or 110 or GPH 111 or SES 121; MAT 170 or MAT 171 or 210 or 251 or 265 or MAT 270 with C or better. Credit is allowed for only GLG 422 or GLG 494 (Planetary Volcanology)
GLG	424	Petrology	Origin of igneous and metamorphic rocks: Optical mineralogy, hand specimen identification, and thin-section analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): GLG 321 with C or better
GLG	430	Paleontology	Introduces concepts and analytical techniques in biogeology, paleobiology, paleoecology, and paleoenvironmental reconstruction from the fossil record.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: GLG 102 (or SES 122) with C or better; GLG 104 (or SES 124)
GLG	435	Sedimentology	Origin, transport, deposition, and diagenesis of sediments and sedimentary rocks. Physical analysis, hand specimen examination, and interpretation of rocks and sediments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s) with C or better: GLG 102 (or SES 122), 321
GLG	441	Ore Deposits	Origin, occurrence, structure, and mineralogy of ore deposits.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites with C or better: GLG 101 (or SES 121); GLG 310 (or 321)
GLG	451	Field Geology I	Geological mapping techniques using topographic maps and aerial photos. Intensive field-based instruction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	L	Pre-requisites: GLG 310 with C or better; Pre/Co-requisite: GLG 321

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GLG	452	Field Geology II	Geological mapping techniques using topographic maps and aerial photos. Intensive field-based instruction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	L	Pre-requisites: GLG 310 with C or better; GLG 321 with C or better; GLG 451 with C or better
GLG	455	Advanced Field Geology	Geologic mapping in igneous, sedimentary, and metamorphic terrains of the Basin and Range province of Arizona.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		Pre-requisite: GLG 310 with C or better; Pre/Co-requisite: GLG 451 with C or better if completed
GLG	460	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite with C or better: AST 112 (or BIO 182 or BIO 282 or GLG 102 or SES 122), one 300-level course in AST or BIO or CHM or GLG or MIC or PHY or SES. Credit is allowed for only AST 460 or GLG 460 or MIC 475
GLG	461	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and minerals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		
GLG	464	Solving Environmental Problems	Capstone course intended primarily for seniors in the Earth and Environmental Studies degree program. Hybrid self-study design project workshop guided by faculty, in which student teams research and develop plans for a viable solution to a real environmental problem in the American Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): Earth and Environmental Sciences BA seniors; GLG 305, 325 or 327 with C or better
GLG	470	Hydrogeology	Geology of groundwater occurrence, aquifer and well hydraulics, water chemistry and quality, contaminant transport, remediation. Emphasizes quantitative methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		
GLG	471	Hydrology	Descriptive and quantitative hydrology; hydrologic cycle, models, and systems. Rain-runoff models. Hydrologic design. Concepts, properties, and basic equations of groundwater flow. Emphasizes quantitative methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): CEE 341 (or MAE 340) or GLG 362 with C or better; Credit is allowed for only CEE 440 or GLG 471 or GLG 490 (Hydrology)
GLG	481	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite: CHM 341, CHM 346 or GLG 321 with C or better. Credit is allowed for only CHM or GLG 481
GLG	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
GLG	485	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: CHM 341, CHM 346, or GLG 321 with C or better; Credit is allowed for only GLG 485 or CHM 485
GLG	489	Field Geochemistry	Explores basic field measurements and sampling techniques for environmental systems, with a focus on carbon cycling in the Colorado River. Surveys a variety of geochemical principles, including: equilibrium aqueous speciation, acid-base chemistry, solution-mineral equilibrium systems, oxidation-reduction reactions, organic and environmental geochemistry and biogeochemical cycles. Applies chemical principles and analytical techniques to answer questions about environmental systems and processes.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3	L	Prerequisite(s): CHM 302 or GLG 321 or GLG 481 with C or better; Credit is allowed for only CHM 489 or GLG 489 or GLG 490 (Field Geochemistry)
GLG	490	Topics in Geology	Special topics in a range of fields in geology.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
GLG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Prerequisite(s): Barrett Honors student
GLG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	495	Undergraduate Thesis	Guided research culminating in the completion and presentation of an undergraduate thesis based on supervised research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		
GLG	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
GLG	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		

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GLG	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	500	Earth & Space Exploration Colloquium	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	581	Isotope Geochemistry	Geochemistry and cosmochemistry of stable and radioactive isotopes; geochronology; isotope equilibria.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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GLG	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GPE	90	Business Presentation Skills	Develops ability to verbally persuade, inform and motivate an audience. Covers integral key competencies such as: identifying audience, researching and organizing information, preparing and delivering effective visuals, and communicating concisely in English. Coupled with activities which include impromptu business-themed presentations, evaluations by the professor and feedback from peers.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		
GPE	91	Academic and Business Writing Skills	Develops the skills needed to write clearly and effectively, in both academic and business settings, through the exploration of efficient techniques and writing processes for targeting specific audiences with impactful content.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		
GPE	92	Critical Thinking Through Case Studies and Reading Strategies	Teaches international students reading and critical thinking strategies required for a master's-level program. Teaches how to read and understand dense textbooks, articles and magazines in a timely fashion and identify the important information.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		
GPE	93	American Business and Cross-Cultural Communication	Improves international students' ability to compare and contrast aspects of American business culture with other cultures in order to understand similarities and differences.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		
GPE	94	Business Listening and Conversation	Improves the student's ability to effectively communicate orally at a master's level. Covers speaking and listening strategies and skills necessary to participate in discussions related to business topics. Students learn to control the input they receive and produce coherent and appropriate responses.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		
GPH	111	Introduction to Physical Geography	Spatial and functional relationships among climates, landforms, soils, water, and plants.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	SQ	Credit is allowed for only GPH 111 or 411
GPH	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GPH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	210	Society and Environment	Examines the interaction among social processes, key environmental issues, and nature's role as a resource at global and regional scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	G	
GPH	211	Landform Processes	Laboratory science class on earth-surface processes, with exercises emphasizing how erosion, transportation, and deposition modifies landforms.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	SQ	
GPH	212	Introduction to Meteorology	Fundamentals of weather and climate, including basic atmospheric processes and elements. Students whose curricula require a lab course must also register for GPH 214. Both GPH 212 and 214 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SQ	
GPH	213	Introduction to Climatology	Fundamentals of meteorological/climatological analysis, including terminology and symbology. Recommended for meteorology/climatology program students. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SG	
GPH	214	Introduction to Meteorology Laboratory	Introduces basic meteorological/climatological data and measurements. Suggested concurrent enrollment in GPH 212. Both GPH 212 and 214 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1	SQ	

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GPH	215	Introduction to Climatology Laboratory	Fundamentals of meteorological/climatological map analysis and interpretation. Recommended for meteorology/climatology program students. May be taken concurrently with GPH 213. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1	SG	
GPH	267	Extreme Weather	Introductory survey of extreme weather and climate processes and the often disastrous consequences at the intersection of human operations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
GPH	275	Geography of Cyberspace	Focuses on the relationship between geography and human's use of (and creation of) Internet and communications technologies to interact with each other over space and time. Studies the cyberspaces that they produce and their impacts on the information society. Topics include cyberpunk and space in popular culture; computer spaces, virtual worlds, and gaming; mapping cyberspace; bots, crawlers, and viruses; cyberspace law; cyberspace as social media; historical cyberspaces; the Digital Divide; geographies of e-commerce; mobile cyberspaces; cyberspace; and code/space.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GPH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	314	Global Change	Response of Earth's natural systems (atmosphere, hydrosphere, lithosphere, biosphere) to past environmental change, and effects of potential future changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	HU & G	Pre-requisite: Minimum 45 hours
GPH	381	Geography of Natural Resources	Nature and distribution of natural resources and the problems and principles associated with their use.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	G	
GPH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	405	Energy and Environment	Sources, regulatory and technical controls, distribution, and consequences of the supply and human use of energy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Minimum 75 hours; Credit is allowed for only GPH 405 or 505
GPH	409	Synoptic Meteorology I	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisites: MAT 270 with C or better; Pre/Co-requisite: PHY 121
GPH	410	Synoptic Meteorology II	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisite: GPH 409 with C or better
GPH	412	Physical Meteorology	Physical processes in the earth-atmosphere system on regional and global scales; concepts and analysis of energy, momentum, and mass balances.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GPH 111, MAT 270, PHY 121 and PHY 122 with C or better. Credit is allowed for only GPH 412 or GPH 591 (Physical Meteorology)
GPH	413	Meteorological Instruments and Measurement	Design and operation of ground-base and aerological weather measurement systems. Collection, reduction, storage, retrieval, and analysis of data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GPH 213 with C or better
GPH	414	Climate Change	Surveys three climate research areas: paleoclimatology, theories (e.g., greenhouse warming), numerical modeling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	G	Prerequisite(s): GPH 111 (or GPH 213 or 314)
GPH	418	Landforms of the Western United States	Studies landforms and geomorphic processes in the western United States, including lecture, topographical maps, aerial photographs, satellite imagery, and field trips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	
GPH	422	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: BIO 181, GPH 111 or PLB 200 with C or better; Credit is allowed for only GPH or PLB 422
GPH	433	Alpine and Arctic Environments	Regional study of advantages and limitations of the natural environment upon present and future problems involving resource distribution, human activities, and regional and interregional adjustments.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	G	Credit is allowed for only GPH 433 or 598 (Alpine & Arctic Environments)
GPH	474	Dynamic Meteorology I	Large-scale atmospheric motion, kinematics, Newton's laws, wind equation, baroclinics, vorticity, and the midlatitude depression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: MAT 271, PHY 131, PHY 132 with C or better
GPH	475	Dynamic Meteorology II	Topics in climate dynamics. General circulation, numerical modeling, teleconnection phenomena, and surface-atmosphere interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite: GPH 474 with C or better
GPH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GPH	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12	G	Pre-requisite: Junior standing; Credit is allowed for only GCU 485 or GPH 485 or LAP 485 or POR 485 or PUP 485 or 585
GPH	491	Geographic Field Methods	Field techniques, including use of aerial photos, large-scale maps, and fractional code system of mapping; urban and rural field analysis to be done off campus.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GPH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
GPH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Prerequisite(s): Barrett Honors student
GPH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
GPH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GPH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GPH	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	511	Fluvial Processes	Geographical aspects of processes of river erosion, transportation, sedimentation; emphasizing spatial characteristics of forces, resistance, landforms, sediment; includes computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	535	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP or GPH 535
GPH	569	Digital Analysis of Remotely Sensed Data	Focuses on the digital image processing of remotely sensed data for earth resource analysis and applications. Provides the skills and knowledge to apply digital remote sensing techniques for biophysical and environmental planning and problems. Through laboratory work, students have opportunities to practice concepts and techniques learned in the lecture part. Requires a reasonable background in college algebra and basic statistics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only GPH 394 (Digital Analysis of Remotely Sensed Data), 569 or 598 (Digital Analysis of Remotely Sensed Data)
GPH	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	585	International Field Studies	Organized field study in specified international locations.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Graduate student (degree or nondegree); Credit is allowed for only GCU 485 or 586 or GPH 485 or 585 or LAP 485 or 585 or POR 485 or PUP 485 or 585
GPH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GPH	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	596	Advanced Spatial Statistics	Multivariate and advanced statistical techniques including Box-Jenkins modeling and spectral analysis. Requires project papers and presentations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GPH	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	101	Designing Life	Helps students develop strategies to successfully navigate their education experience. Focuses on critical and reflective thinking.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
GRA	111	Graphic Design History I	Surveys development of visual communication from its origins to the 20th century. Investigates significant technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	
GRA	112	Graphic Design History II	Surveys contemporary and 20th-century graphic design. Investigates relationships among graphic design and related disciplines, technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: GRA 111 with C or better
GRA	121	Principles for Graphic Design I	Graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Environmental Design or Graphic Design major. Corequisite(s): GRA 111
GRA	122	Principles for Graphic Design II	Continued exploration of graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): GRA 121 with C or better; Environmental Design or Graphic Design major. Corequisite(s): GRA 112
GRA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
GRA	220	Design Drawing I	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for graphic design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 122 with C or better; Passed Milestone; Co-requisites: GRA 221; GRA 222
GRA	221	Letterform	Drawing of letterforms with focus on proportion and structure. Introduces letterform nomenclature and classifications. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 222
GRA	222	Visual Communication I	Theoretical and applied studies in shape, drawing, and color. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 221
GRA	223	Typography	Theoretical exercises in spatial and textural qualities of type. Problems in tension, activation, and balance. Exercises in simple typographical applications. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 220 and GRA 221 with C or better; Co-requisite: GRA 224
GRA	224	Visual Communication II	Transition from theoretical to applied problems. Emphasizes refinement of visual skills. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 220 and GRA 222 with C or better; Co-requisite: GRA 223
GRA	225	Communication/Interaction Design Theory	Theory related to the design of communication artifacts and interaction within various media environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
GRA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
GRA	321	Technology for Design I	Explores the process of technology in design. Projects interface with GRA 361.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Graphic Design student; Co-requisite: GRA 361
GRA	322	Technology for Design II	Emphasizes advanced technology in design problems. Projects interface with GRA 362.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: GRA 321 with C or better; Co-requisite: GRA 362

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GRA	345	Design Rhetoric	Develops critical thinking and expression of ideas in concise and persuasive written and spoken form.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	L	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; Architecture, Digital Culture (Design), Design Studies, Environmental Design, Graphic Design, Industrial Design, Interior Design, Landscape Architecture major
GRA	361	Visual Communication III	Explores methodologies of strategic communication, development of visual systems, and information design ideation processes leading to applied projects in print and digital media.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Graphic Design student; GRA 223 & 224 with C or better; Co-requisite: GRA 321
GRA	362	Visual Communication IV	Comprehensive studio projects with emphasis on production processes leading to multidisciplinary applied projects in print, 3-D space, and digital media.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Graphic Design student; GRA 361 with C or better; Co-requisite: GRA 322
GRA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
GRA	401	Creative Environment	Explores and investigates theories of the psychology of space, psychology of people in space, and the psychology of objects as it pertains to creativity and the creative environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
GRA	421	Exhibit Design	Familiarization with the processes associated with the design of exhibits, especially visual communication in 3-D.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 422; GRA 461
GRA	422	Motion Graphics and Interaction Design	Discusses and explores theory related to the design of motion graphics and interaction through lectures and studio projects.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 322 with C or better; Co-requisites: GRA 421; GRA 461
GRA	423	Advanced Interaction Design	Advanced discussion and exploration of theory related to the design of interaction.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: GRA 422
GRA	424	Advanced Media	Advanced exploration of digital media for communication.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: GRA 422 with C or better
GRA	440	Finding Purpose	Career orientation in the creative professions, including value clarification, decision making, lifestyle planning, goal setting, and expression of individual talents.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
GRA	461	Visual Communication V	Comprehensive studio projects with emphasis on design processes, including research, writing, critical thinking, practice, presentation, and analysis.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 421; GRA 422
GRA	462	Visual Communication VI	Comprehensive studio projects pursued in cooperation with a public organization or private enterprise. All projects culminate in an exhibit.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Graphic Design student; GRA 461 with C or better; Co-requisites: GRA 423; GRA 424
GRA	464	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 464 or MGT 464 or SOS 474
GRA	465	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 465 or IND 465 or MGT 465 or SOS 475
GRA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisite: GRA 461
GRA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
GRA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
GRA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		

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GRA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
GRA	501	Creative Environment and Collaborative Leadership	Explores and investigates creativity and group collaboration leadership as it applies to the creative process.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): graduate Herberger Institute for Design and the Arts major
GRA	521	Advanced Visual Communication Design Studio I	Students translate data, stories and references that they collect in their research into masterful visual narratives. This studio is an inquisitive environment for exploring ways to frame information and weave stories with graphic design. Students acquire new knowledge as individuals and as a group. Emphasizes studio-based research, conceptual development and articulation of process, voice and a high level of design execution.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): Master of Visual Communication Design major. Credit is allowed for only GRA 521 or GRA 590 (Advanced Visual Communication Design Studio I)
GRA	522	Advanced Visual Communication Design Studio II	Encourages students to develop a framework for understanding the role of design systems, tools and objects as cultural artifacts and their reflection on social diversity. In particular, students focus on the cultural experience of collaborative consumption as it is fostered through visual communication design.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): GRA 521. Credit is allowed for only GRA 522 or GRA 590 (Advanced Visual Communication Design Studio II)
GRA	526	Visiting Designers	Series of workshops (three per semester) in which students work closely with professionals and scholars in design and related disciplines.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student
GRA	561	Methods in Visual Communication I	Introduces methodology in visual communication.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student
GRA	562	Methods in Visual Communication II	Advanced theories and methodologies in visual communication. Emphasizes visual search as the synthesis of theory and practice.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: DSC 561 with C or better
GRA	563	Thesis Document Design	Emphasizes the construction of the final thesis document as a visual communication object and/or medium.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Master of Science in Design student
GRA	581	Internship in Teaching Design	Develop assignments, conduct critiques, structure dialogue, make presentations, and assist in the instruction of studio and lecture courses.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Master of Science in Design student
GRA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GRA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	621	Advanced Visual Communication Design Studio III	Structured around the Design School traveling-studio model, this studio challenges students to work together to identify new design opportunities. For approximately one week during the semester, students travel to an off-campus location to examine a local condition there for which new design solutions are needed. Students return to ASU and continue working on the project for the semester.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): GRA 522
GRA	622	Advanced Visual Communication Design Studio IV	As a culmination of study at the master level, the student is responsible for the development of an individually determined, semester-long project in response to defined objectives, periodic commentary by committee, and formal review. Students meet regularly with a faculty member to discuss assignments. Final faculty review and project book containing a written as well as graphic theoretical component are the forms of final presentation for this contribution to the field of visual communication design.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): GRA 621
GRA	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
GRA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
GRD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate Education	Graduate Education	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate Education	Graduate Education	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GRD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	N	LEC	Y	Z1	Graduate Education	Graduate Education	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GRD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	GNA	Graduate Education	Graduate Education	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRK	101	Elementary Ancient Greek	Ancient Greek grammar and vocabulary with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
GRK	140	Greek and Latin Roots in Bioscientific Terminology	Introduces students to the ancient Greek and Latin root words most commonly used in biological, medical, and other scientific terminology, and gives practice identifying them in context. The knowledge of these root words enables students to memorize with greater ease and increased retention the bioscientific terminology they encounter in other coursework as well as in their medical or scientific profession.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
GRK	142	Ancient Greek Civilization	Ancient Greek civilization and culture. Studies (in roughly equal parts) the art, archaeology, literature, culture and history of ancient Greece from prehistoric times until after the conquests of Alexander the Great (the Hellenistic Age).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H	Credit is allowed for only GRK 142, GRK 194 (Ancient Greek Civilization) or SLC 142
GRK	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GRK	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	201	Intermediate Ancient Greek	Continuation of GRK 101. Ancient Greek syntax and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		Pre-requisites: GRK 101 with C or better
GRK	221	Survey of Ancient Greek Literature	Introductory survey of ancient Greek literature. Familiarizes students with the important literary genres, texts, and authors of the ancient Greeks from Homer to the Hellenistic period. All readings in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only GRK 221, SLC 221 or 294 (Ancient Greek Literature in Translation)

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GRK	223	Introduction to Greek and Roman Mythology	Familiarizes students with the characters and events of ancient Greek and Roman myths through their literary manifestations, and moves beyond mere narrative to consider the possible interpretations and functions of these myths, thus revealing the central concerns of ancient society and giving insights into the working of our own society and its literary and artistic traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only GRK 223, LAT 223, SLC 223, GRK 294 (Greek and Roman Mythology)
GRK	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	301	Ancient Greek Literature I	Readings in ancient Greek prose; advanced grammar. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: GRK 201 with C or better
GRK	302	Ancient Greek Literature II	Continuation of GRK 301. Readings in ancient Greek poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: GRK 301 with C or better
GRK	344	Classics and Comics	Explores the connections between the classical tradition of Ancient Greek and Roman literature and the modern American superhero comic book tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GRK 344 or LAT 344 or SLC 344 or GRK/LAT/SLC 394 (Classics and Comics) or SLC 494 (Classics and Comics)
GRK	360	Greece and Rome at War	Familiarizes students with the major battles, leaders and tactics of Classical Greece and Rome. Supplements lectures with student participation including study of original sources, group presentations, and gaming battle simulations. This multifaceted approach gives a greater sense of the evolution of the leaders, armies and tactical systems of the Greeks and Romans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 360, HST 397, LAT 360, SLC 360 or SLC 394 (Greece and Rome at War)
GRK	362	Ancient Greek Religion	Surveys ancient Greek religion, including its gods, ritual practices and festivals. Analyzes the development of the religion over time, and how both ancient and modern figures interpreted its meaning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; Credit is allowed for only GRK 362, REL 360, SLC 362 or SLC 394 (Ancient Greek Religion)
GRK	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	444	Heroes, Ancient and Modern	Explores the heroic literature of the ancient Greeks and Romans, then traces the classical tradition and reception of the classical hero in medieval and modern texts. Incorporates history, art history and material culture from the relevant societies to supplement study of the texts involved.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 444, LAT 444, SLC 444 or SLC 494 (Heroes: Ancient and Modern)
GRK	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
GRK	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
GRK	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GTD	501	Global Technology and Development	Major theories of economic, political, and social development, with particular emphasis on the impact of current technologies and globalization.	N	LEC	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	503	Technology and the International Political System	Historical development of international political system, with emphasis on role of technology.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	504	Technology and Development in Zones of Conflict	Examines the special context of technology and development in zones of conflict that face wars among other nations, civil strife and dramatic political change.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	505	Research Design in Technology and Development	Emphasizes techniques of primary data collection, effective uses of secondary sources, for qualitative and quantitative applications.	N	LEC	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	506	Quantitative Analysis in Technology and Development	Uses correlation and regression-based multivariate statistical approaches in development studies.	N	LEC	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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GTD	507	Technology and Development in The Middle East	Examines historical and current patterns of political and socioeconomic development in the Middle East, including the role of technological development and current events.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GTD 507 or GTD 598 (Political Development in the Middle East)
GTD	508	Technology and Development in Latin America	Examines historical and current patterns of political and socioeconomic development in Latin America, including the role of technological development and current events.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GTD 508 or GTD 598 (Technology and Development in Latin America)
GTD	509	Technology and Development in North Africa	Examines historical and current patterns of political and socioeconomic development in North Africa, including the role of technological development and current events.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GTD 509 or GTD 598 (Technology and Development in North Africa)
GTD	510	Technology and Development in Sub-Saharan Africa	Examines historical and current patterns of political and socioeconomic development in Sub-Saharan Africa, including the role of technological development and current events.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GTD 510 or GTD 598 (Technology and Development in Sub-Saharan Africa)
GTD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	100	Introduction to the Science of Health Care Delivery	Introduces the science of health care delivery in the United States. Presents basic concepts in health services, health care organizations, and the delivery of safe, accessible, high-quality health care. Solidifies concepts through the use of assignments, exams and discussions.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		
HCD	101	Introduction to Public Health	Introduces public health in the United States. Familiarize students with the broad discipline of public health and how it influences community and individual health status. Discusses the role of various agencies in public health, methods of measurement and evaluation, major public health issues in the United States, and factors that contribute to individual and community health. Solidifies concepts through the use of in-class discussion, group work and individual analysis.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Credit is allowed for only HCD 101 or PBH 100

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HCD	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-3		
HCD	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
HCD	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
HCD	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	PRA	N	OPT	College of Health Solutions	College of Health Solutions	1-6		Prerequisite(s): Barrett Honors student
HCD	300	Biostatistics	Biostatistics and its use in health and health services research. Familiarize students with statistical concepts and methods to analyze and interpret data and conceptually addresses statistical theory. Introduces SPSS software to analyze large data sets.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3	CS	Prerequisite(s): completion of General Studies MA requirement with C or better; minimum 45 hours. Credit is allowed for only HCD 300 or PBH 300
HCD	301	Leadership and Professionalism	Leadership, leadership theory and inter-professionalism in practice. Applies didactic content to case studies and activities designed to promote critical thinking and effective teamwork. Solidifies concepts through the use of assignments, exams and discussions.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Pre-requisite: HCD 100 or MED 100. Credit is allowed for only HCD 301 or MED 450
HCD	302	Health Care Management	Broad concepts and skills of management; application of these techniques to health care organizations. Students appreciate the variability of management styles and personalities and begin to develop their own style. Solidifies concepts through the use of case studies and asynchronous discussion boards.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Pre-requisite: ECN 212; HCD 100
HCD	303	Global Health Care Systems	Examines health care delivery systems internationally and explores contemporary issues affecting the institutions that provide health care and the people who seek health services. Covers the historical development of international health care systems, the organization and financing of systems of care, and the policy process and priority setting. Also covers current efforts at health care reform. Provides students with the necessary professional skills to be effective participants in efforts to evaluate and improve the delivery of health care nationally and internationally.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 100 or HCD 101 or MED 100 or PBH 100
HCD	305	Public and Community Health	Provides a broad survey of national, state and local community health sciences and services including cultural and ethnic issues. Examines the concepts of health and wellness and introduces health education as a foundation for population-based health care.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 100 or HCD 101 or PBH 100
HCD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
HCD	400	Interpreting the Scientific Literature	Emphasizes clinical relevance and application of searching and interpreting the literature, using case studies as examples. Applies these skills through in-class activities and through written report at the conclusion of the course. These tools ultimately assist the student with critical thinking and application of concepts to clinical scenarios. Class is held in a computer lab to facilitate class engagement.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 100; HCD 300; MAT 210, 251, 265, or 270
HCD	402	Health Economics	Emphasizes clinical relevance and application of searching and interpreting the literature, using case studies as examples. Applies these skills through in-class activities and through written report at the conclusion of the course. These tools ultimately assist the student with critical thinking and application of concepts to clinical scenarios. Class is held in a computer lab to facilitate class engagement.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): HCD 100 or MED 100; minimum 45 hours
HCD	403	Process Engineering	Core concepts in process engineering, specifically related to systems improvement and patient safety. The Institute of Medicine (IOM) advocates for integrating process engineering within health care to optimize health care outcomes. The IOM addresses multiple dimensions of health, including efficiency, effectiveness, safety, equity, patient-centeredness and access. These domains provide the framework from which faculty approach course content.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Pre-requisite: HCD 100 and 101; HSC 300 and 330
HCD	404	Advanced Concepts in the Science of Health Care Delivery	Applies the themes of science, systems and leadership across the continuum of health and health care. Application and discussion of core competencies to facilitate critical thinking.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Pre-requisite: HCD 100, 101, 301 and 402; HSC 330
HCD	405	Health Technology	Develops essential skills in identifying, analyzing and evaluating information technology applications in health care. Examples include electronic health records, computerized prescriber order entry, and computerized clinical decision support. Discusses the use of health technology in a variety of care settings, including outpatient and inpatient, and facilitate access to health care in resource-poor communities through the use of efficient technology.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): HCD 100 or HCD 101 or MED 100; HCD 300 and HSC 330

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HCD	422	Health Disparities and Access to Health	Racial and ethnic health disparities in the United States. Explores disparities in healthcare seen at the provider and system level and their effects on health in the community. Also considers the historical context of racial and ethnic health disparities and the demographic and conceptual issues surrounding health disparities research. Reflects on the effects of behavior, socioeconomic status and group-specific disparities on community health status.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 101 (or PBH 100) or BS Medical Studies major. Credit is allowed for only HCD 422 or PBH 422
HCD	444	Science of Health Care Delivery Internship	Applies the themes of science, systems and leadership across the continuum of health and health care. Application and discussion of core competencies to facilitate critical thinking.	N	RSC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Pre-requisite: HCD 100, 101, 300, 301 and 400
HCD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): minimum 2.00 GPA; senior standing
HCD	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	College of Health Solutions	1-6		Prerequisite(s): Barrett Honors student
HCD	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	College of Health Solutions	College of Health Solutions	1-6	L	Prerequisite(s): Barrett Honors student
HCD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
HCD	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-6		Prerequisite(s): Barrett Honors student
HCD	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-7		
HCD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Health Solutions	College of Health Solutions	1-3		
HCD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	501	Health Behavior and Statistical Tools in Health Environments	Provides an understanding of the statistical tools and principles of research design and methods in health behavior research in health environments. Encompasses an overview of quantitative, qualitative and mixed designs and focuses on the interpretation and communication of health behavior research through published reports and presentations. Incorporates research approaches and methodologies utilized in an array of content areas. Helps students gain a strong conceptual understanding and application of the statistical tools and research methods used to answer research questions of interest to health and health behavior researchers; it does not focus on mathematical treatments of underlying assumptions and formulae and related statistical problems sets or exercises.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	4		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	502	Health Care Systems and Design	Introduces direct health care delivery structures and processes within and across health care settings, and their impact on the patient, family and community experience of the health care system and services. Examines the interaction among people, resources, delivery systems and built environments using perspectives, tools and strategies from multiple disciplines to evaluate strengths, gaps and opportunities for system improvements.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	510	Interdisciplinary Approaches to Promotion of Healthy Lifestyles	Focuses on application of interventions to promote healthy lifestyles. Includes the theoretical and empirical foundations for clinical evidence for the implementation of healthy lifestyle interventions.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	511	Health Economics, Policy, and Payment Models	Economics provides a framework to understand and predict human decision making under scarcity, uncertainty and imperfect information. Examines concepts central to health care economics and their application to important decisions made by patients, families, practitioners, administrators and policy makers. Uses an individual family's scenario through a progressive case study to evaluate how incentives and information affect the health and health care of each family member. Each meeting integrates basic economic principles, existing facts and knowledge from economic research, and individual perspectives and experience regarding how these concepts apply to health care policy.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only BMD 511 or HCD 511

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HCD	520	Interdisciplinary Perspectives on Health Disparities and System Access	Presents minority health and health disparities concepts and practices from an applied and action-oriented perspective for clinicians and administrators in order to transform systems of inequality and increase access and quality of care for ethnic minorities and other vulnerable populations.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	521	Law and Health Promotion	Analyzes case studies which illustrate the impact of policy and law on health promotion strategies and health outcomes. Includes discussions of the theoretical foundations supporting legal, ethical and economic decision making related to health promotion and real-world examples of the impact of current policies.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	531	The Health Care System	Health care delivery in the United States, including its composition, function and historical organization. The broad discipline of health services systems, health care organizations, and the delivery of safe, accessible, high-quality health care. Discusses the health care system from the perspective of various patient populations, including the aging patient population. Examines the influence of health care reform on health care delivery and costs. Solidifies concepts through the use of in-class case studies and discussions.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	532	Health Care Management	Explores all aspects of managing health care organizations to provide high-value care (better outcomes at lower costs), including human resources, credentialing, finance, supply management, project management. In addition, students appreciate the variability of management styles and personalities and begin to develop their own styles. Solidifies concepts through the use of case studies from health care and other industries.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	540	Seminar in Science of Health Care Delivery	Provides an introduction to the science of health care delivery, an exciting field that focuses on how to achieve the quality care that providers want to deliver and patients expect to receive. Too often quality care is compromised by inadequately designed systems of care. Provides an overview of the health care delivery system and then introduces the major components of the field.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	550	Capstone: Applied Project	Discusses the results from student capstone projects, done in teams, and these projects related to broad topics explored during the prior coursework in the program. Capstone projects are identified early in the master's program in conjunction with and overseen by the degree leaders and the industry partners, and often a health care organization or health agency. These projects are worked on through the year with final written and verbal reports due in the last half of the semester.	Y	RSC	Y	GNA	College of Health Solutions	College of Health Solutions	2		Prerequisite(s) with C or better: HCD 502, 540
HCD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		
HCD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		
HCD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-15		
HCD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		
HCD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Health Solutions	College of Health Solutions	1		
HCD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HCD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	College of Health Solutions	1-12		
HCD	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		
HCD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		
HCD	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		
HCD	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	College of Health Solutions	1		
HCD	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	GRD	College of Health Solutions	College of Health Solutions	1-12		
HCD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		
HCD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	College of Health Solutions	1-15		
HCD	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		
HCD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	College of Health Solutions	1		
HCD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	College of Health Solutions	1-15		
HCI	311	Introduction to Health Care Innovation: Foundational Concepts	Organized around the Seven Pillars of Innovation: innovation process, leadership structure, outcomes, evidence-based practice, finance, policy, and technology and communication. Provides basic definitions and principles of innovation in addition to characteristics, skills and knowledge required for the innovator.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours

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HCI	313	Philosophy of Science in Health Care: Understanding Paradigms of Health and Healing	Philosophy of science and its application to health and healing paradigms. Employs selected schools of thought and individual philosophers within philosophy of science to closely examine health and healing paradigms. Discusses concepts such as "life" and "death". Explores questions: What is science? What is health? Examines the way in which philosophy of science informs perceptions and definitions of health and healing in individuals and populations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): any PHI course with C or better; minimum 45 hours
HCI	412	Transforming Health Care: A Systems Perspective for Innovation	Basic elements of systems thinking as a framework for innovation in addressing current and future issues in health care. Focuses on what occurs at the intersection of disciplines as being fundamental to transforming health care. Stresses the importance of collaboration to the systems perspective, in addition to the value of individual worldviews.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 311 with C or better
HCI	421	Health Care Policy: The Innovator's View	Innovation perspective on policy decision making in the health care environment. This perspective views policy-making as a fluctuating, dynamic and evolving process as seen through a lens of innovation principles. Explores the relationship between politics and policy and discusses factors influencing policy development. Identifies methods to formulate and implement policy and presents models to evaluate, analyze and modify health care policy.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 311 with C or better
HCI	425	Facilitating Innovation to Achieve Outcomes	Principles of facilitation that promote and enable the implementation of innovation to achieve outcomes. This approach identifies facilitation as requiring input seeking, ongoing evaluation, and emergent correction of an existing plan of action. Discusses characteristics of effective teams, innovation leadership behaviors that impact change, and involvement of end-users. Compares and contrasts traditional project management processes with innovative facilitation techniques.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 311 with C or better
HCI	428	Technology: A Tool to Advance Innovation in Health Care	Analyzes the role of technology in achieving the Triple Aim: improved quality, improved patient experience, and decreased cost. Discovers tools that are defined as health information technology and those that support business services. Compares and contrasts tools of technology that hold the potential to advance innovation in health care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 311 with C or better
HCI	538	Innovation and the Individual	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	540	Understanding and Applying Principles of Evidence-Based Practice	Understanding how application of evidence-based practice principles assists healthcare professionals to provide the best care. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Admission to the Masters of Healthcare Innovation
HCI	542	Systems Thinking in a Complex Environment	Examines basic and advanced systems principles as they relate to national and international health and healing systems. Specific emphasis is given to systems thinking from a complexity science perspective and the implications for innovation.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Admission to Master of Healthcare Innovation degree
HCI	543	Approaches to Leading Health Care Innovation	Theory-based survey course introduces approaches to lead innovation in an organization. Many change initiatives are designed by those not completing the work, leaving workers isolated, restricted and powerless. Teaches health care leaders to value collaboration with and seeking input from those who will carry out the work. Analyzes approaches to planned change: positive deviance, appreciative inquiry and creation of a learning organization. Students construct a change plan using an appropriate approach to address a health care problem.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Innovation Leadership certificate program
HCI	544	IT for Healthcare Innovation	Focuses on the information technology (IT) trends and their strategic application in healthcare. Students develop an IT strategy that addresses a specific healthcare area of concern. Students gain an understanding of the role of IT in healthcare innovation and develop skills in business process improvement, change management, strategy definition, value proposition, responding to feedback and managing resistance.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Admission to Master of Healthcare Innovation degree
HCI	545	Public Speaking for Innovation: Building Your Presence and Making the Case for Change	New ideas take a lot of explaining, and innovation often involves persuasion. Builds presence as a speaker and a leader--and gains expertise in public speaking for innovation. Public speaking for innovation is a combination of finding and building one's presence as a speaker and a leader--and translating that to an ability to explain and persuade, making the case for change. Students build their presence and gain the foundational knowledge necessary to successfully explain and persuade in innovation contexts.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Innovation Leadership certificate program
HCI	546	Communication, Technology, and Innovation	Overview of traditional, contemporary and innovative communication strategies in the 21st century.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Master of Healthcare Innovation major

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HCI	548	Advanced Principles and Concepts of Innovation	Explores and analyzes the innovation in complex systems, focusing on developing specific skills for successful innovations.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	550	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy, emphasizing strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	552	Financing for Innovation	Provides an overview of healthcare economics; develops budgeting, planning, and management skills; and culminates in financial analysis skills necessary to facilitate management decision making or writing business plans or grant proposals.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	554	Outcomes Evaluation	Outcomes measurement, management, and evaluation for healthcare practitioners and/or leaders. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Admission to Master of Healthcare Innovation degree
HCI	561	Innovation Methods	Capstone project to learn the active skills of healthcare innovation using an adapted IDEO model.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre-requisites: Admission to Master of Healthcare Innovation degree
HCI	562	Capstone Innovation Project II	Introduces the process of conceptualizing an innovation and building a plan or proposal to move forward with the innovation in either an entrepreneurial or intrapreneurial context.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	563	Capstone: Final Innovation Project	Applies the concepts learned in MHI core courses and presents evidence of knowledge in innovation principles, applications and strategies for implementation and evaluation. Develops an innovation project in the form of a mindmap. Provides a comprehensive methodology for completing all aspects of an innovation opportunity. Student-directed demonstrations of the application of learned leadership skills and techniques for facilitating team and individual implementation.	N	SEM	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	5		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	570	Innovation Proposal: Culminating Experience for Health Care Innovation Certificate	Applies concepts learned and operationalizes skills acquired throughout the Health Care Innovation certificate. Students envision emerging paths toward an outcome by first presenting a problem they have identified within a health care organization, and creating collaborative relationships and developing strategies to initiate change in their chosen setting.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 538; HCI 542; HCI 554; HCI 561
HCI	571	Health Care Innovation Leadership Portfolio: Culminating Experience	Examines and applies personal leadership potential. Focuses on the effective development and facilitation of human networks to advance innovation in the health care space. Challenges students to appraise and analyze personal leadership strengths, challenges and opportunities. Explores strategies to evaluate students' current networks; develops the students' emergent professional networks. Gives focus to building relationships necessary to advance innovation in the health care space. Students develop and implement an action plan to advance their personal leadership growth and network utilization.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 538; HCI 543; HCI 545; NLM 562
HCI	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		
HCR	210	Clinical Health Care Ethics	Healthcare ethics emphasizing analysis and ethical decision making at clinical and health policy levels for healthcare professionals.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	HU	Pre-requisite: ENG 102,105 or 108
HCR	220	Introduction to Nursing and Health Care Systems	Introduces the social, political, and economic contexts in which the nursing profession and health care systems in the United States evolved.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	H	
HCR	230	Culture and Health	Cultures of diverse groups and health/illness. Cross-cultural communication, awareness of own cultural influences, indigenous and alternative healing practices.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	C & G	
HCR	240	Human Pathophysiology	Chemical, biologic, biochemical, and psychological processes used in study of structural and functional alterations in health with selected therapeutics.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s) with C or better: BIO 201 and 202; CHM 101 or higher; MIC 205 and 206

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HCR	260	Health Care Industry and Regulation	Overview of the complex system of regulations that frame the oversight and monitoring of the U.S. health care industry. Provides a foundational understanding of federal and state regulations as well as private health care regulatory agencies' requirements as they relate to physicians and other health care professionals, hospitals and other health care institutions, and insurance companies.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Health Care Compliance and Regulations BS major or minor
HCR	262	Health Care Licensure, Professional Development and Practice	Introduces interprofessional practice, professional licensure, education and training, certification and scope of practice within the health care industry. Explores compliance standards and accreditation as they relate to the authority and scope of licensure boards, which are designed to safeguard the public health.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 261
HCR	263	Introduction to Medical Billing and Compliance	Introduces the complex process of medical coding and billing practices and related federal regulations and programs. Provides learners with a fundamental understanding of medical coding and billing processes including terminology, stakeholders and regulatory impact.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 260
HCR	264	Regulatory Essentials of Compliance Program Design I	Offers a comprehensive overview of the regulations that impact the health care delivery industry. These regulations include: protections against fraud and abuse, patient rights and privacy, protected health information (PHI) and electronic protected health information (ePHI), and occupational health and safety.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 261
HCR	265	Regulatory Essentials of Compliance Program Design II	Comprehensive study of the creation, management and evaluation of all aspects of a formal health care compliance program. Learners investigate and discuss roles of the compliance officer and compliance committee, risk analysis, recommendations for and implementation of corrective action.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 264
HCR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		
HCR	301	Research Methods for the Health Care Professional	Explores basic concepts of qualitative and quantitative research design utilizing methods of assessment, planning, implementation and evaluation.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): STP 226 or PSY 230 or SOC 390 or SWU 321 with C or better; TWC 347 or 362 with C or better
HCR	302	Social Determinants of Health	Addresses issues of social determinants and health disparities at the local, national and global levels.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): TWC 347 or 362; Corequisite(s): HCR 301
HCR	303	Assessing Needs, Assets and Capacity for Health Education	Assesses needs, assets and capacity for health education at the individual, family and community levels.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): CDE 232 with C or better; HCR 210 and 230 with C or better
HCR	330	Fundamentals of Community Health	Provides a framework for understanding community health concepts.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): minimum 45 hours
HCR	331	Communication within Communities	Focuses on the integral nature of communication in health care, including the role communication plays in shaping individual, social and cultural beliefs and expectations about health. Provides skills for effective communication when working with individuals, groups and the media.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): minimum 45 hours
HCR	335	Program Development and Management for Community Health	Incorporates models, research and resource management to plan, strategize and evaluate community programs that promote healthy lifestyle choices in various, as well as specific, geographic communities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): General Studies Literacy course; minimum 45 hours
HCR	336	Environmental Community Health	Examines the interdependent relationship between the health of the environment and the health of communities. Includes a focus on specific communities, as well as agencies and laws involved in the health of communities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 330 with C or better
HCR	340	Foundations of Integrative Health	Discusses the similarities and differences of the biomedical and integrative health care systems providing an overview of integrative health.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): ENG 102, 105, 108 or FYC MET
HCR	341	Biological, Manipulative, and Body-Based Therapies	Analyzes the principles and practices of select biological and body-based therapies and modalities and their use in the health care system.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): any BIO course; any CHM course
HCR	342	Mind-Body and Energy Therapies and Modalities	Analyzes the principles and practices of select mind-body and energy therapies and modalities and explains and distinguishes their use in the health care system.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): any BIO course; any CHM course
HCR	343	Historical and Cultural Foundations of Integrative Health Care	Distinguishes commonalities and differences between early healing traditions and investigates the utility for today's health care system.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 340 with C or better
HCR	350	Introduction to Clinical Research	Provides an introduction to the biomedical and clinical research field and associated operational processes. Examines clinical trial development phases, regulatory protections for human subjects, clinical research team specializations, research organizations, good clinical practice, institutional review board functions, and research funding mechanisms. Explores specialized career positions for nursing and allied health professionals.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Minimum 45 hours; Credit is allowed for only HCR 350 or 394 (Introduction to Clinical Research Management)

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HCR	360	Data Security and Privacy in Health Care Compliance	Focuses on administrative practices that ensure the security of computerized systems and the protection of health information. Topics include communication and reporting, as well as specific regulations and authorities such as the Health Insurance Portability and Accountability Act (HIPAA) Privacy and Breach rules, and HIPAA Security and Meaningful Use Attestation.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 260; HCR 261
HCR	362	Monitoring and Auditing for Health Care Compliance	Ongoing health care compliance evaluation process critical to a successful compliance program. Provides the knowledge to utilize monitoring and auditing systems to ensure health care operations conform to established standards or comply with federal, state or local rules and regulations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 260; HCR 261
HCR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		
HCR	400	Evidence Based Practice for the Health Care Professional	Methods of clinical and scientific inquiry. Focuses on the application of an evidence-based practice approach.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 301; TWC 347 or TWC 362
HCR	402	Advocacy for Health and Health Education	Discusses and analyzes existing or proposed policies on health and strategies for influencing the policy-making process.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 303 with C or better
HCR	406	Health Literacy for Health Care Professionals	Prepares students to use best practices for health communication that promote consumer health literacy.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 210 or HSC 320 with C or better; HCR 230 or HSC 210 with C or better; Pre or co requisite(s): HCR 301 with C or better
HCR	430	Foundation to Health Care Systems	Explores the impact of the current U.S. health care system on the health of individuals, families and communities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 330 with C or better
HCR	435	Leaders in Community Health	Prepares students to assume a leadership role in health promotion in communities. Lecture. Prepares students to assume a leadership role in health promotion in communities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 330 with C or better; HCR 335 with C or better; Pre- or co requisite(s): HCR 430 with C or better if completed
HCR	439	Community Health Seminar	Provides the opportunity to explore the health status of communities and to develop strategies for community health improvement.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s) with C or better: HCR 330, 331, 335, 336. Pre- or corequisite(s): HCR 430, 435 with C or better if completed
HCR	440	Interprofessional Approaches to Integrative Health Care	Prepares learners to develop and lead interprofessional teams with a focus on roles and responsibilities of integrative health care providers and practitioners.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 340 with C or better
HCR	441	Legal and Ethical Issues Impacting Integrative Health Care	Examines current laws, government regulations, ethical principles and case studies to understand issues and consumers' use of integrative modalities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 340 with C or better
HCR	449	Integrative Healthcare Capstone	Capstone course allows the student to demonstrate a culmination and synthesis of integrative health care body of knowledge by focusing on a single healing environment project.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 340; 341; 342; 343; 400; 440 with C or better. Pre- or corequisite(s): HCR 441; TWC 443
HCR	460	Investigations and Disclosures in Health Care Compliance	Types of disclosures required by and investigations conducted by regulatory and accrediting agencies overseeing health care entities. Introduces oversight activities, enforcement and potential penalties incurred by health care entities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 362
HCR	461	Corrective and Preventive Action Plans	Use of corrective and preventive actions (CAPA) in meeting the challenges of a compliant health care services operation. Covers design and implementation of CAPA to respond to deviations or errors in the health care environment. Identifies problems, implements corrective actions, evaluates consequences and employs preventive measures.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 362; HCR 460
HCR	462	Specialty Topics in Health Care Compliance	Provides a comprehensive review of case studies and recent enforcement action involving litigation and enforcement of health care law, including review of landmark and contemporary cases brought by the United States Office of Inspector General, the Office of Civil Rights and state attorney generals. Applies knowledge and skills acquired from earlier coursework to real-world situations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): HCR 260; HCR 261
HCR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
HCR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		
HCR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-7		

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HCR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-3		
HCR	545	Foundations of Biospecimen Repository Administration	Examines the biospecimen repository industry from a business perspective. Students learn the scientific basis, collaborative nature, required personnel, timelines and processes that underlie the business environment of biospecimen repositories and their administration.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Biospecimen Repository Administration certificate program
HCR	546	Management of Biospecimen Repository Operations	Examines the biospecimen repository industry from an operational perspective. Students learn the process aspects of repository start-up through collection, maintenance and disbursement of specimens. Key elements include personnel training, planning, quality control, risk management, project management and safety implementation.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 545
HCR	547	Biospecimen Resource and Technology Management	Examines the biospecimen repository industry from a technology and resource perspective. Students learn the planning and selection of technology and resources for the support of the start-up and long-term maintenance of a biospecimen repository. Key elements include technology and resources assessment and choice, cost-benefit analysis, initial budget, long-term and short-term planning.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 545
HCR	548	Regulation and Ethics in Biospecimen Repository Administration	Examines the biospecimen repository industry from an ethical and regulatory perspective. Students learn the ethical and consenting challenges of biospecimen collection, storage and disbursement. Examines relevant historical case histories to inform current policies and practices.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 545
HCR	549	Scientific Innovation and Biospecimen Repository Administration	Explores the driving effects of scientific innovation on biospecimen administration management. Students learn how scientific advancements increase the demand of high-quality biospecimens and high-quality data, referred to as next-generation biorepository research. Examines tracking pre-analytical variables, adequate preservation and storage methods, controlled biospecimen and data custodianship, governance with ethical and scientific oversight of operations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 545
HCR	551	Clinical Research Monitoring	Introduces clinical trial monitoring processes and procedures.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): MS Clinical Research Management, Nursing major
HCR	552	Medical Device Development and Regulation	Comprehensive examination of the regulatory framework for the design, development, approval/clearance and marketing of medical devices in the United States throughout the product lifecycle.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): MS Clinical Research Management or MS Regulatory Science and Health Safety major
HCR	553	Quality Assurance and Clinical Research	Explores basic quality assurance techniques, standards and applications in the clinical research arena.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Clinical Research Management major or certificate
HCR	554	International Regulatory Affairs	Principles of international regulatory affairs and requirements for marketing regulated products globally. Key regulations that relate to medical product safety, the origins of these regulations, and marketing applications in major foreign markets. Covers similarities and differences among global regulations and those in the United States.	N	LEL	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Nursing Regulatory Science & Health Safety student
HCR	555	Pharmaceutical Safety and Risk Management	Comprehensive examination of regulatory, legal, and scientific factors in pharmacovigilance and risk management and risk mitigation.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Regulatory Science and Health Safety Master of Science student
HCR	557	Clinical Research Design and Methods	Explores basic clinical trial biostatistical methods in concert with clinical trial design and methods.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): MS Clinical Research Management, Nursing or Clinical Research Management (Grad Certificate)
HCR	558	Technical Writing for the Regulatory Professional	Focuses on teaching and applying writing and presentation skills critical for regulatory professionals	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Clinical Research Management, Clinical Research Mgmt Cert, or Regulatory Science and Health Safety Master of Science student

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HCR	559	Regulatory Science Internship	Internship in the field at a regulatory agency or in a regulated industry. Practicum.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-3		Pre-requisite: Regulatory Science and Health Safety Master of Science student
HCR	560	Regulatory Science Capstone	Culmination course integrating all components of regulatory core courses demonstrating knowledge and competency in the field of regulatory science.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-3		Pre-requisite: Regulatory Science and Health Safety Master of Science student
HCR	561	Responsible Conduct of Clinical Research	Introduces concepts and policies for the responsible conduct of research (RCOR), institutional review boards, and dissemination of findings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	562	Clinical Research Data Management and Technology Implementation	Orientation to database design and management, technology assessment methods, auditing procedures for continuous quality improvement (CQI), and cost-effectiveness analysis (CEA).	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	563	Fundamentals of Regulatory Affairs	Principles of clinical research management and regulatory affairs. Overview of national/international regulatory systems and agencies, and trends in conducting clinical research.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	564	Capstone Clinical Research Management Project	Culmination course integrating all components of CRM core courses demonstrating knowledge and competency in designing and managing clinical trials. Students must have documentation of unencumbered professional license in the state where the capstone project will be completed, if required.	N	REC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Clinical Research Management Master of Science or Clinical Research Management Certificate student
HCR	565	Clinical Research Operations	Development, implementation, and operations of FDA clinical research trials, including budgeting, contract negotiations, site evaluation, marketing, project management, and reporting.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	566	Capstone Clinical Research Management Project II	Culmination course integrating CRM degree coursework by demonstrating knowledge and competency in clinical research management planning, operations, and implementation processes.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	567	Research Management and Contemporary Research Topics	Management and leadership principles integrated with contemporary research topics will be introduced.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Clinical Research Management Masters student or Nursing Graduate student
HCR	568	Healthcare Project Management	Designed for graduate students and managers who desire to improve their effectiveness as project managers in the healthcare context.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Clinical Research Management, Clinical Research Mgmt Cert, or Regulatory Science and Health Safety Master of Science student
HCR	570	Introduction to International Health Systems, Professions, and Research	Introduces systems of international healthcare delivery, professions that provide healthcare delivery, and international research principles and practices.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	571	Cultural Diversity and Healthcare Delivery	In-depth exploration of culturally diverse aspects of population health, including culture-bound syndromes, folk practices, assessment approaches, and interactions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	572	International Healthcare Delivery Capstone	Culminating course integrating all International Health requirements that produce culturally responsive implementation and evaluation plan for the student's clinical practice. A portion of the course will be held in Mexico.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	574	The Institutional Review Board (IRB) and Human Research	Analyzes the value and functions of the Institutional Review Board (IRB), including the basis for the IRB's authority and the regulations that govern an IRB's activities. Topics include IRB operations and ethical issues. Explores the historical basis for regulating research.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 561
HCR	575	Contracting and Budgeting for Industry-Sponsored Clinical Trials	Examines best practices in contracting, negotiating and budgeting for industry-sponsored clinical trials.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Clinical Research Management MS major or certificate
HCR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	101	ASU & Herberger Institute Experience	Introduces all new first-time ASU students to the unique elements, culture, challenges and opportunities of their university and the Herberger Institute for Design and the Arts. Explains and defines success with integrity, ASU resources and involvement, the Importance of arts to society and the community, personality and learning style, and success in college and beyond.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Pre-requisites: Herberger Institute for Design and the Arts BA in the Arts or BA in Design Studies major; Credit is allowed for only HDA 101 or 194 (ASU Herberger Inst Experience)

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HDA	125	Fashion Design I	Introduces designing a collection of marketable apparel for a targeted merchandise category. Includes instruction in using inspiration to synthesize garments in a collection, editing a collection for the most marketable ideas, sourcing, fabric selection, costing, and an introduction to pattern development and garment production.	N	LEL	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		
HDA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	210	Creativity and Innovation in Design and the Arts	Designed to get students thinking in a focused manner about creative practice and process. Many young designers and artists arrive at higher education in their discipline having taught themselves or having received a piecemeal education in the directed application of ideas. Aids students in knowing why and how they are creative. Covers types of creativity, how inspiration happens, how to take a project from idea to reality, how to work creatively in teams and how to fuse creative ideas with an understanding of environment to help realize work in socially useful ways.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Credit is allowed for only HDA 210 or 294 (Creativity & Innovation for Design and the Arts)
HDA	225	Fashion Design II	Expands upon fashion design fundamentals learned earlier to encompass additional aspects of the fashion industry, which includes fashion as business, and as a sociological and cultural phenomenon.	N	LEL	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): HDA 125 with C or better
HDA	252	Foundations of Arts Entrepreneurship	Develops entrepreneurial knowledge and skills supporting the self-actualization, self-efficacy, and market acumen of artists.	N	LEL	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): Herberger Institute student
HDA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	310	Socially Engaged Practice	Students gain a wide literacy in the community arts field through reading, discussion and technical practice. Examines theories and techniques of community-based project development. Pairs artists with communities to create art rooted in the needs, values, desires, triumphs and challenges of that community. Helps prepare the artist of the 21st century with skills to apply artistic practices in diverse contexts.	N	LEL	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisites: Minimum 42 hours; Credit is allowed for only HDA 310 or 494 (Public Practice: Engagement & Community)
HDA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	397	Capstone Development	Prepares students for a successful capstone project. Students develop a formal proposal and identify a mentor for the project.	N	LEL	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Prerequisite(s): The Arts BA major; minimum 56 hours
HDA	410	Seminar in Socially Engaged Practice	Discussion-based seminar revolves around readings aimed at describing and understanding the nature of society, culture and the circulation of ideas. Investigates art as a way of knowing, as a profound humanitarian gesture, as a form of disciplined research and a way of building community and confirming shared values. Explores specific strategies and approaches to socially engaged art practices through readings, visiting artist presentations and direct engagement with community-based projects. Illustrates and underscores how artists--creative practitioners of all sorts--are key to the giant collaborative projects we call culture, language and the entirety of cumulative artistic and scientific knowledge. Provides a solid bulwark for the recognition that we really are all in this together and are making it up as we go along.	N	SEM	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisites: HDA 310; Credit is allowed for only HDA 410, 494 (Seminar in Socially Engaged Practice), 510 or 598 (Seminar in Socially Engaged Practice)
HDA	420	Design and the Arts Business Administration	Design and the arts business seminar course that covers core business principles for design or arts businesses such as human resources, legal issues, accounting and finance. Asks with each of these areas how these disciplines uniquely work within design or arts settings. Investigates global business topics and discusses why ethics is integral to every design or arts business enterprise. Provides a broad understanding of design or arts business activities and practices, allowing more effective participation in business discussions in the future.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisites: Minimum 45 hours; Credit is allowed for only HDA 420 or 494 (Design & the Arts Bus Admin)
HDA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-7		
HDA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-3		

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HDA	510	Seminar in Socially Engaged Practice	Discussion-based seminar revolves around readings aimed at describing and understanding the nature of society, culture and the circulation of ideas. Investigates art as a way of knowing, as a profound humanitarian gesture, as a form of disciplined research, and a way of building community and confirming shared values. Explores specific strategies and approaches to socially engaged art practices through readings, visiting artist presentations and direct engagement with community-based projects. Illustrates and underscores how artists--creative practitioners of all sorts--are key to the giant collaborative projects we call culture, language and the entirety of cumulative artistic and scientific knowledge. Provides a solid bulwark for the recognition that we really are all in this together and are making it up as we go along.	N	SEM	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HDA 410, 494 (Seminar in Socially Engaged Practice), 510 or 598 (Seminar in Socially Engaged Practice)
HDA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HEB	101	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
HEB	102	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: HEB 101 with C or better
HEB	131	Biblical Hebrew I	Offers an introduction to Biblical Hebrew, the language in which most of the books of the Hebrew Bible/Old Testament have been written. Provides the basic tools to understand and translate Biblical Hebrew texts. Covers the Hebrew alphabet, basic vocabulary, morphology and syntax. Students learn idiomatic expressions, basic literary techniques in narratives and poetry, as well as specificities of Semitic languages. Emphasizes a critical approach to the ancient text. Also introduces the evolution of the biblical text, from ancient manuscripts to contemporary editions and translations. Includes an introduction to the development of writing and to the evolution of Hebrew, from earliest inscriptions to its revival in modern Israel. The texts translated in class are situated in the history of Israel, but also in their Jewish and Christian cultural and religious contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I)
HEB	132	Biblical Hebrew II	Completes the study of basic Biblical Hebrew grammar and vocabulary (Futato's Beginning Biblical Hebrew, chapters 21-40). Prepares students to translate narrative and legal texts from Hebrew Bible. Students learn to use dictionaries, grammars, paradigms and critical editions of the biblical text.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I) with C or better; Credit is allowed for only HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II)
HEB	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HEB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	201	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: HEB 102 with C or better
HEB	202	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: HEB 201 with C or better

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HEB	231	Biblical Hebrew III	Advanced study of Biblical Hebrew. Deepens understanding of the grammar and composition of the Hebrew Bible. Translates texts of different literary genres (narrative, legal, poetic, prophetic) and different periods. Introduces the basic principles of textual criticism and different approaches to interpret the texts of the Hebrew Bible.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II) with C or better; Credit is allowed for only HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III)
HEB	232	Biblical Hebrew IV	Addresses advanced topics in Biblical Hebrew grammar and interpretation. The first half of the semester is devoted to texts from the Hebrew Bible; the second half on extra-biblical texts written in ancient Hebrew (for example: Dead Sea Scrolls, Rabbinic texts, ancient Hebrew poetry). Topics and texts change annually.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III) with C or better; Credit is allowed for only HEB, JST, REL 232 or HEB 294 (Biblical Hebrew IV)
HEB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	313	Advanced Modern Hebrew	Continues developing speaking, reading, and writing skills in modern Hebrew, with a focus on different aspects of the Israeli culture studied in literature, cinema, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: HEB 202 with C or better
HEB	314	Advanced Modern Hebrew	Continues developing speaking, reading, and writing skills in Modern Hebrew, with a focus on different aspects of the Israeli culture studied in literature, cinema, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: HEB 202
HEB	316	Literary Readings of the Hebrew Bible	Literary analysis of two of the main genres of the Hebrew Bible: narrative art and poetry. Students learn the main literary conventions of biblical prose and poetry, and how these conventions are applied or subverted. Each class comprises the study of a literary aspect, close readings, and thematic discussions. Biblical texts are read only in translation. They are situated in the religious, literary and artistic traditions that have developed on their basis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only ENG 316, HEB 316, JST 316, REL 316 or HEB 394 (Literary Readings of the Bible)
HEB	347	Modern Israeli Literature in Translation	Modern Hebrew, or Israeli Hebrew, started at the end of the 19th century in Europe and today it is the language of the State of Israel. During this short period modern Hebrew developed literature with its unique local characteristic, as well as universal ideas. Reads and examines four books against their social and historical background.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HEB 347 or JST 347 or SLC 347 or ENG/HEB/JST/SLC 394 (Modern Hebrew Literature in Translation)
HEB	348	Israeli Society and Culture	Different partitions of the Israeli society, based on ethnic origin, by religious affiliation or by political association. Depicts how Israel is an absorbing immigration state. Israel is a welfare state and the course covers aspects of a welfare state, such as health, retirement, public transportation, art, higher education and more.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only HEB 348, 394 (Israeli Culture and Society), JST 348, REL 311, or SLC 348
HEB	375	Contemporary Culture of Israel	Intense study of aspects of historical, social, political, and cultural modern life in Israel. Beginning of Zionism to present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	
HEB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	411	Judaism and the Beginnings of Christianity	Studies the beginnings of Christianity in relation to Judaism: their common context, the process of their distinction and their mutual influence. Through a historical and thematic approach, explores the parallel construction of Jewish and Christian identities. Combines readings from primary sources (Hellenistic Judaism, Qumran, New Testament, Early Christianity, Rabbinic Judaism) and up-to-date scholarly literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 or 108 or HST 100 or 102 or REL 100 or SLC 142 or 202 with C or better; Credit is allowed for only HEB/JST/REL 411 or HEB 394 (Judaism and the Origins of Christianity) or HEB 494 (Judeo-Hellenistic Literature)
HEB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HEB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HEB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
HED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
HED	510	Introduction to Higher Education	Overview of American higher education, including philosophical, political, and social aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	527	Seminar: Student Affairs Administration	Organizational models, administrative competencies and skills, and emerging challenges of student affairs administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	573	Applied Inquiry in Higher Education	Provides an overview of research, evaluation and assessment practices in higher education and strategies for utilizing these practices as professionals in higher education. Focuses on learning about and demystifying the process of scientific inquiry, with the intent of translating that knowledge to regular practice in a higher education professional career. It is not a highly technical methods course--no advanced knowledge of statistics or qualitative techniques is assumed--but instead gives practitioners a foundation in educational research design as well as the tools to be literate, thoughtful, critical and frequent consumers of research.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): MEd Higher and PostSecondary Education major. Credit is allowed for only HED 573 or HED 591 (Applied Inquiry)
HED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	620	Diversity in Higher Education	Overview of the demographic profile of college students, faculty, and staff. Addresses issues of access, retention, and development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	634	The American Community College	Philosophy, history, curriculum, faculty, students, organization, financing, research, policy and current issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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HED	644	Higher Education Finance and Budgeting	Financial planning and budgeting in higher education institutions. Issues related to financing public and private colleges and universities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	649	Law of Higher Education	Analyzes legal issues related to higher education; examines key court decisions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	679	The American College Student	Overview of American college student from demographic, background characteristics, and values/attitudes/perspectives. Includes access, persistence, and degree completion.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	688	Organizational Theory	Major views of organizations and their influence on role definition and participant behaviors in educational organization.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	689	Leadership in Higher Education	Theory and practice of leadership and administration in higher education institutions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	701	Higher Education Doctoral Proseminar	Students read and discuss recent writings on the sociology of higher education and explore research interests as well as identities as educational researchers. Visits to several types of higher education institutions in the state of Arizona to meet various program faculty who introduce their interests as researchers and practitioners. Learn better understanding of the challenges and promise of higher education as an academic field and of themselves as researchers and practitioners. Time also spent discussing the dissertation and the writing process.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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HED	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HES	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
HHE	510	Design and Health	Introduces health design core concepts while focusing on evidence-based design research to demonstrate how healthcare environments impact well being.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	540	Current Issues in Health Design	Explores and systematically investigates current issues in health that are driving the current and future directions of the healthcare industry, including the design of healthcare and healing environments.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Degree- or Nondegree-seeking graduate OR Senior with minimum 108 hours
HHE	566	The Healing Experience Research Lab	Connects spatial relationships and healthcare user needs through design, clinical delivery, and architecture. Applying research outcomes to the built environment.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Science in Design or Master of Healthcare Innovation student; HHE 510 and HHE 540 with B or better OR Master of Architecture, Bldg Des(Energy Perform/Bldgs) MS, Master of Landscape Architecture, or Master of Urban Design
HHE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	591	Seminar	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
HIN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HON	171	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	(L or HU) & H	Prerequisite(s): Barrett Honors student; maximum 75 hours
HON	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-3		Prerequisite(s): Barrett Honors student
HON	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisites: Barrett Honors students; Maximum 60 earned hours
HON	272	The Human Event	Covers the Renaissance through the modern period.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Prerequisite(s): Barrett Honors student

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HON	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	1-6		Prerequisite(s): Barrett Honors student
HON	310	Justice and Law	Philosophical study of theories of justice in relation to law and morality. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): Barrett Honors student
HON	366	International France	Offered in France, course utilizes the "city as text" to analyze the construction of national identity.	N	PRA	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	3	HU & H & G	Prerequisite(s): Barrett Honors student
HON	370	History of Ideas	Advanced and intensive survey of key social and intellectual currents in the development of humanity as reflected in both philosophical and creative works with an emphasis on critical thinking and discussion, as well as argumentative writing.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3	L or HU	Prerequisite(s): Barrett Honors student. Credit is allowed for only HON 171, 272, 370 or 394 (History of Ideas)
HON	378	Culture and Society in England, Ireland, and Scotland	Chronologically explores texts, events, and sites for historical and cultural impact on development of England, Ireland, Scotland, and their countries' relationships with each other.	N	SEM	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	HU & H & G	Prerequisite(s): Barrett Honors student
HON	379	Romantics, Victorians, and Moderns	Examines the development and impact of various literatures, arts, and ideas in England, Ireland, and Scotland from the Romantic through the Modern period.	N	SEM	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	HU & G	Prerequisite(s): Barrett Honors student
HON	380	Aesthetics and Society	Advanced, interdisciplinary seminar explores the unique roles of aesthetics in society through philosophy, cultural studies, art, music, literature, film, and/or other media forms, with themes such as the politics of beauty, art and emotion, or creative production and reception.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3	HU	Prerequisite(s): Barrett Honors student; HON 171; HON 272 (or HON 273 or 274) or HON 370 or HON 394 (History of Ideas); Credit is allowed for only HON 380 or HON 394 (Aesthetics and Society)
HON	381	Science and Social Worlds	Advanced multidisciplinary seminar examining the historical, cultural and political roles of science in society, including the politics of scientific knowledge production, the ethics of new technologies, and philosophical approaches to the study of health and medicine.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): Barrett Honors student; HON 171 and 272 (or HON 370 or 394: History of Ideas); Credit is allowed for only HON 381 or 394: Science and the Self
HON	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	410	Philosophy, Politics, and Law	Topics in political and legal philosophy, including political authority, obligation and disobedience, the nature of crime and punishment. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): Barrett Honors student
HON	447	Lean Launch	Students learn lean and customer development methodologies to test assumptions made about a new business concept that they wish to explore or launch. Teaches how to effectively utilize business models and critically assess the assumptions made through the testing of hypotheses to create innovative and market-ready ventures. Includes weekly presentations of learning points and team activities outside of the classroom. Open to students in any major of study with the required prerequisite.	N	LEC	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): W.P. Carey BA or BS major; ACC 241 or 242 or 271 with C or better OR non-Business student with minimum ASU 2.50 GPA; minimum 56 hours. Credit is allowed for only HON 447 or MGT 447 or MGT 494 (Lean Launch)
HON	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	0-12		Prerequisite(s): Barrett Honors student
HON	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-6		Prerequisite(s): Barrett Honors student
HON	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Barrett, The Honors College	Barrett, The Honors College	1-6	L	Pre-requisite: Barrett Honors student; Minimum 75 hours
HON	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-6		Prerequisite(s): Barrett Honors student
HON	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-7		Pre-requisite: Barrett Honors student

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HON	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-3		Prerequisite(s): Barrett Honors student
HON	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HPS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	311	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
HPS	312	History of Women in Science and Medicine	In-depth inquiry into the history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU or SB	Pre-requisite: ENG 102, 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only HPS or HST 312
HPS	313	Probability, Evidence, and Decision	Philosophical topics in epistemology and practical reasoning; probability and its use in representing and reasoning about belief, evidence, and rational choice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: MAT 119 or higher; Minimum 30 hours; Credit is allowed for only HPS or PHI 313
HPS	314	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU	Credit is allowed for only HPS 314 or PHI 314
HPS	322	History of Science	Development and application of scientific thinking from ancient times through the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H	
HPS	323	History of Science	Development and application of scientific thinking from the 18th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H	
HPS	325	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only CHI 335, HPS 325, HST 385 or SLC 335
HPS	330	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	H	Credit is allowed for only BIO 316 or HPS 330
HPS	331	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	H	Credit is allowed for only BIO 318 or HPS 331
HPS	332	The Darwinian Revolution	Origin, nature, and subsequent history of the ideas of Charles Darwin.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
HPS	336	Exploration and Science	500-year survey of exploration as a historical process and cultural activity of Western civilization, with emphasis on its links with modern science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	SB & H	
HPS	340	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 188 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 311 or HPS 340
HPS	347	Science and Social Change	Modern science and technology are rapidly and radically transforming our society in innumerable ways, from how we process food to altering the very core of what it means to be human. Explores historical, philosophical, sociological, ethical, economic and political topics and consequences of modern science in society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Credit is allowed for only BIO 347, BIO 394 (Science and Society) or HPS 347
HPS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HPS	410	Biomedical Research Ethics	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only for BIO 416 or HPS 410
HPS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
HPS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
HPS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
HPS	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Junior or Senior standing; Credit is allowed for only BIO, HPS, MBB, MIC, or PLB 496
HPS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
HPS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
HPS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
HPS	511	History of Science	Teaches crucial skills needed for graduate-level research in history of science, including (1) critical analysis of primary sources from different periods in the history of science and (2) critical analysis and familiarity with important trends in the secondary literature ("historiography of science").	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	512	Philosophy of Science	Serves as a graduate-level introduction to five central themes in philosophy of science, and as a means to begin to investigate new topics.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	516	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 518, HPS or HST 516
HPS	520	Masters of Nonfiction	Students read and critically discuss works by well-known nonfiction writers to improve their own writing skills. Consists of weekly writing exercises, reviewed with workshop-style discussions centered on individual authors, themes or genres such as history, journalism, personal essays, biography, character profiles, travelogues, book reviews and op/ed commentary.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only HPS or HST 520
HPS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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HPS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	615	Biology and Society Lab	This course brings together graduate students, postdocs, and faculty members in biology and society. Sessions include panel discussions of biology and society topics from multiple perspectives, student-led discussions of important literature, practice presentations of papers for national meetings, discussion of dissertation and thesis ideas, and other activities that help to forge an active intellectual lab group.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	620	Research Prospectus Writing	Workshop-style course where students develop and peer review graduate-level project prospectuses, such as those for NSF grant proposals, journal articles, theses, and dissertations. Appropriate for graduate students in Biology and Society, History and Philosophy of Science, the life sciences, and related programs.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only HPS 620 or BIO 620
HPS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HRC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HRC	200	Introduction to Social and Cultural Analysis	Introduces social and cultural analysis. Focuses on key terms and analytical categories for interdisciplinary work in social and cultural analysis and related fields such as American studies, ethnic studies, women and gender studies and Latin American studies. Examines a range of forms of oppression and privilege from a social justice perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
HRC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HRC	310	Social and Cultural Studies: Method and Theory	Covers how scholars in social and cultural studies think, argue, research and write. Traces the changing definition of fields such as American studies, ethnic studies, and women and gender studies. Studies these fields in relationship to 20th-century social movements and related theoretical categories including Marxism, cultural studies and class; feminism, gender and sexuality; and post-Colonialism, race and ethnicity. Covers basic archival and ethnographic research techniques underlying interdisciplinary research methods in these fields.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: Minimum 36 hours
HRC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HRC	480	Capstone: Practices and Approaches	Examines theoretical, methodological and epistemological issues in American studies, women and gender studies, and ethnic studies. Studies a wide variety of interdisciplinary theories, methodologies and epistemologies from an intersectional analysis of race, class, gender and sexuality in national and transnational contexts. Places special emphasis on historical definitions and debates on the relationship among theory, activism and praxis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): AMS 201 or ETH 100 or HRC 200 or WST 100

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HRC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
HRC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HRC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		
HRC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
HSC	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
HSC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
HSC	210	Cultural Aspects of Health	Examines how culture influences health, healthcare practices, barriers to health care, interactions with healthcare professionals, and health disparities in the U.S. Addresses the need for cultural competence among health practitioners.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	C	
HSC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
HSC	300	Complementary Health Care	Evaluates the major components of complementary and alternative healthcare models and evidenced-based recommendations related to complementary healthcare.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 56 hours
HSC	304	Health Communication	Focuses on communicating topics related to health through an examination of the theoretical frameworks, communication techniques, and different technologies including ehealth and mhealth. Addresses communication through channels that promote the health of individuals and communities. Topics may include clinician to client communication, peer to peer communication, health literacy, health in the media, and effective public health communication.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only HSC 304 or HSC 394 (Health Communication)
HSC	310	Health Literacy: Creating Healthy and Active Schools	Signature course for elementary educators and special education educators in order to prepare future teachers with the knowledge, skills, and dispositions to teach healthy and active content knowledge and to create healthy and active school environments.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Co-requisite: One of the following: ECD/EED/SED/SPE 396/397/478/496, PPE 474/484 or TEL 484; Credit is allowed for only HSC or PPE 310
HSC	320	Applied Medical/Healthcare Ethics	Integrates the theory and practice of ethics within health-related disciplines and the application of bioethics by health science professionals, including health disparities.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	HU	Prerequisite(s): PHI 101 (or PHI 103, 306 or 314) OR Medical Studies major with PSY 101 (or SOC 101)
HSC	330	Health Care Systems in the U.S.	Presents and integrates the organization, financing, and delivery of health services in the United States from the professional, organizational, community, and systems perspectives.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCD 101 or HCR 210 or HSC 320 or MED 100 or PBH 100
HSC	332	Health Care Legislation	Provides an overview of the federal/state health policy legislative process, how it is implemented in institutions, and its effect on health science professionals and delivery of services.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 210 or HSC 320; HCR 220 or HSC 330; Credit is allowed for only HSC 332 or HSC 494 (Health Care Legislation)
HSC	340	Changing Health Behaviors	Comprehensive review of the theoretical bases of health behavior change. Students gain the knowledge to identify behaviors associated with optimal health and wellness and to develop theory-based intervention strategies and techniques to effectively influence behavior change.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 230 or HSC 210; PSY 101 (or PGS 101); Credit is allowed for only HSC 340 or HSC 394 (Changing Health Behaviors)
HSC	355	Eating for Lifelong Health	Examines dietary choices throughout the life span and how they impact personal health and wellness. Prepares health and wellness team members to evaluate consumer and professional materials on dietary choices.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): NTR 100 or NTR 241
HSC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
HSC	400	Practicum in Health Sciences	Supervised experience in area of student specialization. Students are placed with an agency, organization, business, and/or facility that meets their specific academic goals.	N	PRA	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Health Sciences Senior student

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HSC	401	Professions and Practices in the Health Sciences	Provides the opportunity to explore career options within the health sciences, compare credentialing/licensure requirements across the U.S., describe professional organizations and societies related to the health sciences, evaluate employment trends in the health sciences, and interview professionals currently active in a health sciences-related field.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: HSC 320
HSC	410	Supporting the Health of Older Adults	Focuses on community and national policies and programs that affect the health of older adults, programs to improve access to healthcare as well as to improve overall health, issues related to family and professional caregiving, and future challenges related to caring for older adults.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 230 or HSC 210 or Medical Studies major; Credit is allowed for only HSC 410 or HSC 394 (Supt Health Older Adult)
HSC	412	Health Issues in Later Life	Focuses on health issues that primarily affect adults ages 50 years and over as related to nutrition, physical activity, environmental toxins. Focuses on exploring those factors known to promote healthy aging.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 230 or HSC 210; Credit is allowed for only HSC 394 (Health Issues in Later Life) or HSC 412
HSC	420	Evaluation of Health Sciences Research	Investigates methods of inquiry in health sciences and techniques for critiquing and interpreting research within the context of evidence-based practice.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): POS 401 (or PSY 230 or 231 or SOC 390 or STP 226 or 231 or 420) OR Medical Studies major with HCD 300 (or HSC 320)
HSC	432	Legal Issues in Health Care	Legal doctrines provide protection of consumers, health care providers, and health care institutions with regard to health care delivery including access and cost. Provides an overview of the legal obligation and rights of private and public stakeholders in the delivery and receipt of health care services.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 220 or HSC 330 or HSC 332
HSC	435	Environmental Health Issues in the U.S.	Environmental health designed to address public health issues.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 230 or HSC 210; Credit is allowed for only HSC 394 (Envrnmtal Hlth Iss in U.S.) or HSC 435
HSC	440	Health Coaching Concepts and Skills	Health coaching techniques and skills for health promotion professionals with emphasis on the practical application of brief intervention and motivational interviewing skills to promote healthy lifestyle changes.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: HSC 210; PGS 101; Credit is allowed for only HSC 440, 498 (Health Coaching Concepts Skill) or NTR 530
HSC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	YGB	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): minimum 3.00 GPA
HSC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-6		Prerequisite(s): Barrett Honors student
HSC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6	L	Prerequisite(s): Barrett Honors student
HSC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
HSC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-7		
HSC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
HSD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	501	Science and Technology Policy	Provides an in-depth introduction to theoretical perspectives on the role and place of science in democratic societies and democratic governance. Emphasizes how the ideas, ideologies, and practices of science are integrated into the design and implementation of government decision making, as well as how science both shapes and is shaped by the political organization and ordering of society. Pursues such questions in the context of U.S. politics, comparatively between the U.S. and Europe, and in emerging regimes of international governance.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only HSD 501 or POS 571

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HSD	502	Advanced Science and Technology Policy	Focuses on the role of knowledge and expertise in political and policy decision making. Particular emphasis is placed on the analysis of knowledge systems (formalized institutional approaches to the production, validation, and use of knowledge and expertise in policy decision making), their modes of failure, and the design of approaches that may be able to prevent, avoid, or reduce the frequency of such failures.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): HSD 501 or POS 571 with B or better; Credit is allowed for only HSD 502 or POS 572
HSD	503	Governing Emerging Technologies	Examines the governance of science and technology through a focus on emerging technologies whose potential consequences in society are apparent only in anticipation and whose manifestations are still being shaped by local, domestic, and international institutions. These emerging technologies include nanotechnologies, synthetic biology, and other technologies associated with genetic modification, and information and cognitive science and neuro-technologies.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only PAF 550 or HSD 503 or POS 573
HSD	504	Analysis of Large-Scale Socio-Technological Systems	Provide skills and methods to analyze the design and management of large-scale socio-technological systems and the societal impacts of large-scale technological systems change. Emphasizes assessing the intertwining of lives and livelihoods in large-scale technological systems and the risks and vulnerabilities associated with large-scale systems failures, including the effects of both technological failures and natural hazards.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	505	Science and Technology Policy Workshop	Provides the capstone experience for the Professional Science Master's in Science and Technology Policy. Builds on theoretical and analytical work carried out in the program's required courses, providing an integrative experience that requires students to synthesize knowledge gained in prior coursework and apply it to real-world policy problems and settings. By blending exposure to national science and technology policy officials and nationally recognized academic experts, the workshop both advances student learning beyond that possible in the classroom while encouraging students to expand their abilities to connect theoretical and practical insights. At the same time, the workshop provides a natural transition from the student's formal classroom learning to their required applied policy internships, which commences upon the end of the workshop.	N	SEM	N	YGB	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	515	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BIO 515 or GLG 547 or HSD 515 or PAF 547 or SOS 516
HSD	517	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
HSD	540	Responsible Innovation and Research	Movements throughout Europe and increasingly the U.S. are beginning to consolidate the recognition of the profound effects that research outcomes have upon the world under the idea of responsible innovation and research. The responsible innovation and research pushes beyond the responsibilities of the individual researchers and addresses larger issues such as research agenda setting, management of large-scale research and innovation enterprises, funding priorities and innovation as a national policy priority. Explores the idea of innovation as a national policy; the practical and theoretical underpinnings of responsibility in the research world; the history, current state and future trajectories of responsible research and innovation. Focuses on the current literature in the field.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		
HSD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HSD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	601	HSD I: Human Dimensions of Science and Technology	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	4		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only HSD 601 or POS 671
HSD	602	HSD II: Science, Power and Politics	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology. Continuation of HSD 601.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	4		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only HSD 602 or POS 672
HSD	610	Colloquium	Regular meeting for the entire HSDST community. Includes outside speakers, student and faculty member presentations, and community discussions.	N	SEM	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	GRD	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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HSD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Future of Innovation in Society	School for the Future of Innovation in Society	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	220	Health Care Organizations	Overview of United States healthcare delivery systems; financing, health policy, basic principles of budgeting, cost-benefit analysis, and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3	H	
HSM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
HSM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Prerequisite(s): Barrett Honors student
HSM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	502	Health Care Organization	Concepts, structures, functions, and values that characterize contemporary healthcare systems in the United States.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	505	Managerial Epidemiology I	Basic constructs and measures of epidemiology. Epidemiologic study designs. Potential impact of chance, bias, confounding, on an epidemiologic study. Causal criteria; levels of evidence in epidemiological studies, implications and limitations of statistical association.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 561 or ECN 501 with C or better.
HSM	512	Healthcare Economics	Economics of production and distribution of healthcare services, with special emphasis on the impact of regulation, competition, and economic incentives.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	522	Health Sector Information Management	Information technology and knowledge management applications in the health sector, including care delivery and financing institutions and in the pharmaceutical and biotechnology industries.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	542	Healthcare Law	Legal aspects of healthcare delivery for hospital and health services administration. Legal responsibilities of the hospital administrator and staff.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	561	Biostatistics	Aspects of descriptive statistics and statistical inference most relevant to health issues, including data, rates, and confidence intervals.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	564	Health Care Finance	Overview of the acquisition, allocation, and management of financial resources by healthcare providers. Focuses on economic, financial, and accounting principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	565	Introduction to Health Policy	Current policy issues in health through concepts of access, cost, and quality; issues relating to disease trends and policy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	589	Healthcare Strategic Management	Capstone assessment of current policies, problems, and controversies across the broad spectrum of health services administration.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HST		Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU & H & G	
HST	100	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	
HST		Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H & G	

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HST	101	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU & H & G	Credit is allowed for only HST 101 or SGS 111
HST		Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST 101 or SGS 111
HST		Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H & G	Credit is allowed for only HST 101 or SGS 111
HST	102	Western Civilization: Ancient and Medieval Europe	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	
HST		Western Civilization: Ancient and Medieval Europe	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST		Western Civilization: Ancient and Medieval Europe	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	
HST	103	Western Civilization: Renaissance to Enlightenment	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & H	
HST		Western Civilization: Renaissance to Enlightenment	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	
HST		Western Civilization: Renaissance to Enlightenment	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	
HST	104	Western Civilization: French Revolution to European Union	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & G & H	
HST		Western Civilization: French Revolution to European Union	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G & H	
HST		Western Civilization: French Revolution to European Union	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & G & H	
HST	106	Asian Civilizations	Civilizations of China, Japan, and India from antiquity to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G & H	
HST	107	Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G & H	
HST		Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	
HST	108	Introduction to Japan	Historical survey of the people, culture, politics, and economy of Japan, supplemented by audiovisual presentations. Intended for nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	
HST		Introduction to Japan	Historical survey of the people, culture, politics, and economy of Japan, supplemented by audiovisual presentations. Intended for nonmajors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G & H	
HST	109	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & H	
HST		United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	
HST		United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	
HST		United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	
HST	110	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST		United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	
HST	111	Introduction to Asia	Offers a basic introduction to the geography, history, cultures, states, and societies of South and Southeast Asia as well as China, Japan, and Korea.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST or REL 111
HST	112	Foundations of Democracy	Introduces an interdisciplinary study of democracy with special attention to its historical development as a form of government.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Credit is allowed for only HST, POS 112 or HST 194 (Foundations of Democracy)
HST	113	United States and Arizona Social Studies	Introduction to the United States and Arizona from the integrated social science perspectives of history, geography, and government.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Credit is allowed for only GCU 113, HST 113, or GCU 194, US & AZ for Aspiring Elmtly Ed
HST	114	World Social Studies	Introduction to the world from the integrated social science perspectives of history, geography, and government.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Credit is allowed for only GCU or HST 114
HST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing, Maximum 25 hours
HST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HST	200	Historical Themes	General introduction to selected themes in history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	

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HST	201	Historical Themes in Asia	General introduction to selected themes in Asian history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST	203	Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	
HST		Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST	204	Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	
HST		Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST	210	American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or SB) & H	
HST		American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	
HST	211	Jews and Judaism in America	Chronological analysis of Jews and Judaism in American history and letters.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Credit is allowed for only HST 211 or JST 211 or REL 211
HST	230	Introduction to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST, JST or REL 230
HST	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
HST	245	Introduction to South Asia	Provides an introduction to the history and major contemporary political, economic, social, religious and cultural features of the South Asia region at large and of selected South Asian nations in particular.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Pre-requisites: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only HST, REL, SGS 245 or REL 294 (Introduction to South Asia)
HST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HST		Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education - History, students; Minimum 45 earned hours; ENG 102, 105 or 108 with C or better
HST	300	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education - History, students; Minimum 45 earned hours; ENG 102, 105 or 108 with C or better
HST		Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education - History, students; Minimum 45 earned hours; ENG 102, 105 or 108 with C or better
HST	301	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisites: SSH 100, ASB 100, HST 100, or HST 101 with C or better; Credit is allowed for only ASB, HST or SSH 301
HST	302	Studies in History	Specialized topics in history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	303	Studies in Asian History	Specialized topics in Asian history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	304	Studies in European History	Specialized topics in European history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 304 or JST 304
HST	305	Studies in Latin American History	Specialized topics in Latin American history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Studies in Latin American History	Specialized topics in Latin American history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	
HST	306	Studies in United States History	Specialized topics in United States history. Explores regions, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Studies in United States History	Specialized topics in United States history. Explores regions, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	307	Studies in African History	Specialized topics in African history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	308	History and Philosophy of Sustainability	Examines sustainability issues in a broadly interdisciplinary way, but with a special emphasis on humanities perspectives, focusing on human ideas, values and institutions as they have evolved over time.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours; Credit is allowed for only HST 308 or PHI 322 or SOS 309 or BIO/HST/PHI/SOS 394 (History & Philosophy of Sustainability)
HST	309	Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	310	Film as History	In-depth study of moving image media as recorder, object, and writer of history.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Film as History	In-depth study of moving image media as recorder, object, and writer of history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	312	History of Women in Science and Medicine	In-depth inquiry into the history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU or SB	Pre-requisite: ENG 102, 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only HPS or HST 312
HST		American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 320 or HST 313
HST	313	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 320 or HST 313
HST		American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 320 or HST 313

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST		American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 321 or HST 314
HST	314	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 321 or HST 314
HST		American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 321 or HST 314
HST	315	Political History of the U. S.	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Political History of the U. S.	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	316	20th-Century U.S. Foreign Relations	U.S. relations with foreign powers from the late 19th century to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		20th-Century U.S. Foreign Relations	U.S. relations with foreign powers from the late 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisites: ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	317	History of Postwar U.S. Conservatism	Traces the origins of U.S. conservatism as it developed in the work of U.S. and European thinkers, intellectuals and authors after WWII.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only HST 294 (American Conservatism), 317 or POS 317
HST	318	History of Engineering	The history of engineering from the earliest record to modern times, examining the social, cultural, and economic effects on society.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or SB) & G	Pre-requisite: ENG 102, 105, 108 or ENG 112 with C or better; Minimum 45 hours
HST		History of Engineering	The history of engineering from the earliest record to modern times, examining the social, cultural, and economic effects on society.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & G	Pre-requisite: ENG 102, 105, 108 or ENG 112 with C or better; Minimum 45 hours
HST	320	U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	321	Constitutional History/US to 1865	Origin and development of the American constitutional system from colonial period through the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	322	Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST		Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	
HST	323	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101 with C or better; ENG 102 with C or better; Credit is allowed for only AFR 335 or HST 323 or TCL 335

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HST	325	Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H & C	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H & C	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	326	The Global History of the Trans-Atlantic Slave Trade	Reading- and writing-intensive course that employs critical thought to look at the origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or HST 109 or minimum 45 hours; Credit is allowed for only AFR 305 (or AFH 305) or HST 326
HST		The Global History of the Trans-Atlantic Slave Trade	Reading- and writing-intensive course that employs critical thought to look at the origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or HST 109 or minimum 45 hours; Credit is allowed for only AFR 305 (or AFH 305) or HST 326
HST	327	Women in U.S. History, 1600 to 1880	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Women in U.S. History, 1600 to 1880	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	328	Women in U.S. History, 1880-1980	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Women in U.S. History, 1880-1980	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Women in U.S. History, 1880-1980	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Women in 20th-Century U.S. West	Nuanced exploration of how women of various cultures have contended for and shaped the U.S. West, including the West of imagination.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	H & C	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	331	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H & C	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST or TCL 331
HST	332	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H & C	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST or TCL 332
HST	333	African American History to 1865	In-depth examination of African Americans' roles in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H & C	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 363 (or AFS 363) or HST 333
HST	334	African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
HST		African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST		African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
HST	335	History of Black Women in America	Advanced examination of the challenges that black women have faced historically in America and how they have responded to those challenges socially, politically, economically, and culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 302 (or AFS 302) or HST 335 or WST 302
HST	337	American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	338	American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	340	American Military History	Studies the role of the military in American life during war and peace from colonial times to the present day.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		American Military History	Studies the role of the military in American life during war and peace from colonial times to the present day.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 341 or HIS 320
HST	341	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 341 or HIS 320
HST		U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 341 or HIS 320
HST	342	U.S. West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		U.S. West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	343	American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	344	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours

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HST	344	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	345	Environmental History	Examines the interaction between humans and the natural world in the United States from the late 19th century to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST		Environmental History	Examines the interaction between humans and the natural world in the United States from the late 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	346	Ancient Greece II: Late Classical and Hellenistic Period	Trace transformation of the Greek world between the end of the Peloponnesian War (404 B.C.) and the absorption of the last major Greek state by growing power of Rome (30 B.C.), with special attention to how Greeks in this period lived and thought and how the period's political and economic changes helped to create new forms of culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites; ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST		Ancient Greece II: Late Classical and Hellenistic Period	Trace transformation of the Greek world between the end of the Peloponnesian War (404 B.C.) and the absorption of the last major Greek state by growing power of Rome (30 B.C.), with special attention to how Greeks in this period lived and thought and how the period's political and economic changes helped to create new forms of culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisites; ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	347	Ancient Greece I: Bronze Age through the Peloponnesian War	Traces Greek History from its prehistoric beginnings through the Peloponnesian War (431-404 B.C.), with a special focus on the Archaic (ca. 800-480 B.C.) and Early Classical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Ancient Greece I: Bronze Age through the Peloponnesian War	Traces Greek History from its prehistoric beginnings through the Peloponnesian War (431-404 B.C.), with a special focus on the Archaic (ca. 800-480 B.C.) and Early Classical periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	348	Rome	History and civilization of Rome from the beginning of the Republic to the end of the Empire.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Rome	History and civilization of Rome from the beginning of the Republic to the end of the Empire.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	349	Early Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 5th through 10th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	350	Later Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 11th through 15th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Later Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 11th through 15th centuries.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	351	Renaissance Europe	Culture of the Renaissance in Italy and Northern Europe from the 14th to the early 16th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	352	Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	353	Old Regime in Europe	Society and culture of Europe during the 17th and 18th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	354	Revolutionary Europe	Political, social, economic, and intellectual currents in Europe from the French through the Russian Revolutions.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Revolutionary Europe	Political, social, economic, and intellectual currents in Europe from the French through the Russian Revolutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Total War and the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	355	Total War and the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Total War and the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	356	Europe since 1945	Europe in its world setting since World War II, emphasizing major political and social issues from 1945 to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Europe since 1945	Europe in its world setting since World War II, emphasizing major political and social issues from 1945 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	357	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite: ENG 102, 105 or ENG 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357 or PHI 391 or REL 391
HST		Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite: ENG 102, 105 or ENG 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357 or PHI 391 or REL 391
HST	358	Jewish History from Antiquity to 1492	Continuity and change in political, legal, economic and sociocultural history of the Jews from ancient through medieval times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	359	Jewish History from 1492 to 1948	Jewish history from early modern through modern times, highlighting emancipation, enlightenment, and Jewish responses to modernity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	360	The Crusades: Religion & Conflict in the Middle Ages	Examines the origins, the development, and the outcomes of the movement that we call "crusades" by connecting the military aspect of the crusades to broader developments. Focuses primarily, but not exclusively, on the period 1095-1453. Geographically covers chiefly the Mediterranean, and, to a lesser extent, northeastern Europe.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; minimum 30 hours; Credit is allowed for only HST 360 or 394 (Crusades in the Middle Ages)
HST	361	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours. Credit is allowed for only HST 361 or REL 374
HST		Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours. Credit is allowed for only HST 361 or REL 374
HST	362	Sex and Society in Classical and Medieval Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and religious change in classical and medieval Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Sex and Society in Classical and Medieval Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and religious change in classical and medieval Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	363	Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	364	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours

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HST	364	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	365	World Wars I and II: Europe's Eastern Front	In-depth study of the history of the Eastern Front in Europe in the two world wars.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 365 or 394 (WWI and WWII Eastern Front)
HST	366	England to 1689	In-depth examination of the political, economic, and social development of the English people to the late 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	367	Modern Britain	In-depth examination of the political, economic, and social development in Britain from 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	368	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	368	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	369	History and Memory of the Holocaust	In-depth study of the history of the genocide of Jews, the rise of modern antisemitism within the context of Nazi Germany, and the memory and memorialization of the Holocaust post 1945.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 369, 304 (Shoah: History, Memory, and Representation), 394 (History of the Holocaust) or REL 312
HST	370	Eastern Europe in Transition	Democratization, privatization, and identity transformations since the fall of communism in contemporary Eastern Europe and the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	371	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 371 or REL 377
HST	372	Modern Middle East	In-depth examination of the effect of the West and modernization on Middle Eastern governments, religion, and society in the 19th and 20th centuries.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G & H	Pre-requisite: Minimum 24 hours
HST	372	Modern Middle East	In-depth examination of the effect of the West and modernization on Middle Eastern governments, religion, and society in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: Minimum 24 hours
HST	373	Roman History I: Foundations and Republic	Traces the growth of Roman power from Rome's humble beginnings in the eighth century B.C. to its domination of the Mediterranean and the transformation of the Roman Republic into the Roman Empire after the Battle of Actium (31 B.C.).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	374	Roman History II: The Roman Empire	The Roman Empire from the reign of the first emperor, Augustus (27 B.C.-A.D. 14), to that of Justinian (A.D. 527-565), focusing on the lives of the Roman emperors, the society and culture of the empire, and the profound changes that eventually contributed to the empire's collapse.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours
HST	375	Colonial Latin America	Ancient civilization, exploration and conquerors, and colonial institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	375	Colonial Latin America	Ancient civilization, exploration and conquerors, and colonial institutions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	376	Modern Latin America	In-depth examination of the development of independent Latin American republics since 1821.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	376	Modern Latin America	In-depth examination of the development of independent Latin American republics since 1821.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours

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HST	378	Latin American Women: The National Period	In-depth study of the history of women, gender relations, and state policies in a broad continental setting, from independence to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	383	China	Political, economic, social, and cultural history of the Chinese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 333, HST 383 or SLC 333
HST	384	China	Political, economic, social, and cultural history of the Chinese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	385	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only CHI 335, HPS 325, HST 385 or SLC 335
HST	386	Interpreting China's Classics	Study of selected Confucian and/or Taoist classics and ways they have been read in both Asian and Western scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 336, HST 386 or SLC 336
HST	387	Japan	Political, economic, social, and cultural history of the Japanese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	388	Japan	Political, economic, social, and cultural history of the Japanese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	389	Japan Society and Values/Premod	Effects of economic and social transitions on personal and social values as reflected in the dramatizations of contemporary events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST		Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
HST	390	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
HST	391	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 391 or SGS 381
HST	392	Modern India	In-depth study of modern India and its neighboring countries from the 18th century to the present.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 392 or HST 303 (Modern South Asia) or HST 394 (Modern South Asia)
HST		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours

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HST		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	397	Greece and Rome at War	Familiarizes students with the major battles, leaders and tactics of Classical Greece and Rome. Supplements lectures with student participation including study of original sources, group presentations, and gaming battle simulations. This multifaceted approach gives a greater sense of the evolution of the leaders, armies and tactical systems of the Greeks and Romans.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 360, HST 397, LAT 360, SLC 360 or SLC 394 (Greece and Rome at War)
HST	400	Topics in American Historical Periods	Focuses on specific periods in American history. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
HST	404	Conquest and Encounters in Colonial Latin America	How did Hernan Cortés and Francisco Pizarro defeat the Aztec and Inca Empires? Despite numeric inferiority, limited provisions, and little knowledge about the Americas, Cortés and Pizarro defeated advanced civilizations that had experienced warriors and millions of inhabitants. Possible explanations include the conquistador's valor, advanced weaponry, superior military strategy, Indian allies, and biological attacks. In their encounters with native peoples of the Americas, Europeans were not always conquerors. Álvaro Núñez Cabeza de Vaca and Lope de Aguirre failed both in their attempt to conquer a large Indian civilization and in their effort to find mineral wealth. A few Europeans such as Bartolomé de Las Casas spoke out against the abuses committed against the Indians during the conquest. Explores these issues from the perspective of both Europeans and native peoples and looks at the long-term impact for Latin America and its peoples.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 404 or HST 494 (Conquest & Encounters)
HST	405	Colonial American History to 1763	Political, economic, social, and cultural history of the colonial era. Concentrates on English colonies, with some consideration of Spanish, French, and other colonial regions in North America.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		Colonial American History to 1763	Political, economic, social, and cultural history of the colonial era. Concentrates on English colonies, with some consideration of Spanish, French, and other colonial regions in North America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	406	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	407	Early U.S. Republic/1789-1850	Political, social, economic, and cultural development of the United States from the Revolution to 1850.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		Early U.S. Republic/1789-1850	Political, social, economic, and cultural development of the United States from the Revolution to 1850.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	408	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	409	Emergence Modern U.S. 1877-1918	Triumph of modern political, social, and economic structures and values, 1877-1918; role of region, religion, race, and ethnicity.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		Emergence Modern U.S. 1877-1918	Triumph of modern political, social, and economic structures and values, 1877-1918; role of region, religion, race, and ethnicity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours

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HST	410	Modern U.S., 1918 to1945	1920s boom and the crash, the Depression and the New Deal response. The Second World War at home and abroad.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	411	Postwar U.S., 1945-1973	Cold War, prosperity, reform, and immense social and political change in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	412	Contemporary U.S., 1973- Present	End of the Cold War, political crises, and cultural transformations in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		Contemporary America	The United States from 1945 to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	413	Contemporary America	The United States from 1945 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		Contemporary America	The United States from 1945 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	414	Political Thought and Leadership	Research seminar in political values and leadership. Combines lecture, readings and guest lectures by leaders in business, public affairs and the media. Culminates in a substantial written research effort.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; HST 112 with C or better; minimum 55 hours; Credit is allowed for only HST 414 or POS 414
HST	415	Unequal Sisters: Women and Political and Cultural Change	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H & C	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		Unequal Sisters: Women and Political and Cultural Change	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or SB) & H & C	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	416	Western Rivers	Examines the relation between rivers, culture, and environment in the American West.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L & H	Pre-requisites: ENG 102, 105, 108 or 112 with C or better; Minimum 55 hours
HST	418	The Hispanic Southwest	Development of the Southwest in the Spanish and Mexican periods to 1848.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	
HST	419	20th Century Chicano/a History	Historical development of the Chicano community in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
HST	423	The Tudor Monarchy	Political, cultural, and social foundations of 16th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	424	The Stuart Monarchy	Political, social, economic, and cultural developments in 17th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	426	The British Empire	British imperialism and colonialism in Africa, the Americas, Asia, and the South Pacific.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	427	French Revolution/Napoleonic Era	Conditions in Pre-Revolutionary and Revolutionary France; organization of France under Napoleon and impact of French changes upon Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	428	Modern France	Social, political, economic, and cultural transformations of French society, 1815-present. Impact of industrialization, war, and revolution on people's lives.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		Modern France	Social, political, economic, and cultural transformations of French society, 1815-present. Impact of industrialization, war, and revolution on people's lives.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	429	Modern Germany	Germany since 1871.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		Modern Germany	Germany since 1871.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	430	The Ottoman Empire in the Classical Period	Focuses on the largest and most powerful Islamic polity from the late Middle Ages until the early twentieth century; its formation, institutions, social and cultural life, and its multifaceted impact on Europe and the Near East.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 430 or HST 495 (The Ottoman Empire in the Classical Period) or HST 498 (The Ottoman Empire in the Classical Period)
HST	431	Eastern Europe and the Balkans, Pre-1914	Empire and nation in Eastern Europe and the Balkans before World War I, emphasizing Hapsburg and Ottoman lands.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	432	Eastern Europe the Balkans, 20th Century	Politics and culture in Eastern Europe and the Balkans from World War I to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	435	The Russian Empire	Development of Russian imperial institutions and civil society from the 17th to the early 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	436	The Soviet Experiment	In-depth study of Communist revolutionaries' rule of Russia, focusing on utopian culture, Stalinist terror, heroism in war, and the breakup of the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	438	Modern Spain	Cultural, economic, political, and social development of modern Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	441	Latin America and the World Economy	Globalization did not begin in the late twentieth century, but rather global trade has linked Latin America with the rest of the world for over five hundred years. The region has been an active and important participant in the world economy since Columbus's first voyage in 1492. This course explores the social, cultural, economic, and environmental impact of such participation on both Latin America and the rest of the world. It is organized both chronologically and thematically. We will study both colonial and post-colonial trade. The commodities studied include sugar, rubber, bananas, and cocaine.	N	LEC	N	OPT	New Interdis Arts & Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 441 or HST 305 (Latin America and the World Economy) or HST 494 (Latin America and the World Economy)
HST	443	The United States and Latin America	Latin American struggle for diplomatic recognition, attempts at political union, participation in international organizations since 1810, and relations between the United States and Latin America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	444	Latin American Independence	History of independence movements throughout the Western hemisphere from the late 18th century until the mid-19th century.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & G	Pre-requisites: ENG 102, 105, 108 or 112 with C or better; Minimum 55 hours
HST	445	20th-Century Cuba	History of Cuba from colonial era to formation of the early republic; political, economic, social development in late 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	447	Modern Mexico	In-depth examination of political, economic, social, and cultural developments in Mexico from 1810 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 55 hours. Credit is allowed for only HIS 423 or HST 447
HST	447	Modern Mexico	In-depth examination of political, economic, social, and cultural developments in Mexico from 1810 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 55 hours. Credit is allowed for only HIS 423 or HST 447
HST	448	Mexican/U.S. Border	Analyzes the evolution of the Mexican/U.S. border region from the mid-19th century to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: ENG 102, 105, 108 with C or better; Minimum 55 hours
HST	449	Mexican Immigration to the U.S.	Assesses the evolution of immigration and emigration public policy since the mid-19th century. Seeks to contextualize the relationship between immigration and other elemental nation-state issues as the economy, education, identity, and civil rights.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or SB) & H & C	Pre-requisites: ENG 102, 105, 108 with C or better; Minimum 55 hours
HST	450	Postmodern Mexico	Challenges historical myths about the evolution of the nation state and calls into question that globalization and transnationalism are only recent phenomena of the postmodern world.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & G	Pre-requisites: ENG 102, 105, 108 with C or better; Minimum 55 hours

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HST	451	Chinese Cultural History I	China's classics in translation studied both for their intrinsic ideas and for the origins of Chinese thought.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 451, HST 451 or SLC 451
HST	452	Chinese Cultural History II	Evolution of Confucian thought, its synthesis with Taoism and Buddhism, and modern reactions against, and uses of, Confucian traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 452 or HST 452 or SLC 452
HST	453	The People's Republic of China	Analyzes major political, social, economic, and intellectual trends in China since the founding of the People's Republic in 1949.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	454	History of Genocide	Examines the individuals and institutions responsible for the most infamous episodes of state-sanctioned violence in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G & H	Prerequisite(s): minimum 45 hours. Credit is allowed for only FOR 454 or HST 45
HST	456	The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	459	Gandhi and the Politics of Nonviolence	In-depth study of Gandhi and the Gandhian political philosophy and practice of nonviolence.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 55 hours. Credit is allowed for only HST 459 or HST 498, Gandhi: Politics of Non-Violence
HST	465	Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU or SB) & H	Pre-requisite: ENG 102, 105, 108 with C or better; Minimum 55 hours
HST		Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU or SB) & H	Pre-requisite: ENG 102, 105, 108 with C or better; Minimum 55 hours
HST		Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: Admission to Professional Teacher Preparation Program. Credit is allowed for only HST 480 or HST 530
HST	480	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Admission to Professional Teacher Preparation Program; ENG 102, 105, 108 with a C or better; Minimum 55 hours; Credit is allowed for only HST 480 or HST 530
HST		Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Admission to Professional Teacher Preparation Program. Credit is allowed for only HST 480 or HST 530
HST		Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: Admission to Professional Teacher Preparation Program; HST 480 with C or better

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HST	481	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Admission to Professional Teacher Preparation Program; HST 480 with C or better
HST		Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Admission to Professional Teacher Preparation Program; HST 480 with C or better
HST		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		
HST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
HST		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6		Prerequisite(s): Barrett Honors student
HST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Barrett Honors student; HST 300 (HIS 300) or 495 with C or better
HST		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
HST		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6	L	Prerequisite(s): Barrett Honors student
HST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Barrett Honors student; HST 300 (HIS 300) or 495 with C or better
HST		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
HST		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST		Methods of Historical Inquiry	Capstone course in history as an academic discipline, including formulation of research questions, use of primary and secondary sources to evaluate, form and support historical arguments. Students draft and revise a scholarly research paper.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): History or Secondary Education (History) student; ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 300 or HST 495 or JST 490
HST	495	Methods of Historical Inquiry	Capstone course in history as an academic discipline, including formulation of research questions, use of primary and secondary sources to evaluate, form and support historical arguments. Students draft and revise a scholarly research paper.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Prerequisite(s): History or Secondary Education (History) student; ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 300 or HST 495 or JST 490
HST		Methods of Historical Inquiry	Capstone course in history as an academic discipline, including formulation of research questions, use of primary and secondary sources to evaluate, form and support historical arguments. Students draft and revise a scholarly research paper.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): History or Secondary Education (History) student; ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 300 or HST 495 or JST 490

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HST	496	South, Southeast, and East Asia in the Global Matrix	In this capstone seminar, majors in Asia Studies take up broad comparative themes, integrating knowledge from the major's three tracks (East, South, and Southeast Asia) and executing a research project culminating in a major paper.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s) with C or better: ASB 240 (or GCU 240 or HST 111 or 240 or 245 or POS 240 or REL 240 or 245 or SGS 240 or 245); ENG 102 (or ENG 105, or 108); minimum 55 hours
HST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
HST		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-7	L	Pre-requisites: HST 200 or 300 (HIS 300) with C or better; History major with senior standing or Education-History student with minimum 75 hours
HST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7	L	Pre-requisites: HST 200 or 300 (HIS 300) with C or better; History major with senior standing or Education-History student with minimum 75 hours
HST		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: HST 200 or 300 (HIS 300) with C or better; History major with senior standing or Education-History student with minimum 75 hours
HST		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		
HST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
HST		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
HST	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	502	Public History Methodology	Introduces historical research methodologies, techniques, and strategies used by public historians. Readings, short papers, and guest speakers. Required for students in the public history concentration.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student
HST	515	Studies in Historiography	Methods and theories of writers of history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student
HST	520	Masters of Nonfiction	Students read and critically discuss works by well-known nonfiction writers to improve their own writing skills. Consists of weekly writing exercises, reviewed with workshop-style discussions centered on individual authors, themes or genres such as history, journalism, personal essays, biography, character profiles, travelogues, book reviews and op/ed commentary.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only HPS or HST 520
HST	525	Historical Resource Management	Identification, documentation, and interpretation of historic period buildings, sites, and districts. Emphasizes interdisciplinary efforts among historians, architects, and anthropologists.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student
HST	527	Historical Administration	Preparation of historians in administration of archives and historical sites, museums, societies, and offices in government agencies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student

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HST	532	Community History	Techniques and methods of community history emphasizing local resources. Required for community history option.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student
HST	573	Museum Administration	Formal organization and management of museums, governance, personnel matters, fund raising and grantsmanship, legal and ethical issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ASB 573 or HST 573
HST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: History MA or PHD student
HST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST		Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: History MA or PHD student
HST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST		Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST		Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-15		Pre-requisite: History MA or PHD student
HST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Pre-requisite: History MA or PHD student
HST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HST		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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HST	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Pre-requisite: History MA or PHD student
HST	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Pre-requisite: History MA or PHD student
HST	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HUD	301	Housing and Community Design and Development	Single- and multifamily housing, residential neighborhoods, and planned communities. Affordability in owner-occupied and rental housing. First-time, move-up, and adult markets.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	302	Housing Production Process	Development feasibility analysis, finance, contracts, land acquisition, community and permit presentation and negotiation, scheduling, cost control, marketing, and sales.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	361	Housing and Urban Development Studio I: Residential Design and Development	Affordable residential design, development, and production process.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Housing & Community Developmnt student; Passed Milestone; Co-requisites: HUD 301; HUD 363
HUD	362	Housing and Urban Development Studio II: Community Design and Development	Neighborhood and new community design and development process.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Housing & Community Developmnt student; HUD 361 with C or better; Co-requisite: HUD 302; HUD 364; HUD 403
HUD	363	Housing and Urban Development Seminar I: Residential Design and Development	Affordable residential design, development, and production process.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Housing & Community Developmnt student; Co-requisites: HUD 301; HUD 361
HUD	364	Housing and Urban Development Seminar II: Community Design and Development	Neighborhood and new community design and development process.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Housing & Community Developmnt student; Co-requisites: HUD 302; HUD 362; HUD 403
HUD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		

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HUD	401	Assisted Housing	Publicly subsidized and nonprofit housing. Policy, implementation, and administration. FHA, Section 8, FmHA, projects and scatter site, and tax considerations.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	402	Community Revitalization: Problems and Strategies	Public policy and strategies for neighborhood revitalization and community renewal. Preservation and adaptive reuse, gentrification, neighborhood safety, and related socioeconomic concerns.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	403	Advanced Topics in Housing and Urban Development	Varying topics, such as manufactured housing, homelessness, mortgage and finance in housing, housing abroad, marketing housing, and sustainable community development.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	461	Housing and Urban Development Studio III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction, cost management, and marketing.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Housing & Community Developmnt student; HUD 362 with C or better; Co-requisites: HUD 401; HUD 463
HUD	462	Housing and Urban Development Studio IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Housing & Community Developmnt student; HUD 461 with C or better; Co-requisites: HUD 402; HUD 464
HUD	463	Housing/Urban Dev Seminar III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction and cost management, and marketing.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Housing & Community Developmnt student; HUD 302 and HUD 364 with C or better; Co-requisites: HUD 401; HUD 461
HUD	464	Housing and Urban Development Seminar IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Housing & Community Developmnt student; Co-requisites: HUD 402; HUD 462
HUD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Housing & Urban Developmnt BSD student
HUD	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
HUD	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
HUD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
HUD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
HUM	530	Pop Culture America		Y	LEC	Y	CNV	Liberal Arts and Sciences	Division of Humanities	3		
HUM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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HUM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IAP	101	Art, Artist, and Culture	Provides an approach to art, creativity, and culture in global, historical, and contemporary contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
IAP	102	Foundations I: Performance Techniques and Composition	Focuses on practice-based studies of contemporary presentational strategies and techniques.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	103	Foundations I: Interdisciplinary Digital Media	Digital media studies and application of contemporary artists, processes, and presentation practices in interdisciplinary arts.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	104	Foundations I: Fundamentals of Sound Art	Investigates late 20th- and 21st-century sound art and our relationship with it.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	105	Foundations I: Fundamentals of Visual Art	Focuses on contemporary aesthetic concepts and language for interdisciplinary visual arts application. Introduces core concepts of visual design: the elements and principles of design and the creative process, the basics of drawing, color theory, typography and 2D design. Engages student in the fundamental aspects of design to build an adequate foundation and prepares for the next level of the study of interdisciplinary arts practice.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAP	201	Introduction to Interdisciplinary Arts	Considers interdisciplinarity in practical terms in all art forms. Also considers antecedents and cross-cultural issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
IAP	202	Perspectives on Interdisciplinary Arts and Performance	Social, cultural, and historical examination of interdisciplinary art and performance and a survey of current interdisciplinary work and approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
IAP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAP	301	Energetic Systems of Art: Collaboration in the Arts	Identifies and explores the energetic systems at work in the creation, performance, and perception of art.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	302	Cross-Cultural Perspectives on the Arts	Social and cultural perspectives of art and performance through a survey of historical and contemporary attitudes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	304	Traditions of the Avant-Garde and Experimental Art	Surveys 20th-century art movements and isms, including futurism, dada, surrealism, constructivism, realism, the Bauhaus, abstract expressionism, minimalism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	305	20th and 21st Century Art, Performance, and Media	Surveys artists, movements, and trends in the arts with an emphasis on interdisciplinary performance, media, and technology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	307	Art and War	Global interdisciplinary survey of the range of work created by artists in response to war, through time.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	
IAP	310	Women in Art	Cultural, historical, and social issues relating to the seeming scarcity of women artists and changing social contexts for women artists.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre/Co-requisite: ENG 101 or 105 with C or better; Credit is allowed for only IAP or IAS 310
IAP	321	Music Composition I	Study and implementation of specific compositional theories and procedures. May be repeated for credit when topics vary.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	322	Multitrack Digital Recording	Introduces students to theory and practice of Musical Instrument Digital Interface (MIDI) technology.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	324	The Voice and Performance	Involves all aspects of the human voice, including research, creation, and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	325	Sound Performance: Exploring Alternative Performance Groups	Utilizes innovative sound ensembles to explore all aspects of sound and its place in various art forms.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: BA Digital Culture major or BA Interdisciplinary Arts and Performance major; Pre/Co-requisite: IAP 201 or 202
IAP	331	Performance, Acting, and the Individual	Explores the concepts of the self, the subject, and the author as each pertains to the solo artist.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Minimum 45 hours
IAP	332	Technical Production for Interdisciplinary Arts	Develops basic technical knowledge and application of fundamental stagecraft techniques used in the creation and presentation of performance works.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	333	Directing for Performance	Explores various strategies for performance. Emphasizes nontraditional staging and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		

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IAP	334	Conceptual Development in the Arts	Conceptual development processes in the arts from initial idea to formal project proposals, grants, and production plans.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): BA Digital Culture major or BA Interdisciplinary Arts and Performance major or BA Performance and Movement major. Corequisite(s): IAP 201 or IAP 202
IAP	352	Seeing and Drawing	Develops drawing and seeing skills that are important not only to visual arts but also to music, dance, and theatre.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	354	Visual Representation	Explores materials, processes, and aesthetic concepts of art making through various media with readings on cultural perspectives and contemporary theory.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: BA Digital Culture major or BA Interdisciplinary Arts and Performance major; Co-requisite: IAP 201 or 202
IAP	355	Illusion and Vision	Inquiry into 2-D surfaces for visual representation and personal expression; includes readings on color theory, visual perception, and historical/cultural patterns.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	361	Digital Editing and Media Literacy	Investigates the approaches used in digital editing with a focus on interactivity, graphics, audio, and desktop video.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	CS	Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing or BA Digital Culture student
IAP	362	Games & Narratology	Focuses on design techniques for the writing of nonlinear and interactive stories in the video game development process. Compares and contrasts game writing with other creative writing such as short story, song writing, oral history, poetry, fiction and film. Examines, deconstructs and questions the game design approach commonly referred to as narratology. Inspects key texts in media and cultural studies for attitudes, ideas and thoughts on games and narrative in games. Uses materials, processes, and aesthetic concepts of level design and visual skills needed to create a video game using a game engine. Knowledge of introductory computer science recommended.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: ENG 101 and 102 with C or better; IAP 105 with C or better
IAP	363	Sound, Image, and Media	Interdisciplinary arts projects for experimental approaches to relating sound and visual image, accompanied by survey of historical and contemporary material.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	364	Documentaries	Media arts projects exploring new and experimental forms of visualization based upon an interdisciplinary survey of historical and contemporary examples.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	365	Digital Interactivity	Combines graphics, video, and animation with digital authoring tools for creation of interactive multimedia Web sites.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing or Digital Culture student
IAP	368	Digital Graphic Technologies	Employs technology used in contemporary graphic designs to design concepts and techniques for modeling and representation applications.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing or Digital Culture student
IAP	371	Verbal Art	Examines varieties of verbal art in everyday life, literature, oral and literate cultures. Considers diverse cultural forms and values.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	375	Contemporary Performance: Theories and Practice	Performance course focusing on elements of contemporary and digital performance in relationship to stage, new technologies, video, installations, and public art. Through interdisciplinary strategies, students gain tools to deepen their knowledge and range of performance. Requires students to engage in research, conceptualization, and the creation of new original work, combining classroom workshops, various readings, fieldwork, and production to emphasize interdisciplinarity, collaboration, and personal vision. Once theories and concepts are explored, students work in a conceptually based and physically rigorous environment toward producing new work, culminating in a final performance project.	N	STO	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): BA Digital Culture major or BA Interdisciplinary Arts and Performance major or BA Performance and Movement major. Corequisite(s): IAP 201 or 202
IAP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAP	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420

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IAP		Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
IAP	421	Composition: Process, Technique, and Style II	Advanced study of specific compositional theories and procedures; in-depth analysis of individual work.	N	LEL	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	431	Perspectives on Performance and Acting	Focuses on the interaction of the performer with media, alternative stagings, and collaboration with other performers.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	433	Directing Workshop	Applies experimental directorial techniques to presentations and deconstruction of classical works including European and cross-cultural traditions.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Credit is allowed for only IAP 433 or MAS 598 (Directing Workshop)
IAP	434	Production Laboratory	Develops original scripts into showcase productions. Students function as theatrical ensemble, participate in all phases of performance and production values.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	441	Movement for Performance	Explores the relationship of movement as it relates to performance, both historically and cross-culturally.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	462	Games and Play	Focuses on a study of play and game design. Discusses what play is and why humans need it as it pertains to game design. Considers and analyzes an examination of the dark side of play. Scrutinizes the concept of what critical play is and how games are working within social, political and cultural systems. Studies these concepts as the students design and execute a serious or artistic game demo using the materials, processes, aesthetic concepts of art making and scripting skills needed to create a video game using a 3D game engine. Knowledge of introductory computer science recommended.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: IAP 105 with C or better
IAP	464	Media and Diversity	Interdisciplinary art projects exploring identity, perception, and technologies from a basis of class, race, ethnicity, gender, sexuality, and ecology.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	
IAP	465	Media Technologies and the Arts	Practical explorations of media arts interrelated with cultures, society, and technology, addressed through readings, discussion, research, and student arts projects.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	466	Digital Interactivity, Advanced	Advanced multimedia authoring skills for creation of interactive works in DVD, CD ROM, and other media formats.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing students
IAP	467	Acoustic Ecology	Investigations into the relationship between audio art and ecology; covers field recording, oral histories, digital editing, and designing audio Web site and databases.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	468	Digital Graphic Applications	Targeting, planning, design, authoring, development, and presentation of professional digital media graphics for Internet and print.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing students
IAP	469	Advanced Audio Production	Engages advanced media students in the technical, logistical, and aesthetic concerns specific to audio in all forms of digital media.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	471	Language, Culture, and Performance	In-depth examination of language in myth, poetry, social and aesthetic performance genres.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	473	Aesthetic Research	Investigates how artists, in all disciplines and from different historical periods, conduct or participate in research.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	474	Art and Film	Focuses on film as an art form in relation to the arts through aesthetics, cinematic theory, period study.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	480	Senior Project	Capstone course. Students develop an exit project for the IAP degree under the guidance of an advisor.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3-6		
IAP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
IAP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
IAP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
IAP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IAP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
IAP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IAS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
IAS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAS	210	From Passion to Practice: Charting Your Path	Part self discovery, part professional boot camp, this highly interactive course allows students to explore their strengths and passions and utilize them most effectively in their careers. Drawing upon the expertise of successful leaders, organizations and guest speakers from diverse professions, students learn skills and methodology that prepare them for entry into a fulfilling profession.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Credit is allowed for only IAS 210 or IAS 294 (Passion to Practice: Charting Your Path)
IAS	220	Psychology, Multicultural Narratives, and Religion	Examines contemporary multicultural life narratives that explore diversity in America and the authors' constructions of psychological identity and religious values.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Pre-requisite: ENG 101 or 105 with C or better
IAS	225	Building a Better You	Equips students to manage their lives effectively and integrate beliefs, values and skills into fulfilling careers. Students develop a focused career path based upon their learning profile, interests and self-knowledge. Develops critical thinking and reading skills needed for effective decision making and communication. Uses the Let Me Learn Advanced Learning System® to enhance self-awareness and growth.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
IAS	300	Adult Career Development	Analysis of sociological and economic factors of 21st-century work environments, integrated with a psychological understanding of adult development.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or SB	Pre-requisites: ENG 101 or 105 with C of better or Applied Science student
IAS	305	Work and Identity	Explores the relationship between work and identity, as well as the search for meaning in work across generations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	
IAS	324	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
IAS	340	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-reqs for IAS 340. Credit is allowed for only BIO 312 or IAS 340 or PHI 320
IAS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAS	401	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Credit is allowed for only IAS 410, MAS 598 (Sacred Scriptures & Social Choices) or REL 401
IAS	406	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 101 or 105 or 107 with C or better. Credit is allowed for only FOR 406 or IAS 406 or PHI 406
IAS	407	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisite: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
IAS	409	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Credit is allowed for only IAS 409 or PHI 409
IAS	410	Evolution of Ideas	Investigates ideas (paradigms) and revolutions (paradigm shifts). Examines several topics from perspectives of science, arts, humanities, social sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisite: ENG 101 or 105 with C or better
IAS	411	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Credit is allowed for only IAS 411 or MAT 411
IAS	415	Life in the Universe	Examines the search for life in extreme environments on Earth and in remote locations beyond Earth.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		

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IAS	416	Black Holes and Beyond	Explores developments in understanding nature's most basic force-gravity-from Aristotelian concepts to modern theories of curved space-time.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAS	420	Multicultural Autobiographies	Examines the human experience via autobiographies and personal narratives. Multicultural, literary, and psychological perspectives on individual lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits; Credit is allowed for only ENG or IAS 420
IAS	430	Science and Religion	Examines evolving relationships between scientific thought and Western and Eastern religious thought. Explores cosmologies, worldviews, and epistemologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisite: ENG 101 or 105 with C or better; Credit is allowed for only IAS 430 or MAS 510
IAS	477	World Literature	Introduces world literature, mostly outside the United States and England.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Letters and Sciences or New College undergraduate student with minimum 45 earned hours; Credit is allowed for only ENG 477 or IAS 477
IAS	480	Capstone: Practices and Approaches	Individualized projects developed by the student under the guidance of the capstone coordinator based upon the student's area of concentration. Provides an opportunity to apply the knowledge and skills developed in the course of their program to real-world situations.	N	RSC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): Interdisciplinary Arts and Sciences BA or Philosophy, Religion, and Society BA or Applied Science BAS major
IAS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
IAS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
IAS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
IAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		
IAS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
IAS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		
IBC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded and no grade is assigned.	Y	RSC	Y	Z3	College of Health Solutions	College of Health Solutions	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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IBC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	602	Healthcare Statistics	Provides an overview of contemporary issues in health statistics and develops student proficiency in completing hands-on statistical analyses using Microsoft Excel. Develops proficiency in using Excel to manage data analyses as an ongoing tool to collect and analyze clinical and cost-effectiveness data in primary care and related healthcare settings.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	604	Clinical Medicine/Pathophysiology	Overview of each of the main systems within the human body. Addresses the major diseases (symptoms, diagnosis, and medical treatments) within each system. Students learn appropriate medical terminology for symptoms, diseases, treatments, and medical tests so they can communicate effectively with medical practitioners (nurses and physicians). Content is equivalent to pathophysiology training in an RN program. Also addresses the role of behavioral care providers in medical settings; design and implementation of psychoeducational programs in primary care; stress management techniques for use in medical settings; chronic pain management; identification and treatment of somatization disorder; increasing compliance in noncompliant patients; alternative/complementary medicine; overview of nutrition; and the effects of exercise and nutrition on prevention and treatment of diseases.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	608	Psychopharmacology for the Behavioral Care Provider	Provides overview of psychopharmacology to equip the behavioral care provider with the understanding of psychotropic medications necessary to make prescription recommendations to primary care physicians and to participate in medication management for patients being prescribed psychotropics. Basic principles of pharmacology in general, including pharmacokinetics, pharmacodynamics, medication development and the FDA approval process, interaction effects, drug company marketing strategies, appropriate and inappropriate medication usage, over-medication, and off-label medication use. Pharmacokinetics and pharmacodynamics in special populations (children, the elderly, and patients with co-morbid medical and psychological conditions). The Biodyne protocol for medication management, with emphasis on determining which psychological disorders are likely to be medication responsive. Major classifications of psychotropic medications: stimulants, antidepressants, anxiolytics, antipsychotics, mood stabilizers, narcotics.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	609	Clinical Neuropathophysiology	Presents overview of each of the basic neuroanatomy, neurophysiology, and a focus on the manifestations of neurophysiological dysfunction across the life span for Doctor of Behavioral Health (DBH) program behavioral clinicians. Covers the basic human brain anatomy, neurophysiological processes, development, and maturation. Using case studies, presents and discusses evidence-based support for theories of psychiatric disorders and neuropsychopathology. Incorporates evidence-based research findings on the role of genetics, neurophysiological adaptation, epidemiological and societal influences in order to develop understanding of disruptions in normal neurophysiological functioning.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	610	Behavioral and Psychological Assessment in Primary Care	Presents a comprehensive model of behavioral and psychological assessment for behavioral health clinicians in primary care and related medical settings. Provides behavioral health consultants with the necessary knowledge base and skills to develop an appropriate assessment and treatment plan for a variety of commonly seen complaints in primary care. Places attention on the assessment of both psychiatric and behavioral complaints across the lifespan. Students become familiar with both structured interview and empirically support quantitative measures consistently utilized to enhance our understanding of the presenting complaint.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	612	Introduction to Behavioral Interventions	Provides a foundational understanding of behavioral health interventions for primary care settings for those students intending to work in administrative, management or allied health positions. Provides a theoretical basis for various psychological schools of thought, as well as an overview of the empirical evidence for those approaches. Reviews models of therapy including: psychodynamic, brief strategic, cognitive-behavioral and solution-focused. Also reviews two intervention strategies typically used in integrated settings: Acceptance and Commitment Therapy (ACT) and Motivational Interviewing (MI). Explores the ways that these approaches serve as the theoretical framework of the Biodyne model.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 612 or IBC 780 (Introduction to Behavior Intervention)

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IBC	613	Cognitive/Affective Bases of Health	Provides an overview of cognitive and affective theories and their intersection with health and health behavior change among individuals and communities. Covers topics including (but not limited to): Health Belief Model, self-efficacy, attribution theory, social-cognitive theory, and the transtheoretical model of change.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	615	Innovative Technologies in Behavioral Health	Provides a quick overview and answers to basic questions related to both online therapy and telemental health. Gives a downloadable audio recording (MP3) and access to the accompanying video clips that augment a rich sampling of pages extracted from our other coursework. As a composite, this experience introduces our multi-modal learning environment and, more importantly, gives an idea of the issues involved with establishing an online or otherwise remote practice.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	1		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 616 or IBC 780 (Innovative Technologies in Behav. Health Intervention)
IBC	620	Psychosomatic Illness: Diagnosis & Treatment	Teaches how to successfully diagnose and treat physical illness caused by various forms of psychosocial stress (psychophysiological disorders, PPD). Because patients are often unaware of the nature or degree of stresses that are responsible for their illness, places emphasis on learning how to detect and use clues that patients provide to develop a more complete understanding of the struggles than they are able to perceive for themselves. Focuses on selecting, assessing and treating a patient known to the student who has medically unexplained physical symptoms.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	1		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 620 or IBC 780 (Psychosomatic Illness: Diagnosis and Treatment)
IBC	624	Integrated Behavioral Health Care for Children and Adolescents	Integrates developmental psychology with pediatric psychology in order to prepare behavioral clinicians to provide screening, assessment, and intervention for children and adolescents in primary care and other medical settings. Presents an overview of developmental stages with an emphasis on critical tasks, while contrasting normal versus abnormal development. Develops societal, familial, and cultural influences.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	634	Strategies and Techniques for Behavior Change in Primary Care	Examines and discusses the theoretical and applied health-related research changing nutrition, smoking and physical activity behaviors in clinical practice.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	660	Healthcare Legal, Ethical, and Professional Issues	Integrate three key areas of healthcare ethics, law, and professional issues for the Doctor of Behavioral Health (DBH) clinician in primary care: (1) the code of ethics for psychologists; (2) legal and ethical issues in medicine; and (3) technological issues and the behavioral health provider.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	670	Integrated Behavioral Health Interventions for Substance Use Disorders	Focuses on the theoretical foundations, research and strategies for identifying, intervening and/or referring patients in primary care and other healthcare settings that present with substance use disorders or problem use. Provides detailed information about the clinical model of SBIRT (Screening, Brief Intervention, and Referral to Treatment), along with strategies for implementing sustainable business models for SBIRT in healthcare environments.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 670 or IBC 780 (Integrated Behavioral Health Interventions for Substance)
IBC	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	701	Models of Integrated Primary Care	Provides an overview of the primary care environment as well as current models of integrated primary behavioral health care. Reviews and critiques models of health care based on their success in impacted patient health outcomes and improving physician satisfaction, along with fiscal and care delivery systems for each.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	702	Brief Interventions in Primary Care	Provides an overview of evidence-based care for the integrated primary care environment. In particular, reviews and applies the most common approaches to addressing co-morbid behavioral and medical conditions, including but not limited to brief psychotherapy, adherence enhancement, lifestyle medicine, and others, using cognitive-behavioral, acceptance and commitment therapy, solution-focused, and motivational interviewing approaches.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only IBC 691 (Brief Interventions in Primary Care) or IBC 702

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IBC	704	Psychopathology & Personality in Integrated Primary Care	Covers the basic principles of the Biodyne Model, which are applicable to all behavioral health cases, both in outpatient mental health settings and in integrated care settings. Core knowledge forms the basis for success as a behavioral care provider in integrated medical settings. Includes common psychotherapist mistakes, evidence-based treatment, basics of the Biodyne Model, survey of integrated care approaches, defense mechanisms, case conceptualization strategies for maximum efficiency, and when to refer a patient for specialty care. Presents in detail common conditions (anxiety and depression), with a focus on how these conditions can be subcategorized for maximum treatment efficiency. Emphasizes the development of comprehensive treatment plans (including psychotropic medications, group programs, and other modalities). Presents didactic material in the context of actual cases. Strong focus on case examples, both illustrative cases provided by the instructor and the students' cases (past and/or current).	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	708	Evidence-Based Behavioral Intervention III	Covers advanced principles of evidence-based integrated behavioral care in primary care and other medical settings. Continuation and third course in the Evidence Based Behavioral Intervention I and II sequence. Further develops evidence-based approaches in the assessment and treatment of children and families and deepens and expands the skills in specific applications of assessment and treatment modalities for adults.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	712	Population-Based Behavioral Health Management	Overview epidemiology for health care followed by population-based approaches to behavioral intervention. Epidemiology includes concept of populations; descriptions and definitions of health and disease; measurement of health (measures, morbidity, mortality and health); designs for studying the health of populations and standardization of population health measures. Population-based management includes definitions of medical management; planning health care for populations and population health outcomes; quality of care and economic analysis of population-based interventions; adjunctive treatments as a core component of population-based interventions. Also, advanced application of population-based behavioral interventions with a focus on design, measures, analysis, results and discussion of current approaches. Includes predictive modeling methods for defining populations; interventions focusing on stepped-care approaches; engagement strategies, interventions, measurement, and follow-up.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	714	Quality and Performance Measurement, Improvement, and Incentives in Health Care	Overview of healthcare quality management, emerging models of healthcare performance measurement, and models of pay for performance incentives in healthcare designed to reward providers for attaining quality of care goals. Prepares behavioral clinicians to provide services that are consistent with best practices in quality management and performance measurement in healthcare and to provide care that is consistent with performance incentive programs that are present or on the horizon. A key characteristic of healthcare reform is increased focus on provider quality of care, accountability for quality via performance measurement, and aligning provider incentives to meet national and regional quality of care performance targets.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	718	Healthcare Systems: Organization, Delivery and Economics	Provides an overview of the U.S. healthcare system with a focus on economics and policy. Primary goals of the course are to enable students to recognize the relevance of economics to healthcare and to apply economic principles to better understand health-related issues; understand the U.S. healthcare delivery system in the context of social, policy, and economic factors; evaluate the evolving nature of healthcare reform initiatives and their implications for clinical practice, financing, research and policy; analyze public healthcare policy from an economic perspective. Students also focus on behavioral healthcare economics and policy and the economics of behavioral health services in medical settings. Students also understand the medical cost offset effect, including economic benefits of behavioral interventions for co-morbid medical and behavioral conditions, measurement of medical cost-offset, and cost-offset for psychopharmacology and specific behavioral conditions.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	720	Behavioral Health Entrepreneurship	Provides an introduction to the essential entrepreneurship skills for the behavioral healthcare clinician. Focuses on entrepreneurial skills designed to prepare the behavioral clinician to start a new business venture or revitalize an existing organization or business, to meet the needs of the evolving healthcare system and marketplace.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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IBC	724	Behavioral Health Management	Presents an introduction to the roles and responsibilities of supervisor/manager in a healthcare organization. Provides behavioral health professionals moving into management with the necessary knowledge base and skills to be an entry-level manager and focuses on the further knowledge acquisition needed to become an experienced, effective manager and leader. In addition, discusses the larger context in which healthcare businesses operate--healthcare reform, regulations and technological changes. Participants take time to look at personal characteristics, interpersonal styles and presentation that affect how one is perceived and responded to in an organization. Too often we have observed individuals with high-level clinical skills moving into management without the requisite skills and understanding of issues, restricting their ability to be successful.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 724 or IBC 780 (Behavioral Health Management)
IBC	728	Cultural Diversity, Health and Illness	Focuses on the relationship among cultural diversity, health and illness, and multicultural psychotherapy in primary care and other healthcare settings. Prepares behavioral clinicians to identify the relationship between cultural diversity and health and illness and to use effective psychotherapy informed by cultural diversity in primary care and related medical settings.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IDN	101	Elementary Indonesian I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
IDN	102	Elementary Indonesian II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		Pre-requisites: IDN 101 with C or better
IDN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
IDN	201	Intermediate Indonesian I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: IDN 102 with C or better
IDN	202	Intermediate Indonesian II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: IDN 201 with C or better
IDN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
IDN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
IDN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
IDN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IED	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		
IED	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
IED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
IED	410	History American Indian Education	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H & C	Credit is allowed for only IED 410 or 510
IED	430	Lang/Literacy-Indig Peoples	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(HU or SB) & C	Credit is allowed for only IED 430 or 530
IED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
IED	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student

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IED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
IED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
IED	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
IED	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7		
IED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
IED	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	510	History of American Indian Education	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only IED 410 or 510
IED	530	Language/Literacy-Indig People	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only IED 430 or 530
IED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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IED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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IED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		
IEE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	210	Introduction to Industrial Engineering	History of IE: IE career paths; ethical, social, and contemporary issues; introduces IE techniques, methods, and their application; case studies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: IEE 100(or BME100,CHE100,CEE100,CSE101, ECE100,EEE101,EGR101 ,FSE100,MAE100,MSE 100, or SES 100) with C or better; MAT 265 (or MAT 270) with C or better
IEE	220	Business and Industrial Engineering	Introduces business for industrial engineers, including business/financial structures, fundamentals of cost and accounting, role of business/engineering in society.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student: Introduction to Engineering course with C or better OR Engineering Management Minor/Concentration: minimum 25 earned hours
IEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	300	Economic Analysis for Engineers	Economic evaluation of alternatives for engineering decisions, emphasizing the time value of money.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student: MAT 265 or 270 with C or better and Introduction to Engineering course with C or better OR Engineering Management Minor/Concentration: MAT 265 or 270 with C or better
IEE	305	Information Systems Engineering	Overview of computer and information systems applications. Topics include client/server; distributed computing; networks; process modeling; e-commerce; enterprise applications; Internet.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	CS	Prerequisite(s): Fulton Engineering undergraduate student and CSE 205 OR other majors with minimum 3.00 GPA and CSE 205
IEE	369	Work Analysis and Design	Planning, analysis, and design of methods of accomplishing work. Emphasizes human factors, work planning, methods analysis and design, and work measurement. Applications in diverse fields.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): Fulton Engineering undergraduate student or Engineering Management Minor/Concentration; Pre- or corequisite(s): FIN 300 or IEE 300
IEE	376	Operations Research Deterministic Techniques/Applications	Industrial systems applications with deterministic operations research techniques. Resource allocation, product mix, production, transportation, task assignment, networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): CSE 205 with C or better; MAT 242, 342 or 343 with C or better; or Industrial Engineering graduate student
IEE	380	Probability and Statistics for Engineering Problem Solving	Applications-oriented course with computer-based experience using statistical software for formulating and solving engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	CS	Prerequisite(s): Fulton Engineering undergraduate or Engineering Management minor; MAT 266 (or 271) with a C or better; or Industrial Engineering graduate student

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IEE	381	Lean Six Sigma Methodology	Define, measure, analyze, improve and control (DMAIC) steps of six sigma methodology for business and quality improvement. Reviews the necessary statistical tools and illustrates their integration into the problem-solving process. Overview of lean principles and design for six sigma. Unique features of applying six sigma and DMAIC in transactional and service organizations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: IEE 380 with C or better; Credit is allowed for only IEE 381, 498 (Six Sigma Methodology) or 498 (Six Sigma Green Belt)
IEE	382	Probability and Statistics Lab	Applied modeling and data analysis using Excel and Minitab.	N	LAB	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1		Pre-requisites: Industrial Engineering or Engineering Management BSE student; Co-requisite: IEE 380
IEE	385	Engineering Statistics: Probability	Conditional probability, common probability models, Goodness-of-fit tests and reliability models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): undergraduate Fulton Engineering major or Engineering Management minor with IEE 380 with C or better OR graduate Industrial Engineering major
IEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	405	Developing Information Systems Applications	Analysis and design of distributed information system applications using object and relational architectures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student
IEE	412	Introduction to Financial Engineering	Intensive exploration course of three phases: (1) a preparation phase for the terminology and financial lingo to be used throughout the semester, (2) introduction of more advanced financial topics such as portfolio formation, assessment and traditional portfolio theory, (3) several financial engineering topics such as the application of stochastic models to stock and derivatives pricing and financial risk management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): IEE 300 and 380 with C or better
IEE	421	Urban Operations Research	Probabilistic modeling and analysis of transportation systems (car, bus, train) and emergency service systems (fire, police, ambulance) using functions of random variables, geometric probability, queueing theory, location theory, network analysis and graph applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s) with C or better: IEE 376, 380, 385. Credit is allowed for only IEE 421 or IEE 498 (Urban Operations Research) or IEE 521 or IEE 598 (Urban Operations Research)
IEE	426	Operations Research in Healthcare	Quantitative methods for modeling and analysis of healthcare systems to address operational and tactical decision-making problems. Topics include forecasting, scheduling, decision making, facility location and layout, staffing, quality control and supply chain management in hospitals and healthcare delivery facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: IEE 376 and 380 with C or better; Credit is allowed for only IEE 426, 498 (OR in Hospitals), 526 or 598 (OR in Hospitals)
IEE	431	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): Fulton Engineering undergraduate, Digital Culture (Media Processing) BA, or Engineering Management minor or concentration; junior or senior standing. Credit is allowed for only IEE 431 or IEE 541
IEE	437	Human Factors Engineering	Studies the human psychological and physiological factors that underlie the design of equipment and the interaction between people and machines.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student OR other majors with minimum 3.0 GPA; Credit is allowed for only IEE 437 or 547
IEE	454	Risk Management	Methods and tools for identifying, assessing, mitigating and controlling risk in business and engineering design activities. Decision tools include cost-benefit analysis, decision trees, value of information, Bayesian statistical decision making, fault trees, and failure modes and effects analysis (FMEA).	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: ECN 221 or IEE 380 with C or better; Engineering major OR Engineering Management Minor/Concentration; Junior or Senior student

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IEE	456	Introduction to Systems Engineering	Foundation course addressing the concepts needed for successful system planning, design and build process. Topics include successfully bringing large-scale systems to completion on schedule and on budget, modeling and cost estimating techniques, risk and variability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Junior or senior Engineering student OR Engineering Management Minor/Concentration; Credit is allowed for only IEE 456 or 556
IEE	458	Project Management	Life-cycle processes for selecting and managing large-scale projects to ensure successful completion. Topics include project phases, defining milestones, work breakdown structure, group decision making and teamwork, organizational structure, human resource management, technological and economic feasibility, configuration management, budget control, and resource allocation and scheduling. Use of modern tools for planning and controlling project performance.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: ECN 221 or IEE 380 with C or better; Junior or senior Engineering OR Engineering Management Minor/Concentration student
IEE	461	Production Control	Techniques for the planning, control, and evaluation of production systems. Forecasting, inventory control, scheduling, enterprise requirements planning, supply chain design, and coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student; IEE 376 with C or better; IEE 380 with C or better
IEE	470	Stochastic Operations Research	Modeling and analysis with emphasis on stochastic operations research. Models for stochastic processes, including Markov chains, queueing and decision analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Industrial Engineering, Engineering Management or Computer Science undergraduate; IEE 376 and IEE 385 with C or better; or Industrial Engineering graduate; Credit is allowed for only IEE 470 or 598 (Stochastic Operations Research)
IEE	474	Quality Control	Basic statistical process control techniques, capability analysis, design of experiments, and acceptance sampling plans.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: IEE 380 with C or better
IEE	475	Simulating Stochastic Systems	Analyzes stochastic systems using basic queueing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	CS	Prerequisite(s): Fulton Engineering undergraduate student or other majors with minimum 3.00 GPA; CSE 205 and IEE 380 with C or better; Credit is allowed for only IEE 475 or IEE 545
IEE	477	System Dynamics and Thinking	Methods for the modeling and analysis of system dynamics; metrics to measure business performance; continuous simulation tools for evaluation of system performance over time.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: CSE 205 with C or better; IEE 380 with C or better; Credit is allowed for only IEE 477 or 498 (System Dynamics Engineering)
IEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	485	Systems Design Capstone I	Senior capstone project provides students with the skills required to effectively complete a capstone project in design and development.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): BSE Engineering Management major with pre- or corequisite(s): IEE 475 or 477; or BSE Industrial Engineering major with IEE 376 with C or better and pre- or corequisite(s): IEE 475 or 477
IEE	486	Systems Design Capstone II	Project in design and development. Individual or team capstone project in creative design and synthesis.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Pre-requisites: BSE Engineering Management or Industrial Engineering major; Senior standing; IEE 485 with C or better

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IEE	490	Project in Design and Development	Individual or team capstone project in creative design and synthesis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): BSE Industrial Engineering major; IEE 376 with C or better and pre- or corequisite(s): IEE 475 OR BSE Engineering Management major; pre- or corequisite(s): IEE 475
IEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6		Prerequisite(s): Barrett Honors student
IEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6	L	Prerequisite(s): Barrett Honors student
IEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-7		
IEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		
IEE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	505	Information Systems Engr	Studies information systems application engineering. Topics include information technology, data modeling, data organization, process mapping, application and database engineering, and user interface development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	506	Web-Enabled Decision Support Systems	Development and analysis of Web-enabled applications for decision support. Topics include: (1) Web application development using ASP.NET; (2) design for computing scalability, interface usability and cyber security; and (3) use of application development skills and design concepts to develop a decision support system consisting of database, analytical data processing, expert knowledge and reasoning, and user-friendly interface for enabling transitions from data to information, knowledge and decisions. Knowledge of database development is necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering graduate student; Credit is allowed for only IEE 506 or 598 (Design of Computational Systems)
IEE	511	Analysis of Decision Processes	Methods of making decisions in complex environments and statistical decision theory; effects of risk, uncertainty, and strategy on engineering and managerial decisions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only IEE 498 (Analysis of Decision Processes) or 511
IEE	512	Introduction to Financial Engineering	Introductory course on financial engineering covering traditional portfolio theory, forwards, futures, financial stochastic models, option pricing, and risk management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	520	Statistical Learning for Data Mining	Surveys data analysis methods for massive data sets and provides experience in analysis with computer software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 515 or IEE 572 or IEE 578; Credit is allowed for only BMI 555 or IEE 520
IEE	521	Urban Operations Research	Probabilistic modeling and analysis of transportation systems (car, bus, train) and emergency service systems (fire, police, ambulance) using functions of random variables, geometric probability, queueing theory, location theory, network analysis and graph applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only IEE 421, 498 (Urban Operations Research), 521 or 598 (Urban Operations Research)
IEE	526	Operations Research in Healthcare	Quantitative methods for modeling and analysis of healthcare systems to address operational and tactical decision-making problems. Topics include forecasting, scheduling, decision making, facility location and layout, staffing, quality control and supply chain management in hospitals and healthcare delivery facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Graduate Engineering student; Credit is allowed for only IEE 426, 498 (OR in Hospitals), 526 or 598 (OR in Hospitals)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IEE	530	Enterprise Modeling	Focuses on social, economic, and technical models of the enterprise with emphasis on the management of technological resources. Includes organization, econometric, financial, and large-scale mathematical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	533	Scheduling	Provides the basic theory of scheduling and introduction to the applications domain.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	534	Supply Chain Modeling and Analysis	Techniques for modeling and analysis of supply chains. Inventory management, transportation/location models, value of information, channel alignment, risk pooling, contracts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): IEE 574 or 620
IEE	535	Intro Intrnl Logistics Systems	Exploratory project-oriented course that addresses domestic and international logistics practices from a high-level descriptive perspective and an analytical model-based perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	541	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student; Credit is allowed for only IEE 431 or 541
IEE	545	Simulating Stochastic Systems	Analyzes stochastic systems using basic queuing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only IEE 475 or 545
IEE	547	Human Factors Engineering	Study of people at work; designing for human performance effectiveness and productivity. Considerations of human physiological and psychological factors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only IEE 437 or 547
IEE	552	Strategic Technological Planning	Studies concepts of strategy, strategy formulation process, and strategic planning methodologies with emphasis on engineering design and manufacturing strategy, complemented with case studies. Presents and uses an analytical executive planning decision support system throughout course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	556	Introduction to Systems Engineering	Foundation course addressing the concepts needed for successful system planning, design and build process. Topics include successfully bringing large-scale systems to completion on schedule and on budget, modeling and cost estimating techniques, risk and variability. Graduate students are expected to have a background in and understanding of large-scale systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Engineering graduate student; Credit is allowed for only IEE 456 or IEE 556 or IEE 598 (Intro to Systems Engineering)
IEE	561	Production Systems	Understanding how factories operate, how performance is measured, and how operational changes impact performance metrics. Operational philosophies, increasing production efficiency through quantitative methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	570	Advanced Quality Control	Process monitoring with control charts (Shewhart, cusum, EWMA), feedback adjustment and engineering process control, process capability, autocorrelation, selected topics from current literature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	571	Quality Management	Total quality concepts, quality strategies, quality and competitive position, quality costs, vendor relations, the quality manual, and quality in the services.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	572	Design Engineering Experiments	Analysis of variance and experimental design. Topics include strategy of experimentation, factorials, blocking and confounding, fractional factorials, response surfaces, nested and split-plot designs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	573	Reliability Engineering	Nature of reliability, time to failure densities, series/parallel/standby systems, complex system reliability, Bayesian reliability, and sequential reliability tests.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	574	Appl Deterministic Oper Rsch	Develops advanced techniques in operations research for the solution of complex industrial systems problems. Goal programming, integer programming, heuristic methods, dynamic and nonlinear programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Industrial Engineering MS, MSE or PhD student
IEE	575	Appl Stochastic Oper Rsch Mdls	Formulate and solve industrial systems problems with stochastic components using analytical techniques. Convolution, continuous-time Markov chains, queues with batching, priorities, balking, open/closed queuing networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	578	Regression Analysis	Regression model building oriented toward engineers and physical scientists. Topics include linear regression, diagnostics, biased and robust fitting, nonlinear regression.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Engineering Graduate student
IEE	579	Time Series Analy/forecasting	Forecasting time series by regression-based, exponential smoothing, and ARIMA model techniques; uses digital computer programs to augment the theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IEE	581	Six Sigma Methodology	The six sigma process improvement strategy of define, measure, analyze, improve, and control (DMAIC). Integrates and deploys statistical methods and other six sigma problem solving via the DMAIC framework. Requires background in undergraduate engineering statistics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Engineering Graduate student
IEE	582	Response Surfaces/Process Opt	Classical response surface analysis and designs including steepest ascent, canonical analysis, and multiple responses. Other topics include process robustness studies, robust design, and mixture experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering MS, MSE or PHD; IEE 572 with C or better
IEE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	585	Six Sigma Capstone.	The DMAIC (define, measure, analyze, improve, control) improvement strategy is applied in the formulation and execution of a six sigma project.	N	PRA	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Engineering Graduate student
IEE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		Pre-requisite: Engineering Graduate student
IEE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	605	Foundations of Information Systems Engineering	Introduces science and engineering technologies of information systems design and analysis with focus on industrial engineering applications. Topics include: design and analysis of computational algorithms; and data mining techniques for classification, clustering, feature extraction and data reduction problems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Industrial Engineering Graduate student; Credit is allowed for only IEE 598 (Found Info Syst Engr) or 605
IEE	620	Optimization I	First course of the PhD-level deterministic course series. Covers foundations of optimization and linear programming. Prior working knowledge of linear algebra and knowledge of how to formulate linear programs is required for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	622	Optimization II	Introduces computational methods to solve optimization problems with integer variables and the mathematical theory behind them. Follows formulation of integer programming models with a survey of relaxation, decomposition and cutting-plane methods. Discusses various practical problems such as facility location, transportation and distribution problems. Assigns computational examples using the software IBM ILOG OPL.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: IEE 620; Credit is allowed for only IEE 622 or 598 (Optimization II)
IEE	640	Probability & Stochastic Processes	Presents fundamentals of probability and stochastic processes from a non-measure theoretic point-of-view to develop (a) basic model building and probabilistic reasoning skills, and (b) an understanding of important qualitative characteristics of some basic stochastic processes used to model dynamical systems with noise. Topics include a review of probability theory with particular attention to conditional probability and expectation; Markov chains; Renewal theory and the Poisson process. Considers applications in reliability, inventory theory, queueing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: IEE 470, Graduate Industrial Engineering major; Credit is allowed for only IEE 598 (Prob & Stoch Model) or 640

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IEE	670	Mathematical Statistics	Introduction to the field of mathematical statistics at a level intended for first-year PhD students in Industrial Engineering. Builds a solid background in the principles, concepts, and techniques of mathematical statistics. Prepares students for advanced study and research in statistics, and is useful for understanding statistical data analysis techniques and developing statistical thinking. Completion of at least one course in probability and statistics is required prior to taking this class.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	672	Adv Topics-Experimental Design	Multilevel and mixed-level factorials and fractions, design optimality, incomplete blocks, unbalanced designs, random effects and variance components, analysis of covariance.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering MS, MSE or PHD student; IEE 572 with C or better
IEE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	100	Introduction to Information Technology	Project-based introduction to the key concepts, tools and devices underlying today's technologies. Introduces computer hardware, software and system architecture, the Internet, the World Wide Web and information technology ethics. Forms a foundation for future courses offered in the Information Technology major and the information technology discipline.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		
IFT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-3		
IFT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-4		
IFT	200	Information Modeling, Storage and Retrieval	Notations, tools and languages for modeling, representing and manipulating information; database creation, access and management in the context of a controlling application. Analyzes information storage needs and design of an appropriate representation. Project-based access to information through tools and languages such as structured query language.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Pre-requisite is CST 200
IFT	201	Computer and Network Systems: Organization and Administration	Fundamentals of computer networks, computer organization and computer operating systems. Components, tools and languages for configuring and administering computer systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Pre-requisite is CST 200
IFT	202	Foundations of Information and Computer System Security	Project-based introduction to privacy, ethics, legal, social and professional responsibilities for information technology. Principles of information security and assurance and their implications on access. Tools and methods to identify intrusion, best security practices. Securing communications and applications.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 200
IFT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-5		
IFT	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	1-6		Prerequisite(s): Barrett Honors student

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IFT	301	Introduction to Interactive Media	Human-computer interaction design for rich media systems. Introduces design processes, tools and principles for applications that are highly interactive with their users and which include multiple input/output modalities and multimedia. Project-driven course.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Pre-requisites: IFT 100 and 200
IFT	359	Internet Networking Protocol	Computer networking for application, transmission control and network layers using the Internet protocols as a model; reliability and security.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): CST 250 or IFT 201 or BAS major
IFT	383	Shell and Script Programming with UNIX	UNIX operating system programming of shells, environment and 4th-generation languages and tools, such as sed, awk, perl, grep, make.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): CST 100 or BAS major
IFT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-4		
IFT	401	Information Technology Capstone Project I	First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier coursework.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): senior standing
IFT	402	Information Technology Capstone Project II	Second half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier coursework.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Pre-requisite: IFT 401
IFT	481	Information System Security	Implementation, development, and analysis of computer and network security policies, legal ramifications and development and analysis of risk management measures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 359 (or CST 359); IFT 202
IFT	482	Network Forensics	Use and creation of advanced network forensics tools: intrusion detection and prevention, honeynets, traffic routing and management, and data reduction and graphing tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 481 (or CST 481)
IFT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		
IFT	488	Systems Administration of UNIX	UNIX administration of system and user services using command line and GUI tools. System security and forensics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): CST 386 or IFT 201; Pre- or corequisite(s): IFT 383 (or CST 383)
IFT	489	Network Administration with TCP/IP	Configuration and installation of networks: addressing, routing, naming, and LAN and MAN services. Network security checking, monitoring, and basic forensics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 359 (or CST 359); Pre- or corequisite(s): IFT 383 (or CST 383)
IFT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-6		Prerequisite(s): Barrett Honors student
IFT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Information Technology	1-6	L	Prerequisite(s): Barrett Honors student
IFT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-4		
IFT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-7		
IFT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-3		
IFT	510	Principles of Computer and Information Technology	Comprehensive introduction to computer and information technology (IT). Provides a detailed understanding of computer architecture, system software and important related issues in an IT context. Forms a technical foundation for understanding current technologies and how they work. Topics include principles of systems' physical architecture, operating systems and application software, storage and systems management as well as current developments in cloud computing, green IT, social networking systems, and Internet search.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	520	Principles of Telecommunication Technology	Basic communication technology concepts from an information technology perspective. Addresses signals, spectra and bandwidth; attenuation, distortion and noise; filtering, equalizing, modulation and multiplexing; information measurement, source and channel coding, channel capacity, baseband data transmission, digital modulation and spread-spectrum systems; local area networks and architecture and performance; layered network architecture, protocols, switching techniques, TCP/IP, traffic engineering and basic capacity analysis. Focuses not on detailed component design but on understanding the interrelationships of these concepts and telecommunication systems to support broad system design and management.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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IFT	530	Information Analysis, Modeling, Representation, and Communication	Teaches proven techniques for modeling information requirements and organizational data resources with a strong focus on gleaning information from data. Students learn how to discover and document database requirements, functional system requirements, and user interface requirements at a level appropriate for advanced information technology practitioner. Covers techniques including entity-relationship modeling for data analysis, functional dependency and normalization for the logical design of the database, Structured Query Language (SQL) for data management, and use cases for learning the process of requirement specification.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	540	Software Development for Information Technology	Teaches proven techniques for modeling information requirements and organizational data resources with a strong focus on gleaning information from data. Students learn how to discover and document database requirements, functional system requirements, and user interface requirements at a level appropriate for advanced information technology practitioner. Covers techniques including entity-relationship modeling for data analysis, functional dependency and normalization for the logical design of the database, Structured Query Language (SQL) for data management, and use cases for learning the process of requirement specification.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Pre-requisites: IFT 530
IFT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Information Technology	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IMD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
IMD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
IMD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
IMD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IMD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IMD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IMD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	120	Drawing for Industrial Design	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for industrial design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Environmental Design or Industrial Design major
IND	121	Principles for Industrial Design I	Industrial design as a language and process for creative thinking and realization.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Environmental Design or Industrial Design major. Corequisite(s): IND 122
IND	122	Principles for Industrial Design II	Continued exploration of industrial design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): IND 120 with C or better; Environmental Design or Industrial Design major. Corequisite(s): IND 121
IND	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
IND	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
IND	227	Visual Methods for Problem Solving	Introduces conceptual design activity based on the mind-eye-media feedback loop. Graphic language used to represent conjecture, analysis, synthesis of objects, and their contexts.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student, IND 122 with C or better; Passed Milestone; Co-requisite: IND 260
IND	228	Imaging and Visualization	Design activities stressing graphic language abstraction practiced for presentation. Discusses structure of criticism, including description, interpretation, and evaluation.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student; IND 227 with C or better; Co-requisite: IND 261
IND	242	Materials and Design	Materials application in design. Introduces characteristics and properties of metals and organic materials, including plastics, and inorganic materials.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
IND	243	Design for Ecology and Social Equity	Explores the role of design in the ecological crisis; materials, processes, strategies and methods to design more ecologically friendly and socially equitable products.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
IND	260	Industrial Design I	Introduces the method and process of the industrial designer. Determinants necessary in small product design.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student; IND 122 with C or better; Passed Milestone; Co-requisite: IND 227
IND	261	Industrial Design II	Issues of physical form development related to product and design; form development properties of paper, fibers, wood, metal, and plastics.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student; IND 260 with C or better; Co-requisite: IND 228
IND	316	20th-Century Design I	European and American design from 1850 to 2000 with thematic emphases on worldview, technology, transportation, economics and nature.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Prerequisite(s): minimum 45 hours
IND	317	20th-Century Design II	European and American design from 1850 to 2000 with thematic emphases on communication, education, material culture, politics and society.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Prerequisite(s): minimum 45 hours
IND	327	Presentation Graphics	Studies methods for portfolio and professional product presentation using graphic media for information transfer. Stresses aesthetic judgment, organization, and craftsmanship .	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Industrial Design student; Co-requisite: IND 360
IND	328	Graphics for Industrial Design	Investigates and applies applications and planning to the development of an identity for a product line structured as a system.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student; IND 327 with C or better; Co-requisite: IND 361
IND	344	Human Factors in Design	Man-machine environment systems; human characteristics and behavior applied to design of products, systems, and their operating environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		

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IND	354	Principles of Product Design	Influences of physical and mechanical concepts in product design; mechanisms, kinematics, and fastening systems. Concepts of analysis for product design. Influences of concepts on aesthetics.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: PHY 111 with C or better; Digital Culture: Design, Industrial Design BSD, or Pre-Industrial Design major
IND	360	Industrial Design III	Methods of visual thinking, conceptualization, and ideation related to building skill levels in professional design presentation techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Industrial Design student; IND 261 with C or better; Co-requisite: IND 327
IND	361	Industrial Design IV	Emphasizes developing ideas into a complete functional product, including survey and application of aesthetics, human factors, materials, and manufacturing.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Industrial Design student; IND 360 with C or better; Co-requisite: IND 328
IND	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
IND	460	Design Project I	Complete analysis of the product unit as an element of mass production, featuring marketing, technology, human factors, and visual design. Emphasizes professional standards.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 484; IND 470
IND	461	Design Project II	Product design, with emphasis in systems interaction. Culmination of design process and technique. Encourages individual project direction.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Industrial Design BSD student; IND 460 with C or better
IND	464	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 464 or MGT 464 or SOS 474
IND	465	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 465 or IND 465 or MGT 465 or SOS 475
IND	470	Professional Practice for Industrial Design	Business procedures, management techniques, accounting systems, ethics, and legal responsibilities of the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	L	Pre-requisite: Industrial Design student; Co-requisite: IND 460 or Design Studies minor student
IND	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 460
IND	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
IND	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
IND	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
IND	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IND	521	Advanced Industrial Design Studio I	Design language, motivation and inspiration, form exploration sketching, rough form study mock-ups, form development, and presentation. Product redesign. Students create new design language proposals for an existing product and redesign the product based on one of these languages. Provides instruction and opportunities to understand product design language and how to redesign existing products with different design guidelines. Results include evidence of concept development (sketches, drawings, models); functional development; human factors and ergonomic considerations; materials and process specifications; sustainability recommendations; and appearance visual materials and models (virtual and physical). Project-based course includes readings, presentations, critical analysis, discussion and the public exhibition and presentation of design work.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): Master of Industrial Design major. Credit is allowed for only IND 521 or IND 590 (Advanced Industrial Design Studio I)
IND	522	Advanced Industrial Design Studio II	New product development with emphasis on design research, problem solving and functional/aesthetic development. Preliminary research about human behavior and health promotion. Based on the research findings, students conduct design research in teams and work on individual design projects. Student project results include evidence of concept development (sketches, drawings, models); functional development; human factors and ergonomic considerations; materials and process specifications; sustainability recommendations; and final appearance visual materials and models (virtual and physical). Project-based course includes readings, presentations, critical analysis, discussion, and the public exhibition and presentation of design work.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): IND 521. Corequisite(s): DSC 501. Credit is allowed for only IND 522 or IND 590 (Advanced Industrial Design Studio II)
IND	544	Human Factors Systems and Documentation	Advanced topics associated with theory and methods of human factors in design. Individual projects stressing problem organization, evaluation, and documentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Herberger Institute of Design and the Arts Graduate student
IND	548	Design for Sustainable Development	Research on designing systems that are economically viable, ecologically friendly, and socially equitable.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	599	Thesis	Supervised research focused on preparation of the thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	621	Advanced Industrial Design Studio III	Structured around the Design School traveling-studio model, this studio challenges students to identify new design concepts that improve society and the natural environment while also delighting users and creating value for business. For approximately one week, students travel to an off-campus location to examine a local condition there for which new design solutions are needed. Students return to ASU and continue working on the project for the semester. Project-based course includes readings, presentations, critical analysis, discussion and the public exhibition and presentation of design work.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): IND 522

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IND	622	Advanced Industrial Design Studio IV	Challenges students to create new design concepts that improve society and the natural environment while also delighting users and creating value for business. Requires some independent direction by the student; however, instructor assigns deadlines and expectations for deliverables, and requires cooperation and collaboration among students. Project-based course includes readings, presentations, critical analysis, discussion and the public exhibition and presentation of design work.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): IND 621
IND	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	111	Interior Design Issues and Theories	Interiors issues, theories, and philosophies. Emphasizes unique social and cultural factors that shape 20th-century design concepts.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	
INT	120	Design Drawing and Media	Visual thinking; Development of freehand drawing techniques as a language and tool to explore, communicate, and process ideas.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Environmental Design or Interior Design major
INT	121	Introduction to Computer Modeling for Interior Design	Computers in interior design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	The Design School	3	CS	Credit is allowed for only INT 121 or 320
INT	123	Introduction to Computer-Aided Design and Building Information Modeling	Introduces AutoCAD computer-aided design and Revit building information modeling principles and strategies for designers of the built environment.	N	LAB	N	OPT	Herberger Inst Design & Arts	The Design School	3		
INT	131	Design and Human Behavior	Applies conceptual design to issues of programming and space planning, user needs, and behavior.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	SB	
INT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
INT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
INT	221	Principles of Design	Applied visual vocabulary: studio experience exploring applications, process and conceptual development of the principles of order and composition.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): INT 120 with C or better; Environmental Design or Interior Design major. Corequisite(s): INT 222
INT	222	Principles of Design Lecture	Applies the visual vocabulary: explores the principles of organization through examination of historical precedence and contemporary interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): Environmental Design or Interior Design major. Corequisite(s): INT 221
INT	223	Drafting for Interior Design	Orthographic, paraline, axonometric, and perspective projection; shades and shadows; and basic descriptive geometry for interior designers.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 261
INT	253	Interior Materials, Finishes, and Specifications	Survey, evaluation, and specification of materials, finishes, and performance criteria for interiors.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design student; INT 261 with C or better
INT	261	Interior Design Studio I: Residential	Studio problems in interior design related to behavioral response in personal and small-group spaces.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 223
INT	262	Interior Design Studio II: Hospitality	Focuses on environments that entertain or host the public, including but not limited to nightclubs, restaurants, theaters, hotels, city and country clubs, golf facilities, cruise ships and conference facilities.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design student; INT 261 with C or better
INT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
INT	310	History of Interior Design I	Evolution of interior design as an expression of cultural influences from the ancient periods to 1835. Analysis of interior architecture, planning and lighting of interior spaces, and furniture.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Pre-requisites: ARS 102 with C or better
INT	311	History of Interior Design II	Evolution of interior design as an expression of cultural influences 1835 to present. Analysis of interior architecture, planning and lighting of interior spaces, and furniture.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Pre-requisites: INT 310 with C or better

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INT	341	Interior Codes: Public Welfare and Safety	Codes and regulations as performance criteria for interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisite: Interior Design student; Co-Requisites: INT 253; INT 262
INT	351	Ambient Environment	Surveys environmental control systems, acoustics, and lighting issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design major; PHY 101 with C or better. Co-requisites: INT 352, INT 362 and INT 381; OR Digital Culture: Design major
INT	352	Construction Methods in Interior Design	Design theory related to analysis, materials, and building techniques of horizontal and vertical construction in interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Interior Design student; Co-requisites: INT 362; INT 381
INT	354	Construction Documents	Elements of construction drawing sets, application of codes and specifications, and contract administration.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Interior Design student; Co-requisite: INT 363
INT	362	Interior Design Studio III: Hospitality and Retail	Investigates interior design issues in hospitality and retail environments.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Interior Design student; Co-requisites: INT 351, INT 352 and INT 381
INT	363	Interior Design Studio IV	Explores the poetics of materials and their assemblage in the design of public and private spaces.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Interior Design student; INT 362 with C or better; Co-requisite: INT 354
INT	381	Preinternship Seminar	Preparation of internship materials that produce and enhance a successful internship experience.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	1		Prerequisite: INT 262
INT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
INT	412	History of Decorative Arts in Interiors	Design of decorative arts as an expression of cultural influences and as an extension of interior spaces.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	Prerequisite(s): INT 311 with C or better. Credit is allowed for only INT 412 or INT 515
INT	413	History of Textiles in Interior Design	Cultural and historical expression of textiles as related to interiors.	N	PRA	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): INT 412 with C or better. Credit is allowed for only INT 413 or INT 516
INT	415	Latin American Design	The impact of Latin American culture and civilization on design throughout the Americas.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Minimum Junior standing
INT	446	Furniture Design and Production	Design, construction, cost estimating, and installation in interior furniture and millwork.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Graphic Design BSD, Interior Architecture BSD or Industrial Design BSD student
INT	464	Interior Design Studio V: Work Environments	Studio problems in interior design-related issues in work environments.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Interior Design student; INT 363 with C or better; Co-requisites: INT 484; INT 471
INT	465	Interior Design Studio VI: Institutional Design	Advanced interior design problem solving related to institutional facilities.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Interior Design student; INT 464 with C or better; Co-requisite: INT 472
INT	471	Facilities Management	Facility management process in large-scale organizations. Planning, long-range forecasting, and productivity. Project management methodologies using micro-based software programs.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
INT	472	Professional Practice for Interior Design	Business procedures, project control, fee structures, and professional product liabilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Interior Design student; Co-requisite: INT 465
INT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Interior Architecture BSD student; DSC 483 or INT 381 with Y grade
INT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
INT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
INT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
INT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
INT	515	Decorative Arts in Historic Interiors: A Thematic Overview	A thematic overview of decorative arts used in historic interiors that explores their aesthetic, functional, and symbolic contribution.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Herberger Institute of Design and the Arts graduate major. Credit is allowed for only INT 412 or INT 515
INT	516	Textiles in Historic Interiors: Appearance, Function, Symbolism	Overview of textiles used in historic interiors that explores their aesthetic, functional, and symbolic contribution.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Herberger Institute of Design and the Arts graduate major. Credit is allowed for only INT 413 or INT 516
INT	521	Advanced Interior Architecture Studio I	Studio problems in interior architecture related to the integration of building structure and systems with the behavioral response to personal spaces.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): Master of Interior Architecture major. Credit is allowed for only INT 521 or INT 590 (Advanced Interior Architecture Studio I)
INT	522	Advanced Interior Architecture Studio II	Investigates interior architecture issues, including construction, technology, programmatic and environmental determinants.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): INT 521; Corequisite(s): INT 527; Credit is allowed for only INT 522 or INT 590 (Advanced Interior Architecture Studio II)
INT	527	Contemporary Design Theory	Aesthetic, political, economic, and social theories that have shaped modern design; theory as the basis for design philosophies.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Herberger Institute of Design and the Arts Graduate student
INT	529	Design Criticism	Applies critical methods to design as material culture and human expression; evaluates achievement versus intention.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Herberger Institute of Design and the Arts Graduate student
INT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	621	Advanced Interior Architecture Studio III	Structured around the Design School traveling-studio model, based on design problems emphasizing the global context of interior architecture as it influences interior space and architectural form.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): INT 522

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INT	622	Advanced Interior Architecture Studio IV	Individual, student-initiated capstone project reflecting a culminating synthesis of interior architecture ideas.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): INT 621
INT	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
INT	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ITA	101	Elementary Italian I	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
ITA	102	Elementary Italian II	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
ITA	110	Intensive Italian I	Proficiency-oriented language course designed to achieve the maximum level of proficiency in an intensive and dynamic communicative environment. Class time is spent on a variety of fast-paced communicative activities focused especially on the development of speaking skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		
ITA	111	Accelerated Elementary Italian	Accelerated elementary Italian for experienced language learners. Emphasizes reading, writing, listening, speaking, and cultural proficiency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
ITA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ITA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	201	Intermediate Italian I	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on both spoken and written genres of Italian culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
ITA	202	Intermediate Italian II	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on values of Italian culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
ITA	210	Intensive Italian II	Proficiency-oriented language course designed to achieve the maximum level of proficiency in an intensive and dynamic communicative environment. Class time is spent on a variety of fast-paced communicative activities focused especially on the development of speaking skills. Class meets four times a week.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		Prerequisite(s): ITA 102 or 110 or 111 with C or better
ITA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	311	Italian Conversation	Engages students in different oral/aural activities to reach an advanced proficiency level.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: ITA 202 with C or better
ITA	312	Italian Composition	Engages students in different written activities to reach an advanced proficiency level.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L & G	Pre-requisites: ITA 202 with C or better
ITA	315	Italian Civilization	Students read and analyze texts and artifacts that represent important cultural and political movements of Italian civilization.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisites: ITA 202 with C or better
ITA	319	Italian for Professions	Read and analyze texts and artifacts that represent important cultural and political movements of Italian civilization.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ITA 202 with C or better
ITA	321	Introduction to Italian Literature I	Studies the development of early Italian language, literature, and culture through reading, discussion, and writing activities in Italian.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ITA	322	Introduction to Italian Literature II	Studies the development of modern and contemporary Italian language, literature, and culture through reading, discussion, and writing activities in Italian.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: ITA 202 with C or better
ITA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	413	Advanced Italian	Development and assessment of advanced spoken and written Italian proficiency through activities using all four skills.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: ITA 311 or 312 with C or better
ITA	420	Italian Cinema	Major trends of Italian cinema from the post-war period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ITA	430	Italian Literature of the Middle Ages	Emphasizes Stil Novo, Dante's minor works, Petrarach, and Boccaccio.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: ITA 321 or 322 with C or better
ITA	441	Dante: Divina Commedia	Critical reading of the three Cantiche (Inferno, Purgatorio, and Paradiso).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: ITA 321 or 322 with C or better
ITA	443	Italian Literature of the Renaissance	Emphasizes Lorenzo de'Medici, Poliziano Castiglione, Machiavelli, Ariosto, and Tasso.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H	Pre-requisites: ITA 321 or 322 with C or better
ITA	449	20th-Century Italian Literature	Major works, figures, and movements of contemporary Italian literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisites: ITA 321 or 322 with C or better
ITA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ITA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student

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ITA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
ITA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ITA	550	Italian for Reading Knowledge	Teaches non-speakers of foreign language, or those with only basic notions of the language, how to read in a foreign language at an advanced level. Consists of a concise overview of grammar as well as reading comprehension practice for students who plan to take the Graduate Foreign Language Exam or others who would merely like to learn to read in a foreign language. Focuses only on reading and not on listening, speaking or writing as in a traditional language course.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ITA 494 (Italian for Reading Knowledge) or ITA 550
ITA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ITA	594	Conf And Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ITA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
JAC	101	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCCD will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCCD tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0		
JHR	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Social Justice & Human Rights MA student
JHR	501	Proseminar in Social Justice and Human Rights	Classical and contemporary theories of social justice and human rights in the context of current local, national, and international issues. Special reference made to the roles of both governmental and nongovernmental organizations in addressing social justice and human rights issues.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Social Justice & Human Rights MA student
JHR	506	Grant Writing for Social Justice and Human Rights	Seminar in grant writing and fund raising for social justice and human rights. Provide an introduction to the grassroots grant writing and fund raising process, with a particular focus on justice-oriented nonprofit and international nongovernmental organizations.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	510	Problem-Based Seminar in Social Justice and Human Rights	Interdisciplinary seminar examines current problems in social justice and human rights from several different theoretical and analytical viewpoints. May be repeated once for credit.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Social Justice & Human Rights MA student
JHR	511	Community-Embedded Seminar in Social Justice and Human Rights	Interdisciplinary seminar requiring students to be placed in community organizations dealing with the course issue during the semester. Emphasizes developing effective strategies for partnerships with relevant community organizations and evaluating institutional settings, policies, and procedures from the perspective of social justice and human rights.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Social Justice & Human Rights MA student
JHR	525	Action Research in Social Justice and Human Rights	Advanced practicum in engaged, community-embedded research and interpretive analysis. Gives students experience in the practice of engaged fieldwork as well as the writing it generates.	N	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Social Justice & Human Rights MA student
JHR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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JHR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JMC	101	Grammar for Journalists	Grammar course specifically designed to help journalism majors master the essentials of grammar. All majors must achieve an 80 percent in the course, indicating a mastery of grammar, before they can move on to any other journalism course.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major
JMC	105	Freshman Seminar	Exploring the impact of technology on the profession of journalism during the last 20 years.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Credit is allowed for only JMC 105 or 194 (Freshman Seminar)
JMC	110	Principles and History of Journalism	Fundamental principles of journalism and the evolution of those principles through the history of the U.S. news media. By understanding the history of journalism, students learn about the most critical values of the profession. This is the first of four "values" courses Cronkite students take during the four-year curriculum.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB	Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; Credit is allowed for only JMC 110 or MCO 120
JMC	120	Studio Production	Introduces the vocabulary of production. Develops familiarity with the studio equipment, its care and operation, and basic production procedures. Covers the ability to function as a member of a production team; sound attitudes toward assignments and constructive criticism; and an appreciation of production as a tool of the communication process. Discusses career opportunities in the diverse marketplace.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Pre-requisite: Journalism and Mass Communication major; Credit is allowed for only JMC 120 or 194 (Studio Production)
JMC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major
JMC	201	News Reporting and Writing	Introductory news writing course required for all Cronkite majors. Students learn the basic reporting and writing skills needed for further study in print, broadcasting, online or public relations. Students practice reporting and writing news stories with an emphasis on accuracy, newsworthiness, deadlines, objectivity and fairness.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	L	Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; ENG 101, 105, or 107 with C or better; JMC 101; JMC 110 or MCO 120 with C or better
JMC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major

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JMC	301	Intermediate Reporting and Writing	Required of all students specializing in print, online and public relations; trains students in news reporting and writing under deadline. Students produce professional-level stories that are clear, well reported and accurate for publication. Students hone their reporting techniques and learn how to cover a beat and write news, feature and enterprise stories. They gain a deeper and more sophisticated understanding of newsworthiness, journalism ethics and law and news diversity.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	L	Prerequisite(s): Journalism and Mass Communication major; ENG 102 or 105 or 108 with C or better; JMC 201 with C or better; minimum 2.50 cumulative GPA
JMC	302	Sports Reporting	Students learn how to cover a sports beat in this hands-on class. They develop story ideas and sources and report and write multiple stories on deadline. Expects students to pitch stories to professional outlets with the goal of publication.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 201 with C or better; minimum 2.50 GPA
JMC	305	Multimedia Journalism	Software and digital tools commonly used by multimedia journalists, including shooting and editing photos and video, social media, Web analytics, basic HTML, blogging, and design for the Web.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; ENG 101 or 105 or 107 with C or better; JMC 101; JMC 110 or MCO 120 with C or better
JMC	310	Public Relations	Theory and practice of publicity, public relations and related techniques and procedures.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 201 with C or better; minimum 2.50 cumulative GPA
JMC	313	Introduction to Editing	Hands-on training in editing copy, photos and graphics and writing headlines and other display text for print and digital platforms. Emphasizes editing for accuracy, clarity, brevity, grammar and tone. Students practice AP style, develop news judgment and consider the ethical implications of their work.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 with C or better
JMC	315	Intermediate Reporting and Writing (Broadcast)	Intermediate broadcast news reporting and writing techniques with emphasis on audio.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	L	Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 cumulative GPA; ENG 102 or 105 or 108 with C or better; JMC 201 with C or better
JMC	320	Newscast Producing	Principles of broadcast news producing, delivered via a combined lecture/lab experience and assignments based on editorial judgment, technical skills and industry awareness. Students emerge with strategies for total newsroom management, confidence in producing news content and newscasts under deadline pressure and prepared for a variety of producer-related roles in professional newsroom environments.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 302 or JMC 315 with C or better; minimum 2.50 GPA
JMC	325	Breaking News Multimedia Reporting	Students cover breaking news for azcentral.com, gaining practical experience in an online, multimedia environment. Students work out of a Republic Media newsroom under the direction of professional editors. Students often have the opportunity to work with full-time professional reporters on big news stories, and their work may appear on azcentral.com, in The Arizona Republic and in 12 News reports. Students must commit to two full days a week, and they earn pay in addition to class credit.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; minimum 2.50 GPA; JMC 305 with C or better
JMC	330	Television Reporting	Writing, reporting and editing for television.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 315 and JMC 345 with C or better
JMC	331	Television Sports Reporting	Hands-on experience reporting and producing television sports packages. Skills taught include sports writing, reporting and editing for broadcast.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 302 with C or better; JMC 346 with C or better; minimum cumulative 2.50 GPA
JMC	345	Videography	Students conceive, plan, shoot, write and edit television news packages in this hands-on class. Skills taught include sequencing, framing, lighting, sound, story structure, news judgment, storytelling and editing. Students may use school-supplied cameras and editing facilities but must provide a Flash Memory card and portable external FireWire Hard Drive.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 201 with C or better; minimum 2.50 cumulative GPA
JMC	346	Sports Videography	Develops an understanding of visual sports storytelling and craft compelling sports stories using video and sound.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 201 with C or better; minimum 2.50 GPA

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JMC	351	Photojournalism I	Teaches basic skills required to compose, shoot and prepare still photos for publication. Hands-on, with students shooting a range of assignments from news events to environmental portraits, and producing a portfolio of their work. Students may share a school-supplied Canon camera or provide their own. The camera should be a digital SLR camera body with at least a kit zoom lens, and the camera body must have a manual setting and have the ability to turn off any built-in camera flash. Students need digital media cards of at least 2 GB and an external digital card reader. Students may not use point-and-shoot cameras or cameras with Flash (built-in or external) for this class.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 201 with C or better; minimum 2.50 cumulative GPA; successful completion of the English Grammar Test administered by the Cronkite School (or JMC 101 or JMC 194 - Grammar for Journalists)
JMC	352	Sports Photojournalism	Students learn photojournalism skills, including composition, shooting and preparing still photos for publication in a sports context. Hands-on, with students shooting a range of sports assignments and producing a portfolio of their work. Students may share a school-supplied Cannon camera or provide their own. The camera should be a digital SLR camera body with at least a kit zoom lens, and the camera body must have a manual setting and have the ability to turn off any built-in camera flash. Students need digital media cards of at least 2 GB and an external digital card reader. Students may not use point-and-shoot cameras or cameras with flash (built-in or external) for this class.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 201 with C or better; minimum 2.50 GPA
JMC	366	Journalism Ethics and Diversity	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 110 with C or better; minimum 2.50 cumulative GPA; minimum 25 hours
JMC	367	Ethics and Diversity in Sports Journalism	Explores ethical problems related to sports media in a seminar setting. Discussion-based course applies journalistic values and principles to contemporary ethical dilemmas in sports media and helps prepare students for work in the profession.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; minimum 2.50 GPA; JMC 101; JMC 110 with C or better
JMC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 300, JMC 315, TCM 300 or TCM 315 with C or better
JMC	402	Mass Communication Law	Provides a grounding in the laws and regulations that govern various aspects of the media with a focus on First Amendment guarantees and privileges and the extent to which those have been limited by courts and lawmakers. Topics include freedom of expression, libel, privacy and obscenity.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; ENG 102, 105, or 108 with C or better; JMC 201 with C or better; minimum 2.50 cumulative GPA; minimum 56 hours
JMC	410	Turning Points in TV History	Uses historic television footage to talk about the evolution of news coverage and the ethical decisions journalists face.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism and Mass Communication major; Minimum 2.50 GPA; JMC 101 (or successful completion of English Grammar Exam); Credit is allowed for only JMC 410 or 494 (Turning Points in TV History)
JMC	412	Opinion Writing	Provides hands-on experience writing and editing opinion and first-person narratives for ASU-affiliated Zocalo Public Square, an innovative LA-based publication syndicated by more than 100 publications nationwide including Time, The Washington Post, the San Francisco Chronicle and Gannett newspapers.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 301 with C or better; minimum 2.50 cumulative GPA
JMC	413	Advanced Editing	Builds on skills learned earlier. Students master editing skills that include AP style, grammar, headline writing and page layout as well as editing graphics and other visuals, editing Web content and uses of social media. Students hone their news judgment and learn to work quickly and accurately on deadline.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student, JMC 313 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student

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JMC	414	Graphic Design for Print and Web	Theory, organization, and practice of layout, typography, and design in traditional and multimedia publishing.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 305 with C or better; minimum 2.50 cumulative GPA
JMC	415	Writing for Public Relations	Develops the professional-level writing and strategic skills expected of public relations practitioners. Students learn how to design and produce strategic plans, news releases, media kits and executive communications. They are exposed to communications approaches required for different audiences and media and learn about public relations theory as well as audience research and analysis.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student; JMC 301 with C or better; JMC 270 or JMC 310 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	417	Public Relations Campaigns	Students work with professional clients in an agency setting to research, plan and create comprehensive public relations campaign that address clients' needs. Concepts, theories and techniques relevant to public relations campaigns as well as strategic planning, campaign components and technology resources and tools. Analyzes, discusses and responds to current public relations issues and case studies.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): JMC 415 with C or better; JMC 436 or 494 (Public Relations Research) with C or better; Minimum 2.50 GPA OR graduate Mass Communications major
JMC	420	Reporting Public Affairs	Instruction and assignments in reporting the courts, schools, government, city hall, social problems, and other areas involving public issues.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student, JMC 301 with C or better; Minimum 2.5 GPA OR Graduate Mass Communication student
JMC	430	Sports Marketing and Campaigns	Creates a professional campaign engaging viewers and fans in new and meaningful ways solidifying Fox Sports Network's (FSN) position as a leader in sports programming. Students work within FSN's "Creative University" program to execute the campaign; FSN selects a campaign to implement.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301 or 302 or 315 with C or better; minimum 2.50 GPA; Credit is allowed for only JMC 430 or JMC 494 (Sports Marketing and Campaigns)
JMC	435	Latino and Transnational Issues	Provides background and understanding of some of the most pressing and controversial issues of the day that are taking place in the Southwest borderlands.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 201 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 435 or JMC 494 (Latino and Transnational Issues)
JMC	436	Public Relations Research	Students learn about the importance of research in communications, conduct research using qualitative and quantitative methods, and analyze data to understand implications within a specific communications context. They also critically evaluate published academic and professional research and are exposed to types of research and their application in the field of public relations.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; Minimum 2.50 GPA; JMC 301 and 310 with C or better; Credit is allowed for only JMC 436 or 494 (Public Relations Research)
JMC	437	Documentary Production	Students learn the fundamentals of producing documentaries, including research, script writing, production and shooting and editing video. Students produce a long-form documentary. Students become familiar with television documentary history in order to identify trends and learn about legal and ethical issues relevant to video documentary production.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 345 or JMC 346 with C or better; minimum 2.50 GPA
JMC	440	Magazine Writing	Students report and write stories suitable for magazine outlets. They develop and pitch stories, learn new reporting techniques and employ literary techniques such as description and scene setting in their writing. See class notes for additional information.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.5 GPA OR graduate Mass Communication student
JMC	445	Science and Medical Writing	Develops writing, reporting, and an understanding of key concepts in science as they relate to medical science research and practice.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student

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JMC	450	Issues in Coverage of Business and the Economy	Basics of business and economic reporting, one of the fastest-growing areas of journalism. Students learn what skills are needed to cover business and economic stories as well as the basics of how private companies operate and the factors that drive the economy. Students learn about opportunities in the field and hear from leaders in business journalism.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism and Mass Communication major; Minimum 2.50 GPA; JMC 201 with C or better; Credit is allowed for only JMC 450 or 494 (Issues in Coverage Bus/Economy)
JMC	451	Photojournalism II	Develops photojournalism and visual storytelling skills through extensive hands-on practice shooting and editing for online and print media. Introduces shooting video with DSLR cameras and becoming proficient at image cropping, writing outlines and editing using Adobe Photoshop.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 305 with C or better; JMC 351 with C or better; minimum 2.50 cumulative GPA
JMC	452	Visual Storytelling	Develops visual storytelling skills, working closely with a professional visual journalist to tell multimedia documentary stories that utilize video, still photos and text. In addition to the basics of storytelling, covers non-traditional techniques, including time-lapse, panos, HDR and star trails. Students should have basic skills in both still photography and videography and are expected to provide their own DSLR camera that can accommodate external mics and that have video capability.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA; JMC 345 or JMC 351 with C or better
JMC	453	Reporting on Business and the Economy	Trains in the basics of reporting about business and the economy. Helps students tell the stories behind companies, people and money, while improving competence in using numbers in stories. Offers the opportunity to have stories appear in print, online or broadcast.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; Minimum 2.50 GPA; JMC 301 (or 315) and JMC 450 with C or better; Credit is allowed for only JMC 453 or 494 (Reporting on Business/Economy)
JMC	455	Digital Media Entrepreneurship	Students identify a marketable idea and transform it into a product and/or company. In the process, they learn about key concepts of entrepreneurship and practice skills that they can employ as entrepreneurs themselves. Students are exposed to a range of national and regional entrepreneurs and emerge with a deeper understanding of entrepreneurship's importance within the media and communications landscape.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; minimum 2.50 GPA; JMC 305 with C or better; Credit is allowed for only JMC 455, JMC 494 (Digital Media Entrepreneurship), MCO 555, or MCO 598 (Digital Media Entrepreneurship)
JMC	460	Advanced Online Media	Covers online trends, Web design and usability, and copyright; legal, and ethical issues facing online journalists. Students critically examine journalistic Web sites and recognize excellence as well as mediocrity. Hands-on experience in using Photoshop, Dreamweaver, CSS, Soundslides, Final Cut, and Flash to produce original, compelling multimedia stories as well as an award-winning online magazine.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 305 with C or better; minimum 2.50 cumulative GPA
JMC	465	Telling Stories with Data	Techniques and tools of reporting using data and public records as well as how to use the Internet and other online sources to find information and sources for stories. Students get experience with computer spreadsheets, database software and statistical techniques as they develop their advanced reporting skills.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301 or 302 or 315 with C or better; minimum 2.50 GPA
JMC	470	Depth Reporting	Teaches students how to conceptualize, report and write long-form, in-depth stories. Students deeply research a selected topic through public records, interviews and investigative reporting techniques and write an in-depth article with the goal of publication.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; minimum 2.50 cumulative GPA; JMC 301 or 302 or 315 with C or better
JMC	473	The Business and Future of Journalism	Exposes advanced journalism students to broad media management problems; helps students understand how essential the bottom-line and quality journalism are to the entire journalistic enterprise; helps students think about how to balance those two concerns.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism student; minimum cumulative GPA of 2.5; JMC 201 with C or better

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JMC	474	Advanced Issues in 21st-Century Sports and Media	Exposes challenges facing sports and media in the 21st century, including changing content models, revenue streams, and the evolving relationship between teams and media outlets.	N	SEM	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 201 with C or better; minimum 2.50 cumulative GPA
JMC	475	Cronkite News: Broadcast	Students increase their knowledge of the television and multimedia news industry and receive a realistic experience in field and studio newscast production.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 330 or 331 with C or better; minimum 2.50 cumulative GPA
JMC	476	Public Relations Laboratory	Synthesizes and applies the theories, principles and techniques of public relations. This body of knowledge includes research, planning techniques, types of budgets, organizational systems, management styles, campaign components, types of campaigns, technology, ethics, diverse channels of communication and target audiences. Students: (1) analyze, discuss, then respond to public relations case studies; (2) develop an in-depth understanding of a client's needs; (3) conduct primary and secondary research; (4) work with a client in a team-based approach to prepare a comprehensive campaign proposal to address the client's problem or issue; (5) design and develop media products for client; (6) formally present the proposal to the client and the class.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication major; 2.50 cumulative GPA; JMC 417 with C or better. Credit is allowed for only JMC 476 or JMC 498 (Public Relations Lab)
JMC	477	New Media Innovation and Entrepreneurship Lab	Research and development program designed to help media companies create new and exciting multimedia products and to help students create digital media startups. Brings together students from disciplines across campus, including journalism, business, computer engineering and design. Journalism students conduct research into developing new products and creating prototypes for those products. Students learn by doing, interacting with clients or investors, the director and the lead Web developer. Students schedule meeting times with the director to discuss projects.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 301 or JMC 315 and 305 with C or better; 2.50 cumulative GPA. Credit is allowed for only JMC 477 or JMC 498 (Innovation and Entrepreneurship Lab)
JMC	478	Cronkite News: Phoenix Bureau	Applies and enhances reporting, writing and multimedia skills.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication major; 2.50 cumulative GPA; JMC 301 or JMC 315 with C or better
JMC	479	Cronkite News: Washington Bureau	Students participate in a full-time regional reporting bureau that gives them the opportunity to work as a Washington correspondent.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication major; JMC 301 or 315 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 479 or JMC 478 (Cronkite News - Washington Bureau)
JMC	480	Cronkite News: Phoenix Sports Bureau	Students gain valuable experience in sports reporting, shooting, editing and voicing packages for partnership outlets.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301, 302, or 315 with C or better; JMC 305 with C or better; minimum 2.50 GPA; Credit is allowed for only JMC 480 or JMC 478 (Cronkite News - Phoenix Sports Bureau)
JMC	481	Cronkite News: Los Angeles Sports Bureau	Students gain valuable experience in sports journalism reporting, shooting, editing and voicing packages for partnership outlets.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 330 or 331 with C or better; minimum 2.50 GPA; Credit is allowed for only JMC 481 or JMC 478 (Cronkite News - L.A. Sports) or JMC 478 (Sports Journalism Santa Monica)

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JMC	483	Cronkite News: Digital Production	Students produce stories and multimedia across platforms for Cronkite News and professional news outlets.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301 or 302 or 315 with C or better; JMC 305 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 483 or JMC 478 (Cronkite News Digital Production)
JMC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301 or 302 or 315 with C or better; JMC 305 with C or better; minimum 2.50 GPA
JMC	485	Public Insight Network Bureau	Community engagement, story development, collaboration and entrepreneurship. Opportunity to build relationships with journalists in different markets and across media.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 301 or 315 with C or better; minimum cumulative 2.50 GPA; Credit is allowed for only JMC 485 or JMC 494 (Public Insight Network)
JMC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		Prerequisite(s): Barrett Honors student
JMC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; minimum 2.50 cumulative GPA OR graduate Mass Communication student
JMC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-7		Pre-requisites: JMC student; Minimum 2.25 GPA; Successful completion of English proficiency exam OR Graduate Mass Communication student
JMC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-3		
JPN	101	First-Year Japanese I	Basic speaking, listening, reading, writing, computer skills, and culture. Hiragana, katakana, 75 kanji. For students without previous Japanese instruction.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	
JPN	102	First-Year Japanese II	Continued development of JPN 101 skills. 99 additional kanji. Communication skills goal: ACTFL Guideline Novice-Mid to Novice-High.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: JPN 101 with a C or greater or in progress. Students may not take JPN 102 if they have received credit for JPN 201, 202, 309, 310, 311, 312, 313, 314 or 321

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JPN	110	Intensive Japanese I	First semester of the one-year intensive Japanese language sequence designed to train novice-level speakers to become competent intermediate speakers who can carry out conversation on familiar topics or handle straightforward situations. Emphasizes both oral and written communication through development of skills in listening, speaking, reading, writing and cultural awareness. Students manage a number of communicative tasks in social situations. Conversations are restricted to a few of the predictable topics necessary for survival; students express themselves in straightforward situations and on familiar topics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		
JPN	115	Japanese Popular Culture: Anime, Manga, and Film	Examines different media of Japanese popular culture such as comics (manga), animation (anime) and film for evidence of how the Japanese express their self identity in Japanese society. By separating the media into themes such as technology and the future, war/apocalypse/disaster, violence in society, gender and sexuality, and human relations, understands the Japanese culture (and social consciousness) more intimately. Students view films, read scholarly articles on the subject matter, and actively participate in the course through written papers and discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Credit is allowed for only JPN 115 or 194 (Japanese Popular Culture: Anime, Manga, and Film)
JPN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
JPN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	201	Second-Year Japanese I	Continued development in speaking, listening, reading, writing, culture, and computer skills. 74 additional kanji. Introduction to kanji dictionary.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: JPN 102 with C or better; Students with credit for JPN 202, 309, 310, 311, 312, 313, 314 or 321 may not enroll in JPN 201
JPN	202	Second-Year Japanese II	Continued development of JPN 201 skills. 116 additional kanji. Communication skills goal: ACTFL Guideline Intermediate-Low to Intermediate-Mid.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisite: JPN 201 with C or better
JPN	206	Japanese Calligraphy	Introduces Japanese calligraphy using traditional implements, starting with basic brush strokes and stroke order for kanji and kana.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1		Pre-requisites: JPN 101 with C or better
JPN	210	Intensive Japanese II	Second semester of the one-year intensive Japanese language sequence designed to train novice-level speakers to become competent intermediate speakers who can carry out conversation on familiar topics or handle straightforward situations. Emphasizes both oral and written communication through development of skills in listening, speaking, reading, writing and cultural awareness. Students manage a number of communicative tasks in social situations. Conversations are restricted to a few of the predictable topics necessary for survival; students express themselves in straightforward situations and on familiar topics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		Prerequisite(s): JPN 110 with C or better
JPN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	301	Third-Year Japanese I	Development of reading skills, using authentic materials to comprehend structure, grammar, idioms, and culture. Expansion of kanji and vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisite: JPN 202 with C or better
JPN	302	Third-Year Japanese II	Continued development of reading skills, as in JPN 301. Reading proficiency goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: JPN 301 with C or better
JPN	309	Japanese Oral Communication I	Development of interpersonal, interpretive, and presentational oral/aural skills in familiar topics with sociolinguistic skills and understanding of Japanese culture. JPN 309 and 310 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 202 with C or better
JPN	310	Japanese Oral Communication II	Continued development of oral/aural skills, with increased emphasis on honorifics. Speaking proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 309 with C or better
JPN	311	Japanese Composition I	Learning structural guidelines for narrative writing, developing organization skills to support ideas. Writing proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: JPN 202 with C or better
JPN	312	Japanese Composition II	Continued development of writing skills, introducing research and creative writing. Writing proficiency goal: ACTFL Guideline Intermediate-high to Advanced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: JPN 311 with C or better
JPN	315	The Language of Japanese Popular Culture I: Gender and Onomatopoeia/Mimesis	Develops reading and listening skills using Japanese popular culture materials of various genres, including narratives, comics, anime, film and music. Introduces linguistic elements that are not found in regular language textbooks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre- or corequisite(s): JPN 202 with C or better if completed; Credit is allowed for only JPN 315 or JPN 394 (The Language of Japanese Popular Culture I)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JPN	316	The Language of Japanese Popular Culture II: Honorifics and Dialects	Understands Japanese popular culture materials such as anime, music, movies, manga and narratives through their target language of Japanese. Emphasized language areas are honorifics, formal expressions, dialects and slang and vulgar expressions that are tolerable in the classroom environment. Introduces elements of the history, geography and culture of Japan to further students' understanding of the materials. Students improve their receptive skills, i.e., listening and reading, by engaging with these materials, and through the technique of shadowing, also improve their pronunciation, intonation and grammatical accuracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre- or corequisite(s): JPN 301 with C or better if completed; Credit is allowed for only JPN 316 or JPN 394 (The Language of Japanese Popular Culture II)
JPN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	401	Reading Modern Japanese Texts I	Readings in modern literary and expository texts. Focus varies from year to year.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Pre-requisites: JPN 302 and SLC 202 with C+ or better
JPN	414	Introduction to Classical Japanese	Readings from various genres of pre-20th-century literature, with analysis of the structure of the classical language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 302 with C or better
JPN	415	Advanced Classical Japanese	Close readings of selected premodern texts, with focus on grammatical and stylistic features.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 414 with C or better
JPN	445	Readings in Modern Japanese Letters and Culture	Advanced study of selected facets of modern Japanese letters and culture, including literature, material and visual culture, film, and other media.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 401 and SLC 202 with C or better. Credit is allowed for only JPN 445 or 535
JPN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	485	Literary Translation: Theory and Practice	Introduces theories and practice of literary translation, with an emphasis on the translation of Japanese literary texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 401 and SLC 421 with C or better. Credit is allowed for only JPN 485 or 585
JPN	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
JPN	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
JPN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
JPN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
JPN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	535	Advanced Readings	Readings in primary and secondary sources in history, art, religious studies, literature, or other fields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only JPN 445 or 535
JPN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	585	Advanced Problems of Translation	Theories and practice of translation; strategies for handling a variety of Japanese texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only JPN 485 or 585
JPN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JPN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JST	131	Biblical Hebrew I	Offers an introduction to Biblical Hebrew, the language in which most of the books of the Hebrew Bible/Old Testament have been written. Provides the basic tools to understand and translate Biblical Hebrew texts. Covers the Hebrew alphabet, basic vocabulary, morphology and syntax. Students learn idiomatic expressions, basic literary techniques in narratives and poetry, as well as specificities of Semitic languages. Emphasizes a critical approach to the ancient text. Also introduces the evolution of the biblical text, from ancient manuscripts to contemporary editions and translations. Includes an introduction to the development of writing and to the evolution of Hebrew, from earliest inscriptions to its revival in modern Israel. The texts translated in class are situated in the history of Israel, but also in their Jewish and Christian cultural and religious contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Credit is allowed for only HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I)
JST	132	Biblical Hebrew II	Completes the study of basic Biblical Hebrew grammar and vocabulary (Futato's Beginning Biblical Hebrew, chapters 21-40). Prepares students to translate narrative and legal texts from Hebrew Bible. Students learn to use dictionaries, grammars, paradigms and critical editions of the biblical text.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I) with C or better; Credit is allowed for only HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II)
JST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
JST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
JST	210	Introduction to Judaism	Beliefs, ceremonies, festivals, and institutions of Judaism emphasizing the contemporary era. Assumes no previous knowledge about Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only JST 210 or REL 210
JST	211	Jews and Judaism in America	Chronological analysis of Jews and Judaism in American history and letters.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Credit is allowed for only HST 211 or JST 211 or REL 211
JST	230	Introduction to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST, JST or REL 230
JST	231	Biblical Hebrew III	Advanced study of Biblical Hebrew. Deepens understanding of the grammar and composition of the Hebrew Bible. Translates texts of different literary genres (narrative, legal, poetic, prophetic) and different periods. Introduces the basic principles of textual criticism and different approaches to interpret the texts of the Hebrew Bible.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II) with C or better; Credit is allowed for only HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JST	232	Biblical Hebrew IV	Addresses advanced topics in Biblical Hebrew grammar and interpretation. The first half of the semester is devoted to texts from the Hebrew Bible; the second half on extra-biblical texts written in ancient Hebrew (for example: Dead Sea Scrolls, Rabbinic texts, ancient Hebrew poetry). Topics and texts change annually.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III) with C or better; Credit is allowed for only HEB, JST, REL 232 or HEB 294 (Biblical Hebrew IV)
JST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
JST	304	Studies in European History	Specialized topics in European history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 304 or JST 304
JST	314	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
JST	314	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
JST	315	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST or REL 315
JST	316	Literary Readings of the Hebrew Bible	Literary analysis of two of the main genres of the Hebrew Bible: narrative art and poetry. Students learn the main literary conventions of biblical prose and poetry, and how these conventions are applied or subverted. Each class comprises the study of a literary aspect, close readings, and thematic discussions. Biblical texts are read only in translation. They are situated in the religious, literary and artistic traditions that have developed on their basis.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only ENG 316, HEB 316, JST 316, REL 316 or HEB 394 (Literary Readings of the Bible)
JST	317	Introduction to Rabbinic Judaism	Historical analysis of the thought, literature, and institutions of rabbinic Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST or REL 317
JST	318	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST 318, REL 318 or SOC 375
JST	347	Modern Israeli Literature in Translation	Modern Hebrew, or Israeli Hebrew, started at the end of the 19th century in Europe and today it is the language of the State of Israel. During this short period modern Hebrew developed literature with its unique local characteristic, as well as universal ideas. Reads and examines four books against their social and historical background.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HEB 347 or JST 347 or SLC 347 or ENG/HEB/JST/SLC 394 (Modern Hebrew Literature in Translation)
JST	348	Israeli Society and Culture	Different partitions of the Israeli society, based on ethnic origin, by religious affiliation or by political association. Depicts how Israel is an absorbing immigration state. Israel is a welfare state and the course covers aspects of a welfare state, such as health, retirement, public transportation, art, higher education and more.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better. Credit is allowed for only HEB 348 or HEB 394 (Israeli Culture and Society) or JST 348 or REL 311 or SLC 348

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JST	373	Women in Judaism	Studies the legal, social and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better and minimum 24 earned hours or WST 100 or 300 with C or better; Credit is allowed for only JST 373, REL 373 or WST 372
JST	384	The Bible and Archaeological Discoveries	Studies the Bible alongside the stories that architecture, pottery, metalwork, sculpture, tombs, and paintings of the ancient Near East have to tell. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only JST 384 or REL 384
JST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
JST	396	Women in the Bible	Uses feminist criticism to reconstruct the remarkable women who stand in the shadow of the patriarchy in the bible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only JST or REL 396
JST	411	Judaism and the Beginnings of Christianity	Studies the beginnings of Christianity in relation to Judaism: their common context, the process of their distinction and their mutual influence. Through a historical and thematic approach, explores the parallel construction of Jewish and Christian identities. Combines readings from primary sources (Hellenistic Judaism, Qumran, New Testament, Early Christianity, Rabbinic Judaism) and up-to-date scholarly literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101 or 105 or 107 or 108 or HST 100 or 102 or REL 100 or SLC 142 or 202 with C or better; Credit is allowed for only HEB/JST/REL 411 or HEB 394 (Judaism and the Origins of Christianity) or HEB 494 (Judeo-Hellenistic Literature)
JST	445	The Holocaust in German-Mediated Memory	Examines representations of the Holocaust from across different media (literature, film, architecture, memoir, photography) and from across multiple generations of German engagement with this period in history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only FMS 445 or GER 445 or JST 445 or SLC 445 or GER 494 (Holocaust and German Media or Holocaust and German Mediated Memory)
JST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
JST	490	Methods of Historical Inquiry	Capstone course in history as an academic discipline, including formulation of research questions, use of primary and secondary sources to evaluate, form and support historical arguments. Students draft and revise a scholarly research paper.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Prerequisite(s): History or Secondary Education (History) student; ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 300 or HST 495 or JST 490
JST	491	History of Anti-Semitism	Anti-Semitism means hostility, negative perceptions, and persecution of Jews. Examines the evolution of anti-Semitism in the West from antiquity to modern times. Explains the history of anti-Semitism by looking at the interplay of religious, economic, cultural, and political factors. Special attention given to the origins of Christianity, the place of Judaism in Christian self-understanding, the power struggle between popes and emperors during the Middle Ages, the involvement of Jews in money lending, the alliance between the Jews and the secular princes, the rise of modern nationalism, and the place of racism in the politics of modern nation states. With a better understanding of the history of anti-Semitism, ponders the differences and similarities between premodern anti-Judaism and modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108; JST 230 (or REL 210) with C or better
JST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
JST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Prerequisite(s): Barrett Honors student

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JST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
JST	495	Judaism, Science and World Religions	Studies the correlation between science and religion as an interdisciplinary study from a historical perspective. Session topics fall into three distinct units. The first correlates the physical sciences with Western religious theology; the second explores the consequences of the life sciences on religious psychology; and the third examines the impact of the interconnection between sciences and religions in society. Each unit is studied through specific readings, film, lectures, and discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108; JST 210 or REL 210 (or JST 230) with C or better
JST	496	Biblical Narratives: Literary Approaches	Presents different trends in synchronic approaches applied to the Bible such as narrative criticism, semiotics, reader-response criticism, and situates them both in the postmodern cultural context and in the history of biblical exegesis. Explores various literary devices in biblical narratives, such as repetition, type-scenes, characterization, the change of points of view, the use of metaphors. Studies each technique on particular biblical texts, literally translated into English, with a special emphasis on how these techniques guide the interpretation and create meaning. Questions the significance of literary approaches for religious or ideological texts, such as the Hebrew Bible. Also considers criticisms raised against these approaches, assesses their limits, and envisions their future.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108 with C or better; JST 210 or REL 210 (or JST 230) with C or better
JST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		
JST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
JUS	105	Introduction to Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Appropriate for freshmen and sophomores.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Credit is allowed for only JUS 105 or 305
JUS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Must have less than or equal to 25 earned hours
JUS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Must have less than or equal to 25 hours
JUS	200	Topics in Concepts and Issues of Justice	Uses critical thinking skills to analyze and comprehend controversial social issues (e.g., abortion, affirmative action, capital punishment, the flat tax, and immigration).	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	
JUS	207	Homicide and Serial Killers	Explores the scholarship, research and rational analysis of the mass, spree and serial killer. It will examine some of the causes and underpinings of these killers within the U.S. as well as the major theories and understandings of this phenomenon.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	
JUS	210	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only AFR 212 (or AFS 210) or APA 210 or JUS 210 or TCL 210
JUS	214	The Pursuit of Justice in the 21st Century	Introduces a wide variety of institutions and organizations--locally, nationally and internationally--that seek justice. Provides an understanding of the many ways justice is institutionalized in modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	
JUS	215	Bob Marley and Reggae: Lyrics of Resistance	Studies political content, influence, and impact of Caribbean popular music, in particular the music of Bob Marley.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Credit is allowed for only AFR 215 or AFR 394 (Bob Marley: Reggae and Resistance) or JUS 215
JUS	220	Introduction to Social Transformation	Introduces key concepts in the study of social change, social innovation, and social transformation. Studies examples of social movements, social activism, community organizing, and coalition building and how such efforts have transformed society and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only APA 220 or JUS 220 or SST 220
JUS	222	Drugs and Justice	Provides an historical overview of the development and circulation of certain drugs; explores the more specific effects of drug use and abuse in everyday life; and examines the efforts by governments to both restrict/end and facilitate/expand the drug trade.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Credit is allowed for only JUS 200 (Drugs and Justice) or 222

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JUS	225	Black Movements in America	Survey course on the historical and political development of mass movements by African Americans and Black resistance in the United States. Traces nearly 400 years of Black resistance against injustices and mass struggles for equality and liberation. Topics include the anti-slavery movement, anti-lynching campaign, the Civil Rights movement, the Black Power movement, prison abolitionism, the reproductive justice movement, and movements for economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only AFR 225 (or AFS 225) or JUS 200 (Black Movements in America) or JUS 225
JUS	235	Disability, Justice and Advocacy	Overarching history of the disability rights movement and how it is similar to and different from other civil and rights movements. Examines how policies and activism are interconnected within this movement, in addition to looking at other human categories related to disabilities such as gender, sexuality, race and socioeconomic status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only COM 235, JUS 235, SST 235, WST 235 or SST 294 (Disability Justice and Advocacy)
JUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
JUS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
JUS	300	Race and Racism in Africa/African Diaspora	Advanced study of the concepts of race and racism and how they manifest themselves in the USA, the Caribbean, and Africa. Examines the construction of race, racism, and race relations in Africa and the African Diaspora as well as practices to challenge ethnicity, racism, and racial oppression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 301 (or AFS 301) or JUS 300
JUS	301	Research in Justice Studies	Focuses on developing and evaluating research designs, data collection, and the relationship between validity and reliability. Stresses methods for conducting research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	302	Statistical Analysis for Justice Studies	Concepts and application of descriptive and inferential statistics, including linear regression, for justice studies research..	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	CS	Prerequisite(s): minimum 2.00 cumulative GPA; minimum 24 hours; ENG 102, 105 or 108 with C or better; MAT 117, 142, 170 or approved MA General Studies course
JUS	303	Justice Theory	Examines classic and contemporary philosophies and theories of justice, including legal, social, and criminal justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Minimum 2.00 GPA
JUS	304	Islands of Globalization: Caribbean Politics and Political Economy	In-depth study of the complexities of contemporary Caribbean politics and political economy. Examines the countries that constitute the Caribbean community and common market and the Caribbean Latin American countries such as Cuba and the Dominican Republic and analyzes the historical evolution of the region's political and economic systems and the impact of globalization. Traces the development of the region's political economy from the colonial period to the present; looks at the impact of globalization on contemporary politics, economics, and culture and the region's response.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 304 (or AFS 304) or JUS 304
JUS	305	Principles of Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Appropriate for juniors and seniors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Minimum 2.00 GPA; Credit is allowed for only JUS 105 or 305
JUS	308	Courts and Society	History and development of courts. Relationship between dispute resolution mechanisms and cultural/social structure/processes in which they are embedded.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	320	Community and Social Justice	Discusses and analyzes definitions of community; impact of environment on behavior; promises of community organization for local empowerment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	321	Wealth Distribution and Poverty	Examines wealth and income distribution in the United States and analyzes ideological and political forces producing an increasingly unequal society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	323	Justice and the Development of the Welfare State	Provides a comprehensive overview of the development of social welfare and relevant issues pertaining to social justice. Introduces upper-division students to different ideas about the meaning of social welfare in the context of the development of the U.S. welfare state.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA

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JUS	325	Globalization and Socio-Economic Justice	Addresses a trend producing increasing interconnectedness of economies and societies, as well as creating new conflicts and divisions. Provides greater understanding of global forces, as well as the effect of these forces on global economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA; Credit is allowed for only JUS 325 or SGS 325
JUS	326	Music as Political Discourse: Reggae, Calypso, and Hip Hop	This is a reading and writing intensive course that employs critical thought that explores African Diaspora popular music as a medium of social and political expression. It examines the political content of Reggae, Calypso and Hip Hop and their role in triggering and influencing popular discourse in the Caribbean and the USA. Course material will analyze the interrelationships among the musical forms and their role in fostering Black and Pan African Cultural Identity, Political Consciousness and World Peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & H & G	Prerequisite(s): AFR 200 (or AFS 200); minimum 45 hours; Credit is allowed for only AFR 325 (or AFS 325) or JUS 326
JUS	329	Domestic Violence	Critical inquiry into the legal, historical, theoretical, comparative, and treatment literatures on domestic violence; application of contemporary justice and social change theories to research how society defines and organizes against domestic violence. May include consideration of intimate partner abuse, child abuse and neglect, and gender violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	330	Survey of African American Politics	In-depth study of the dynamics of the African American political experience. Examines the historical development of African American politics from the anti-slavery era to the Civil Rights breakthrough of the 1960's through the present political climate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 330 or JUS 330
JUS	332	Politics of Energy Policy and Justice	Examines the social and political dimensions that shape energy and environmental policy. Focuses primarily on the U.S. Introduces elements of regional or global policy where they influence or shape domestic politics and policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	335	Organized Crime	Critical inquiry into organized crime and its illegal activities; analysis and application of contemporary theories; analysis of strategies for reducing the prevalence and power of organized crime in the U.S. and other nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	345	Peoples and Cultures of the Caribbean	Traces the socio-political history of the wider Caribbean from the 15th century to the present. Focuses on the following broad areas: the early years of European settlement and colonization; the construction of slavery and plantation society; and the transition from colonization to political independence. Critically examines the origins and building blocks of Caribbean society as well as analyzes the linkages between the region and the rest of the African diaspora.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 345 (or AFS 345) or JUS 345
JUS	347	Immigration, Education and the Family	Cultural processes related to immigration and their impact on the social construction of the immigrant family and the education of other children. Immigration theories, immigration debates and discourses, the immigration landscape of the 21st century, conceptualizations of the family, and the methodological challenges family researchers face. Topics include issues pertaining to education and the family and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only APA 347, JUS 347, APA 394 (Immigration, Education & Family) or JUS 394 (Immigration, Edu. & Family)
JUS	350	Immigration and Justice	Examines immigration policy, history of immigration, refugee issues, labor force participation, gender, family, children, social networks, and transnationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	352	The Global Politics of Human Rights	Examines political forces that have shaped gradual construction of an international human rights regime and a universal culture of rights, including civil and political rights, as well as economic, social, and cultural rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	353	Race, Space and the Production of Inequality	Explores how the relationship between race and space has been important to the development of broad patterns of social inequality in the United States. Through a variety of readings, films and other material, examines how ideas of race and space have been important to the making and maintenance of national boundaries, citizenship, regional histories and spatial typologies such as border, ghetto, suburb and prison.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): APA 200 or 210; minimum 45 hours; Credit is allowed for only AFR 352 (or AFS 352) or APA 352 or JUS 353 or TCL 353 or APA 394 (Race, Space and the Production of Inequality)

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JUS	360	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	365	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
JUS	370	Cultural Diversity and Justice	Analyzes how cultural diversity challenges and broadens conventional understanding of justice. Examines how cultural beliefs and practices come into conflicts with public law and policy. Assesses the U.S.'s performance on incorporating cultural diversity in its social institutions including education, media, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Pre-requisites: 2.00 cumulative GPA; Pre/Co-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours
JUS	374	The Holocaust, Genocide, and Human Rights	Explores the psychological, social, historical, and political dimensions of the Holocaust and the phenomenon of genocide. Also examines the more recent international cases of genocide along with a discussion and analysis of the Universal Declaration of Human Rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	375	Justice and the Mass Media	Analysis of the impact of mass media and popular culture on social justice issues, including criminal justice. Critical inquiry into portrayals of gender, race, culture and class in mass media and other forms of popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	382	Justice and Pop Culture	Explores the connections between the production, reproduction, and consumption of popular culture and the resultant impact on issues of justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU or SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	385	Justice and Everyday Life	Justice and injustice in everyday life and how small things can become legal issues. Role of language and interaction in social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 2.00 GPA; Minimum 24 hours
JUS	405	Economic Justice	Addresses economic issues and justice implications, including the interplay among economic conditions, race-ethnicity, class, and gender worldwide.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & G	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	408	Comparative Development of the Welfare State	Embodies a multidisciplinary perspective on welfare issues and exposes students to different ideas about justice beyond the United States. Allows them to better understand how and why states organize and deliver justice in different ways. Exposes students to cross-national variation in how history, culture, politics, and economics have shaped the development and content of different types of welfare states. Engages theoretical perspectives from political sociology and political economy concerning the emergence and future fate of these welfare states. Analyzes comparative analysis of three distinctive types of welfare states; Liberal, Conservative, and Social Democratic Welfare States, with particular emphasis on their varying capacity to combine economic efficiency with social justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & G	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	410	Punishment: Logic and Approach	Analyzes forms of punishment, how and why they have changed. Areas include philosophy, history, and social structure of punishment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA

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JUS	414	Black Political Movements: Pan Africanism to Black Power	In-depth examination of the three defining 20th century political movements in Africa and the African Diaspora (USA, Europe, Latin America and the Caribbean)the Pan Africanist, the Civil Rights and the Black Power movements. A primary course objective is to synthesize a comprehensive understanding of Black/African politics and society from a Diasporan perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 9 upper-division hours; junior standing; Credit is allowed for only AFR 394 (Black Political Movements) or AFR 414 or JUS 414
JUS	415	Gender and International Development	Examines the ways in which international development is gendered as well as women's rights as human rights in both national and international arenas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & G	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	420	Women, Work, and Justice	Examines gender inequality in the workplace, including the nature of women's work, theoretical issues, and models for promoting gender justice at work.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	421	Race Ethnicity and Politics in the African Diaspora	Reading and writing intensive course that employs critical thought to look at the competition for political power among different ethnic groups in Africa, the Caribbean and the USA and the implications for political stability, economic development, democratic governance, democratization, nationhood and the empowerment of African and African Diasporan populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): AFR 200 (or AFS 200) and minimum junior standing OR minimum 9 upper-division hours in any classes with the following prefix: AFH, AFS, AFR, APA, JUS, POS, SGS, SOC, WST; Credit is allowed for only AFR 420 or JUS 421
JUS	422	Women, Law, and Social Control	Examines social, economic, and legal factors that are relevant to mechanisms of social control of women, including formal legal control and informal control through violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 36 hours; Minimum 2.00 GPA. Credit is allowed for only JUS 422 or WST 422
JUS	424	Ethics and Alternative Tourism	Cultural processes related to alternative tourism and their impact on both the tourist and local. Travel, tourism, globalization, development, human rights and the commodification of people and places. Topics include issues pertaining to Western tourism, commodification, race/class/gender and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 36 hours. Credit is allowed for only JUS 424 or JUS 494 (Sex, Drugs and Death)
JUS	425	Race, Gender, and Justice	Critically examines major theories, research findings, policies, and controversies concerning race, ethnicity, gender, and crime.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	427	Identity and Justice	Theory of symbolic interaction which provides a vocabulary, observational methodology (i.e., dramaturgy) and a set of grounding concepts that allow students to explore identity in its everyday practices. Explores the transformation and emergence of identities in public discursive spaces and the political impact of identity as it is deployed (invoked) and interpreted (imputed) among interactants in the social world. Establishes the position that identity operates as a central constitutive function in the construction of meaning and, subsequently, our ideas and attitudes about justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only JUS 427 or JUS 494 (Identity & Justice)
JUS	428	Critical Race Theory	In-depth analysis of the ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	GRD	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only AFR, APA, JUS or SST 428
JUS	430	Social Protest, Conflict, and Change	Analyzes historical and contemporary protest movements advocating equality based on race, gender, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	432	Racial Justice	Racial inequality remains a dominant theme in understanding social, legal, and economic justice in the U.S. today. Explores controversial topics surrounding race and justice. Emphasizes current legal, economic, political, and social conceptual frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA

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JUS	435	Cinema and Justice	Tracks the conceptualizations of justice that have been and are currently conveyed in film, including but not limited to the relationship between crime and various notions of justice. Other depictions include social issues such as gender, race, or economics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	438	Human Differences: Dilemmas of Justice	General examination of democracy and human differences that expands into in-depth investigations of (1) racial difference and identity politics; (2) gender and sexual difference in democracy; and (3) cultural difference and the multiculturalism debate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	440	Prisons, Power and the Punishments of the Past	Examines the history and logics of a "U.S. Penal Democracy," tracing how prisons became the preferred and accepted choice for punishment. Traces how the practices, policies and rationalizations of punishment (physical, psychological and social) have been at the center of U.S. politics beginning in the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 36 hours. Credit is allowed for only JUS 440 or JUS 494 (Prisons, Power and the Punishments of History)
JUS	444	Environment and Justice	Explores issues of environment and justice. Topics include justice and environmental racism, future generations, nonhuman life, global/non-Western societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	445	Surveillance and Society	Explore how surveillance technologies alter social life; the complex ways that they interact to produce security, fear, control, and/or vulnerability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	452	Justice Issues in Israel and Palestine: The Political is Personal	Explores the justice issues related to the symbolic, historical, geographic, political, economic, religious, social, and cultural meanings of Israel and Palestine. Focuses on how and why the "political" is felt so very personally in everyday life in Israel and Palestine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	456	Human Rights and Sustainability	Addresses the connections between human rights and environmental sustainability. Legal and scholarly approaches linking these areas present new perspectives for addressing some of the greatest challenges of our time, given the important resource dimensions of economic and social rights and the human dimensions of sustainability. Yet human rights demands and environmental concerns are not always in harmony. Explores these tensions and opportunities by examining three substantive areas: urban ecology and human rights, the human right to food, and the human rights implications of extractive industries such as oil and mining. Following an introduction to the key concepts of human rights and sustainability, explores the substantive areas through theoretical and empirical readings on each; grassroots accounts of struggles over environment-related human rights; and selections from literature and film that illustrate the environmental justice issues at stake.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & G	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 36 hours. Credit is allowed for only JUS 456, SOS 456, JUS 394 (Human Rights & Sustainability), or JUS 497 (Seminar in Human Rights)
JUS	460	Feminism and Justice	Explores feminist thought and critiques traditional political theories. Examines issues of racism, sexuality, and the law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	463	Discretionary Justice	Use/abuse, key issues/manifestations of discretion in legal system and other societal institutions. Theoretical/empirical linkages between discretion and discrimination, based on race, ethnicity, and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	465	Death Penalty in the United States	Focuses on capital punishment in the United States; explores negotiation of law, politics, morality, public policy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	467	Terrorism, War, and Justice	Examines the relationship among terrorism, war, and justice. Analyzes terrorism within the larger study of deviance and social control, comparative politics, hegemony, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA

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JUS	468	Protest, Justice, Law and the Media	Examines research on protests, political deviance, trials/law and justice, and critiques some of the media representations of related ideas. Investigates global social movements, political protests and nascent political trials. Analyzes varied justifications for defining action as diversity, deviance or crime and the reasons for using criminal, civil or alternative (positive) sanctions (especially via indigenous peoples). Explores the encompassing meaning of a political trial. Many people throughout the world find everyday life to be a trial, especially those placed on the margins of globalization. Expands the research on media and trials that usually have been examined narrowly by legal institutions in North America and reinforced by hegemony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 2.00 GPA; Credit is allowed for only JUS 468 or 494 (Protest, Justice and the Media)
JUS	469	Political Deviance and the Law	Examines the controversies created by political and deviant behavior, including a critical view of law as an agent of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	470	Alternative Dispute Resolution	Critical examination of the tenets of alternative dispute resolution movement; exposure to the programs of ADR, including community and court based.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	473	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Non-Justice Studies majors with minimum 56 hours and 2.50 GPA OR Prof/capstone undergrad or Justice Studies graduate; Credit is allowed for only REL 482, POS 473, or JUS 473
JUS	474	Legislation of Morality	Addresses historical and contemporary issues related to social justice movements, law, and morality in a pluralistic society. Issues include AIDS, burial rights, homosexuality, poverty, prostitution, and racial discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	477	Youth and Justice	Critical examination of youth-related justice issues, including economic justice, violence against youth, delinquency, and the juvenile justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	479	Law and Disputing	Critical analysis of the controversies created by disputes, law, and other forms of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
JUS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
JUS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
JUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7		
JUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		

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JUS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Social and Cultural Pedagogy MA student, Justice Studies MS or PHD student
JUS	501	Justice Theory	Theories and philosophies of social, economic, political, and criminal justice. Applies theories to contemporary justice issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student
JUS	509	Statistical Problems in Justice Research	Methodological problems of research design and statistical methods specific to justice studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student
JUS	521	Qualitative Data Analysis and Evaluation	Analyzes qualitative data, e.g., field notes, in-depth interview transcripts, document analysis, coding, and retrieval with a microcomputer; qualitative evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student
JUS	542	American Indian Justice	Provides a broad overview of American Indian and Alaskan Native issues of justice and injustice in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	550	Gender, Race, and Economic Justice	Provides a critical social scientific perspective on economic issues particularly as they relate to gender, race, and class equality. Examines issues of economic inequalities as they are distributed along the lines of gender and race. Components converge to identify the social justice ramifications of economic policy and economic conditions.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	555	Migration/Immigration and Justice	Explores the causes and consequences of immigration to the United States and the incorporation of immigrants into the American economy and society.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	560	Women, Law, and Social Control	Gender issues in the exercise of formal and informal mechanisms of social control, including economic, social, legal factors, both violent and nonviolent.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	570	Juvenile Delinquency	Study of delinquency, including causation theories. Alternative definitions of delinquency, official statistics, and the critique and analysis of the interaction between social institutions and youth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	575	Race, Gender, and the Law	Explores the law and social sciences literature on race, ethnicity, gender, and the legal order. Critically assesses the major contemporary theoretical and policy debates and controversies in the field from a variety of disciplinary and interdisciplinary lenses, setting these debates in their historical contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	588	Justice and the Mass Media	Analyzes the nature and impact of mass media messages about justice concerns for social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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JUS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	610	Law and the Social Sciences	Analyzes the theoretical grounds underlying diverse studies of law and society; creation and administration of law; and jurisprudence and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	620	Justice Research Methodology	Covers the epistemology of knowledge and method in justice research, history, and philosophy of social science and critical inquiry, as well as perspectives that link these concerns to research strategies. Explores the strengths and weaknesses of introduced methodologies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student; JUS 500 with C or better
JUS	630	Data Analysis for Justice Research	Bivariate and multivariate techniques of data analysis and hypothesis testing for justice-related research and use of information and statistical programs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student; JUS 509 with C or better
JUS	633	Community Research	Focuses on epistemology, methodology, and the production of knowledge about community and seeks to link theory, methodology, specific research strategies, and social criticism about the conduct of community research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	640	Theoretical Perspectives on Justice	Analyzes philosophical perspectives of justice; linkages between social science theory and justice constructs; application of justice to social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student; JUS 501 with C or better
JUS	650	Advanced Qualitative Data Analysis	Advanced qualitative data collection and analysis techniques, including ethnography, in-depth interviews, field notes, coding, transcribing, content analysis, textual analysis.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student
JUS	656	Human Rights and Sustainability	Addresses the connections between human rights and environmental sustainability. Legal and scholarly approaches linking these areas present new perspectives for addressing some of the greatest challenges of our time, given the important resource dimensions of economic and social rights and the human dimensions of sustainability. Yet human rights demands and environmental concerns are not always in harmony. Explores these tensions and opportunities by examining three substantive areas: urban ecology and human rights, the human right to food, and the human rights implications of extractive industries such as oil and mining. Following an introduction to the key concepts of human rights and sustainability, explores the substantive areas through theoretical and empirical readings on each; grassroots accounts of struggles over environment-related human rights; and selections from literature and film that illustrate the environmental justice issues at stake.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only JUS 656 or SOS 656 or JUS 691 (Human Rights & Sustainability)
JUS	660	Globalization and Economic Justice	Explores the political economy of globalization from a theoretical as well as practical standpoint. Sources used come from a variety of disciplines--sociology, political science, international relations, geography, and economics--all of which contribute unique theoretical and normative tools for analyzing the effect of global forces on economic justice.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Graduate student
JUS	669	Political Trials and Indigenous Justice	Focuses upon research on political trials, deviance, and conceptions of indigenous and contemporary justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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KIN	100	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Credit is allowed for only EXW, HSC or KIN 100
KIN	101	Introduction to Kinesiology	Introduces the disciplines and professions associated with kinesiology, including an overview of historical and philosophical foundations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		
KIN	102	Forager to Couch Potato: The Obesity & Diabetes Epidemics	Overview of factors leading to the global surge in obesity and type 2 diabetes; the historical, cultural, environmental, and anthropological factors impacting genotypes related to the development of obesity and diabetes; social forces leading to a sedentary lifestyle; and options for reengineering environmental and social institutions to increase physical activity.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		
KIN	105	Physical Education Activity	Beginning instruction in a wide variety of sports such as aerobics, aquatics, racquet sports, physical conditioning, and golf. 3 hours per week. Y grade only.	Y	LEC	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		
KIN	110	Research Analysis Laboratory	Introduces basic research areas in the discipline of kinesiology. Topics may include the following: developmental learning, exercise physiology, exercise psychology, exercise testing, metabolic physiology, motor control, motor learning, research journals and societies, research methods, research writing.	N	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-2		Pre-requisite: Pre Sec Ed - Physical Ed, Exercise Sci/Phys Educ or Kinesiology major
KIN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-3		Prerequisite: maximum 25 hours
KIN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
KIN	205	Physical Education Activity	Intermediate levels. Continuation of KIN 105. 3 hours per week.	Y	LEC	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		
KIN	290	Introduction to Evidence Based Practice	Introduces best practices for gathering, interpreting, analyzing, synthesizing and evaluating research within the discipline of kinesiology.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: ENG 101, 105 or 107 with C or better; KIN 101 with B or better; ECN 221, JUS 302, POS 401, PSY 230, QBA 221, SOC 390, 395 or STP 226 with C or better; Credit is allowed for only KIN 290 or 294 (Intro Evidence Based Practice)
KIN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
KIN	310	Collegiate Sports	Participation in men's or women's intercollegiate competition. May be repeated for 4 hours 1 per year. Y/E grade.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		
KIN	334	Functional Anatomy and Kinesiology	Muscles, bones, joints, and nerves and how they produce movement. Emphasizes muscle origins, insertions, actions, and innervations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 201 (ZOL 201) with C or better; BIO 202 with C or better
KIN	335	Biomechanics	Basic anatomical and mechanical principles applied to human movement. Emphasizes kinematic and kinetic concepts.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: KIN 101 (KIN 200) with B or better; BIO 201 (ZOL 201) and BIO 202 (ZOL 202), PHY 111 with C or better; One of the following courses: MAT 170, 210, 251, 270, 271, or 272 with C or better
KIN	340	Physiology of Exercise	Physiological mechanisms of acute responses and chronic adaptations to exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: KIN 101 (KIN 200) with B or better; BIO 201 (ZOL 201) and BIO 202 (ZOL 202) with C or better; one of the following courses: CHM 101, 113, 114, 115, 116, 117, or 118 with C or better
KIN	345	Motor and Developmental Learning	Principles of motor skill acquisition across the life span, focusing on the learner and the learning environment.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: KIN 101 (KIN 200) with B or better; PGS 101 (PGS 101) with C or better; BIO 201 (ZOL 201) with C or better
KIN	348	Psychological Skills for Optimal Performance	Applies psychological techniques and their use to improve effectiveness and performance in sport and related areas.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	

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KIN	352	Psychosocial Aspects of Physical Activity	Interrelationships between physical activity and psychosocial variables, including socialization, cultural values, aggression, and motivation. Includes the psychological benefits of physical activity and exercise adherence.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB & C	Pre-requisites: KIN 101 (KIN 200) with B or better; PGS 101 (PGS 100) with C or better
KIN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
KIN	412	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discussion of injury mechanisms.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 335 with C or better; Credit is allowed for only KIN 412 or 512
KIN	413	Qualitative Analysis in Sport Biomechanics	Develops systematic approach for detecting and correcting errors in human performance using anatomical and mechanical principles.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 335 (EPE 335) with C or better
KIN	414	Electromyographic Kinesiology	Muscular contributions to human movement, muscle mechanics, electrophysiological basis, and practical application of electromyography.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisites: KIN 335 (EPE 335 or PED 335) with C or better; KIN 340 (EPE 340 or PED 340) with C or better
KIN	418	Experimental Neuromechanics	Students experience different quantitative techniques to analyze human movement from a motor control and biomechanical perspective.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): KIN 290; KIN 335; KIN 345; Credit is allowed for only KIN 418 or KIN 494 (Experimental Neuromechanics)
KIN	421	Human Motor Control	Focuses on understanding how the human central nervous system controls, regulates, and learns movements.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 345 (EPE 345) with C or better
KIN	422	Motor Control in Special Populations	Discusses principles of motor control theories and related practical applications for certain special developmental populations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 345 (EPE 345) with C or better
KIN	423	Motor Control and Aging	Functional and behavioral changes to the motor control system as humans age, how specifically it impacts motor control and learning.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 345 (EPE 345) with C or better
KIN	437	Comparative Biomechanics and Motor Control	Guides students to critically evaluate how the physical and mechanical properties of organisms and their environment affect biological tissues, structures, and motor control.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 181; MAT 170 and PHY 111 with C or better; Credit is allowed for only BIO 437, 537, KIN 437 or 537; Credit is allowed for only KIN 437 for KIN 494 or 598 (Comparative Biomechanics and Motor Control)
KIN	440	Exercise Biochemistry	Study of bioenergetics and metabolism of cellular (skeletal muscle, heart, and liver) organelles and proteins during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 (EPE 340 or PED 340); Credit is allowed for only KIN 440 or 532
KIN	441	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 340 (EPE 340 or PED 340); Credit is allowed for only KIN 441 or 531
KIN	442	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 (EPE 340) with C or better; Credit is allowed for only KIN 442 or 536
KIN	443	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 340 (EPE 340 or PED 340) with C or better; Credit is allowed for only KIN 443 or 533
KIN	444	Metabolic Adaptations to Exercise Training	Examines physiologic adaptations to exercise training as they relate to metabolism and tissue functions.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 (EPE 340 or PED 340) with C or better
KIN	445	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 (EPE 340) with a C or better; Credit is allowed for only KIN 445 or 535
KIN	446	Pediatric Obesity	Covers a variety of aspects related to pediatric obesity including the causes and consequences in terms of physiologic, genetic, psychosocial, environmental and economic. Also discusses potential interventions such as behavioral, pharmacologic, surgical and public health and policy. Evidenced-based course where research guides class lectures and discussions.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 315 or KIN 340; Credit is allowed for only EXW 412 or KIN 446 or EXW 494 (Pediatric Obesity) or KIN 494 (Pediatric Obesity)

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KIN	447	ECG Interpretation	Using ECG data, this course comprehensively investigates cardiac arrhythmias and interactions with therapeutic drugs and exercise.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 with C or better; Credit is allowed for only KIN 447 or 547 (or 598 (ECG Interpretation))
KIN	450	Biopsychosocial Perspectives on Physical Activity and Health	Uses a biopsychosocial perspective to examine the interrelationships on physical activity and health (physical and mental).	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 352 (EPE 352) with C or better
KIN	452	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Pre-requisite: KIN 352 (EPE 352 or PED 352) with C or better; Credit is allowed for only KIN 452 or 522
KIN	454	Motivational Theory in Exercise and Health	Assesses motivational theories relevant to the field of exercise and health psychology. Evaluates research and utilizes the findings to create applied public service announcements targeted toward a specific health issue (e.g., exercise, nutrition, smoking) and a specific population. Assesses students on four group public service announcements and "mini exams" for each unit. Taught in class, online and in a hybrid format.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): KIN 352 with C or better. Credit is allowed for only KIN 454 or KIN 494 (Motivational Theory in Exercise & Health)
KIN	460	Theory of Strength Training	Research and theories on developing muscular strength; programs for developing muscular strength.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 340 (EPE 340 or PED 340) with C or better
KIN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): minimum 2.00 GPA; Corequisite(s): junior or senior standing
KIN	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6		Prerequisite(s): Barrett Honors student
KIN	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6	L	Prerequisite(s): Barrett Honors student
KIN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Pre-requisite: Minimum 25 hours
KIN	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-7		Pre-requisites: BS Kinesiology major; Senior standing
KIN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
KIN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	512	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discusses injury mechanisms.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 412 or 512
KIN	520	Applied Sport Psychology	Psychological theories and techniques applied to a sport to enhance the performance and personal growth of athletes and coaches.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 448 or 520

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KIN	522	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 452 or 522
KIN	523	Motor Control and Aging	Focuses on the functional and behavioral changes to the motor system as humans age and how specifically it impacts motor control and learning.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	530	Exercise Physiology	Immediate and long-term adaptations to exercise with special reference to training and the role of exercise in cardiovascular health.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	531	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 441 or 531
KIN	532	Exercise Biochemistry	Understanding the basic biochemical principles and enzyme pathways involved in energy transduction during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 440 or 532
KIN	533	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 443 or 533
KIN	535	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 445 or 535
KIN	536	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 442 or 536
KIN	537	Comparative Biomechanics and Motor Control	Guides students to critically evaluate how the physical and mechanical properties of organisms and their environment affect biological tissues, structures, and motor control.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only BIO 437, 537, KIN 437, 494 (Comparative Biomechanics and Motor Control), 537 or 598 (Comparative Biomechanics and Motor Control)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KIN	547	ECG Interpretation	Comprehensive investigation of the heart rhythm disturbances that occur within the chambers and conducting tissue of the heart. Partitioned into three sections allowing the systematic review of arrhythmias that occur in the atria, AV junction and ventricles of the heart. The material is designed to maximize understanding by analyzing electrocardiogram rhythm strips to reinforce applying the theoretical component of the course. Also uses the application of these theories through laboratory experiences allowing hands-on experience with electrode placement and 12 lead ECG interpretations.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): Clinical Exercise Physiology MS or Exercise and Wellness MS student; Credit is allowed for only KIN 447 or KIN 547 or KIN 598 (ECG Interpretation)
KIN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	598	Special Topics	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	621	Motor Learning/Control	Discussion of contemporary research issues in motor learning and control. Includes behavioral and neurophysiological issues.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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KIN	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
KOR	101	First-Year Korean I	Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills, including Han'gul. Lecture, recitation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
KOR	102	First-Year Korean II	Continuation of KOR 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		Pre-requisite: KOR 101
KOR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	201	Second-Year Korean I	Continual development of communication skills. Increased emphasis on reading and writing, vocabulary building, and review of fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: KOR 102
KOR	202	Second-Year Korean II	Continuation of KOR 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: KOR 201
KOR	250	Korean Culture and Society	Surveys Korean culture and society, covering history, religious traditions, gender, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	
KOR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	313	Third-Year Korean I	Continued development of ability to communicate orally and in writing. Exposure to a variety of Korean written styles.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: KOR 202
KOR	314	Third-Year Korean II	Continuation of KOR 313.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: KOR 313
KOR	321	Korean Literature in Translation	Introduces various genres of Korean literature written from the seventeenth century to the present in English translation. Aims to help students to understand the history of modern Korean literature in transnational and transdisciplinary contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only KOR 294 (Korean Lit in Translation), 321, 394 (Korean Lit in Translation) or SLC 321
KOR	347	Korean Film and Literature	Introduces aspects of Korean history, culture, and society through Korean film and literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	
KOR	350	Women of Korea	Examines the changing role and status of women in modern Korea in relation to political and cultural changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	H	
KOR	353	Folk Religions of Korea	Introduces forms of folk religions in Korea: shamanism, village rituals, ancestor-worship, fortune-telling, geomancy, and folk elements in major traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: Minimum 24 hours; ENG 102, 105, or 108 with C or better; Credit is allowed for only KOR or REL 353
KOR	354	Religious Traditions of Korea	Examines major religious traditions of Korea: Buddhism; Christianity; Neo-Confucianism; indigenous practices and their development through political, cultural, and social frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105, or 108 with C or better; Credit is allowed for only KOR or REL 354
KOR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
KOR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
KOR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
KOR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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KOR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
KOR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LAA	345	Professional Practice Seminar	Landscape architecture practice including contracts, project and office management, liability, licensing, and professional development.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	1		Pre-requisites: Landscape Architecture student; Co-requisite: LDE 362
LAA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAP	252	Natural Systems	Increases awareness and understanding of the biotic and abiotic systems, processes and factors of our biosphere in order to facilitate sustainable landscape architectural design and applications.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Landscape Architecture student; Credit is allowed for only LAP 252 or LTC 294 (Natural Systems)
LAP	354	Plant Materials	Plants as landscape architectural elements. Emphasizes plant identification and the uses of particular plants in landscape architecture.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Landscape Architecture major, Co-requisites: LAA 345; LDE 362; Credit is allowed for only LAP 345 or LTC 494 (Plant Materials)
LAP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Landscape Architecture BSLA plan; Co-requisite: LDE 461
LAP	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-6		Pre-requisite: Junior standing; Credit is allowed for only GCU 485 or GPH 485 or LAP 485 or POR 485 or PUP 485 or 585
LAP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
LAP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
LAP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7		
LAP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAP	585	International Field Studies	Organized field study in specified international locations.	N	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only GCU 485 or 586 or GPH 485 or 585 or LAP 485 or 585 or POR 485 or PUP 485 or 585
LAP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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LAP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	CNV	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
LAS	205	Deep Roots: Latin America	Introduces the diversity of Latin-American traditions through its cultural production. The approach is interdisciplinary (art, architecture, literature, film, theater, business and anthropology). Studies the history and culture of Latin America and its concept of identity and nation through a variety of genres. Focuses on aspects that reveal the complexity of Latin America and in turn provides insights into Latin American culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	206	Locating Latin America:Interdisciplinary Methods	Methodologies course designed to provide exposure to academic fields and research approaches that intersect in Latin American studies	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
LAS	330	From the Inside: The Latin American Journey	Journeys through a wide variety of genres and critical scholarship in Spanish. Provides a broad exposure to different types of reading and writing. Because the Latin American Studies program is flexible, students must be able to engage with many different types of texts across disciplines. Covers Latin American cultural history from pre-Colombian to the post-modern by exploring different formats and genres around major central themes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	340	Latin American Women Writers	In the 20th and 21st centuries, Latin America has seen a proliferation of literature published by women authors. While this explosion of the written word owes in part to changing socio-economic factors and the opening of the international markets, Latin American women's literary history is often ignored in the canon. Examines the concepts of feminism through a Mexican framework, starting from the point of view of Mexican women theorizing about their own. This is not a history of feminism, but it does aim to highlight certain fundamental texts and key concepts of Mexico's history from the position of women writers, including feminism's critique of social structures beyond the bounds of gender relations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	350	The Construction of a Nation: Chile in the 20th/21st Century	Examines Chilean history, politics and cultural production through its historical development and explores a multiplicity of cultural issues. Develops knowledge and appreciation of cultural and visual production of Chile and Latin America as well as acquired skills for critically analyzing texts in their applicability to modern-day society. Considers the variety of cultural and artistic productions (novel, poetry, short story, film, music, pop culture, presidential speeches) as sources of social commentary in which observations of national identities are constructed.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; Credit is allowed for only LAS 350, ENG 494 (Construction/Nation:Chile in the 20th/21st Cen) or SPA 494 (Construction/Nation:Chile in the 20th/21st Cen)
LAS	351	Cityscapes: Urban Mexican Literature and Culture	Examines major developments in contemporary Mexican literature. Begins at mid-20th century as the novel turns away from the rural novel of the Revolution, toward a more urban setting. Mexico City serves as a cultural and political center, and the novels mark social and political changes across different literary currents.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	355	Contemporary Mexican Cinema: Changing Cartographies	Examines major themes and auteurs in contemporary film as their work intersects with larger cultural phenomena, expanding students' cultural knowledge as well as critical communication skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
LAS	471	Treaties and Cultural Production in Spain and the Americas	Emphasizes sociocultural values associated with national, transborder and transatlantic identities providing a panoramic view of treaties, agreements, constitutions and cultural production by Americans and Spaniards from 1812 to 2012 with particular focus on the themes of nations, borders, citizenship and identity.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAS	480	Current Trends in Theatre and New Media in Latin America and Spain	Overview of the transatlantic cultural interrelationships between Latin American and Spanish theatre and performance in the 20th and 21st centuries. Explores topics such as cyber-theatre, Internet theatre and multimedia theatre.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	481	Dictatorships and Dirty Wars: Latin American Cinema from Resistance to Reconciliation	Examines aspects of Latin American politics and culture of and through the optic of social unrest. Examines films focusing on the period(s) of recent Latin American history in which there have been social upheavals, dictatorships and state repression, "dirty wars": understood as clandestine wars waged on the citizenry by the government, social movements from below.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s) with C or better: LAS 205, 206, 330. Credit is allowed for only LAS 481 or SPA 481 or ENG 494 (Dictatorships/Dirty Wars:Lat Am Cinema) or SPA 494 (Dictatorships/Dirty Wars:Lat Am Cinema)
LAS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
LAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
LAS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		
LAS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
LAT	101	Elementary Latin	Basic Latin grammar with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
LAT	102	Elementary Latin	Continuation of LAT 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Pre-requisites: LAT 101
LAT	140	Greek and Latin Roots in Bioscientific Terminology	Introduces students to the ancient Greek and Latin root words most commonly used in biological, medical, and other scientific terminology, and gives practice identifying them in context. The knowledge of these root words enables students to memorize with greater ease and increased retention the bioscientific terminology they encounter in other coursework as well as in their medical or scientific profession.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
LAT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
LAT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	201	Intermediate Latin I	Final semester of grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	HU	Pre-requisites: LAT 102
LAT	202	Intermediate Latin II	Beginning reading of Latin authors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	HU	Pre-requisites: LAT 201
LAT	222	Survey of Roman Literature	Introductory survey of Roman literature. Familiarizes students with the literary genres, texts and authors of the Romans from the origins of the Latin language to the Silver age. All readings in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only LAT 222, SLC 222, LAT 294 (Roman Literature in Translation) or SLC 294 (Roman Literature in Translation)
LAT	223	Introduction to Greek and Roman Mythology	Familiarizes students with the characters and events of ancient Greek and Roman myths through their literary manifestations, and moves beyond mere narrative to consider the possible interpretations and functions of these myths, thus revealing the central concerns of ancient society and giving insights into the working of our own society and its literary and artistic traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only GRK 223, LAT 223, SLC 223, GRK 294 (Greek and Roman Mythology)
LAT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	301	Roman Authors	Intermediate Latin reading class that introduces Roman prose authors such as Livy, Cicero and Pliny and explores the variety of genres within Latin prose, such as historical accounts, personal letters and political oratory.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): LAT 201 with C or better; Credit is allowed for only LAT 301 or LAT 394 (Introduction to Latin Authors)
LAT	322	Medieval Latin	Surveys Late Antique and medieval Latin authors and texts, both prose and poetry. Some review of grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: LAT 201 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAT	344	Classics and Comics	Explores the connections between the classical tradition of Ancient Greek and Roman literature and the modern American superhero comic book tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GRK 344 or LAT 344 or SLC 344 or GRK/LAT/SLC 394 (Classics and Comics) or SLC 494 (Classics and Comics)
LAT	360	Greece and Rome at War		N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 360, HST 397, LAT 360, SLC 360 or SLC 394 (Greece and Rome at War)
LAT	361	Roman Religion	Roman religion was never static, despite the best efforts of the Roman state to make it so. Understands the artifacts and procedures of Roman state cult from its earliest origins to the late empire, using ancient literary sources, archaeology throughout the ages and modern scholarly theories. Clarifies the forces that influenced development and change in Roman religion, both internal and external.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only LAT 361, REL 361, SLC 361 or SLC 394 (Roman Religion)
LAT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	421	Roman Literature	Readings in the Latin masterpieces. Authors read change each year in accordance with needs of the class. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: LAT 202
LAT	422	Roman Literature	See LAT 421.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: LAT 202
LAT	444	Heroes, Ancient and Modern	Explores the heroic literature of the ancient Greeks and Romans, then traces the classical tradition and reception of the classical hero in medieval and modern texts. Incorporates history, art history and material culture from the relevant societies to supplement study of the texts involved.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 444, LAT 444, SLC 444 or SLC 494 (Heroes: Ancient and Modern)
LAT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
LAT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
LAT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
LAT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LAT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAW	105	The Structure and Methodology of the American Legal System	What is law? What is the structure of the American legal system? What does it mean to understand law in the context of that system? How is this system effective and problematic and how does its evolution over time change our perceptions of and relationships with those who are part of it? Provides answers to these and other questions while simultaneously developing a working understanding of American law, its practicalities, and externalities. Takes the form of a comprehensive inquiry into the legal system, its origins, structures, applications, success, failure, and decision-making processes. In asking probing questions about the system and its nature, explores the values and philosophies that inform our American conception of the law and its role in society.	N	LEC	N	OPT	College of Law	College of Law Dean's Office	3		
LAW	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1		Pre-requisites: Freshman standing
LAW	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	College of Law Dean's Office	1-4		Pre-requisites: JD students may not enroll.
LAW	210	Law, Culture and Community	Considers how law constructs meaning from the world around us. Explores not only what law is, but why law is, and where law shows up in American public and private life. Examines the roles of law in facilitating cooperation and resolving conflict with an interdisciplinary lens of history, philosophy, religious studies, political and legal theory.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Credit is allowed for only LAW 210 or 294 (Law, Culture & Community)
LAW	215	Business, Law, and Society	Examines the philosophical and legal framework of business--the basic concepts of business entities, contracts, accountability, and relationships with an emphasis on the social context in which these concepts operate. Emphasizes the concepts of law and ethics throughout the course.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisites: Undergraduate student; Credit is allowed for only LAW 215 or 294 (Business, Law, and Society)
LAW	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	310	The Global Legal Community	Introduces the building blocks of the developing "global legal community," global governance institutions, both public and private, international law and transnational legal regimes. Examines how dynamic area of law is influenced by, and influences the conduct of the international and domestic relations.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: Junior or Senior standing; Credit is allowed for only LAW 310 or 394 (The Global Legal Community)
LAW	315	Foundations in American Business Law	Explores the foundations of American business law. Topics covered include: the structure and processes of the U.S. legal system, a comparison of transactional law and business litigation concepts and processes, and the role of regulation in the free market. Students read law cases and other legal texts such as legislation, professional and academic legal writing.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): minimum 45 hours
LAW	316	Introduction to Corporate Tax Law and Policy	Hands-on introduction to the basics of U.S. Federal and Arizona state corporate tax law. Explores the economic and social policy foundations of the tax codes. Students use the tax code to address various business scenarios they may face.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Credit is allowed for only LAW 316 or 394 (Intro Corporate Tax Law&Policy)
LAW	322	Consumer Protection Law	Since the "Progressive Era" at the turn of the last Century, many new consumer protection agencies were created: The Food and Drug Administration, The Public Health Service, The Federal Trade Commission, Agencies to Control Narcotics, and fifty years later the Consumer Product Safety Commission, the Environmental Protection Agency and the Radiation Health programs, Nuclear Regulatory Commission. Focusing mostly on health products, lookd at these efforts and their effects on the products we use, the choices we make and the assurances we have as consumers that these products are well manufactured and deliver the goods.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: Junior or Senior standing; Credit is allowed for only LAW 322 or 394 (Consumer Protection Law)
LAW	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	480	Business, Law and Society	What would a legal system that is pro-business look like? Explores the role law plays in American business. Considers what it means to have business relations generally governed by the rule of law, and specifically in the United States legal system. Draws on legal theory, political theory, and American legal history to guide us. Examines some of the legal tools of the trade from property law and contract law that are fundamental to the conduct of American business. Discovers that the development of legal doctrines promoting free enterprise are at times tempered by social justice concerns rooted in conceptions of equality and fairness. Considers how the current legal regulatory climate promoting corporate social responsibility impacts business decisionmaking.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): LAW 210, LAW 215 or 294 [Business, Law and Society]); junior or senior standing. Credit is allowed for only LAW 480 or LAW 494 (Business, Law and Society)
LAW	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		

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LAW	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	515	Contracts	Explores common law legal method and the structure of Article 2 of the U.C.C. in the context of issues of contract formation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	516	Criminal Law	Substantive law of crimes.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		
LAW	517	Torts	Legal protections of personality, property, and relational interests against physical, economic, and emotional harms.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	518	Civil Procedure	Explores the structure of a lawsuit and techniques of alternative dispute resolution. Specific topics include commencement of suit, joinder of parties, discovery, pretrial motions, subject matter and personal jurisdiction, res judicata, collateral estoppel, and choice of law under the Erie doctrine.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	519	Legal Method and Writing	Examines methods used to analyze legal problems. Reviews precedent statutory construction and basic res judicata problems. Use of basic legal writing formats.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	522	Constitutional Law I	Role of courts in the federal system, distribution of powers between state and federal governments, and the role of procedure in litigation of constitutional questions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		
LAW	523	Property	Indicia of ownership, found property, estates in land, landlord tenant, nonpossessory interests in property, nuisance, land use planning, and transfers of interests in property.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	524	Legal Advocacy	Continuation of LAW 519.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2		
LAW	530	Fundamentals of Contract Law	Explores the fundamental principles of contract law under the common-law and Uniform Commercial Code statutory provisions. Focuses on issues of contract formation and interpretation, defenses to enforcement, warranties and conditions, and remedies for breach of contract.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): Master of Legal Studies major; Credit is allowed for only LAW 530 or LAW 598, Fundamentals of Contract Law
LAW	581	U.S. Law and Legal Analysis	Introduces non-JD students to the U.S. legal system and to the types of legal reasoning used by U.S. lawyers and judges. Provides the necessary instruction to use legal reasoning in work, including reading and understanding cases and statutes and applying existing law to the issue presented. Extensive written legal analysis exercises.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisites: Laws (USLaw&Global Legal Pract) or Legal Studies students
LAW	582	Patent Drafting	Prepares students to draft patent applications on behalf of clients. Additionally, students learn the techniques and language necessary to reply to Offices Actions issued by the United States Patent and Trademark Office (USPTO). Provides significant drafting experience, requiring three separate writing submissions and revisions based on instructor feedback throughout the course. Students create work product examples that can be shared with potential employers and/or prospective clients.	N	LEL	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): Master of Legal Studies major
LAW	585	Comprehensive Patent Practice	Prepares students for the patent prosecution process, as administered by the United States Patent and Trademark Office (USPTO). Uses a "cradle to grave" approach, beginning with the earliest steps taken when preparing to draft a patent application for a client and ending with post-decision options and activities available to those awarded with an issued patent or denied an issued patent.	N	LEL	N	GNA	College of Law	Sandra Day O'Connor College of Law	5		Prerequisite(s): Master of Legal Studies major
LAW	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAW	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	596	Professional Legal Writing	Teaches non-JD students how to organize a legal research project by analyzing the facts and identifying the issues involved, determining the research tools needed to correctly investigate the legal problem, and systematically using these tools to strengthen and support the desired legal argument.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: Laws (USLaw&Global Legal Pract) or Legal Studies students
LAW	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student

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LAW	601	Antitrust Law	Legislation and its implementation to prevent monopoly and business practices in restraint of trade, including restrictive agreements involving price-fixing, trade association activities, and resale price maintenance.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: College of Law student
LAW	602	Civil Procedure II	Focuses on the Rules of Civil Procedure and how lawyers use the Rules in litigating civil cases from initiation through the pre-trial stages.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		
LAW	603	Conflict of Laws	Problems arising when the operative facts of a case are connected with more than one state or nation. Choice of law, bases of jurisdiction, effect of foreign judgments, and underlying federal and constitutional issues.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Prerequisite(s): degree- or nondegree-seeking graduate student
LAW	604	Criminal Procedure	Nature of the criminal procedural system with special focus on constitutional protections for the accused.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisites: College of Law student
LAW	605	Evidence	Principles and practice governing the competency of witnesses and presentation of evidence, including the rules of exclusion and roles of lawyer, judge, and jury under the adversary system.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student
LAW	606	Federal Income Taxation	Federal income tax in relation to concepts of income, property arrangement, business activity, and current tax problems, with focus on the process of tax legislation and administration.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student
LAW	607	Nanotechnology Law and Policy	Provides an overview of the legal and policy issues relating to nanotechnology, including risk management, national and international regulations, intellectual property, privacy issues, and liability issues.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	610	Advanced Criminal Procedure	Topics in criminal procedure, with emphasis on legal constraints on grand jury investigations, police practices, pretrial release, preliminary hearings, prosecutorial discretion, and plea bargaining.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	611	Estate and Gift Tax	Tax laws relating to transfer of wealth both at death and during lifetime, including federal estate tax, gift tax, and income taxation of estates and trusts.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student; LAW 606
LAW	612	Family Law	Legal and nonlegal problems that an individual may encounter because of a situation as a family member.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	613	Federal Courts	Federal judicial system; relationship of federal and state law; jurisdiction of federal courts and their relation to state courts.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	614	International Contracts	Explores the laws applicable to international contractual relations, focusing heavily on the United Nations Convention on Contracts for the International Sale of Goods. One of several offerings in the field of International Business Transactions, touches on choice of law rules and a comparison of selected UCC with CISG provisions; a comparison of the contract law of selected foreign nations with the UCC; and the law of contracts in the United States. The casebook is heavily oriented toward a problem method of study.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	615	Public International Law	Role of law in international disputes. Considers drafting and interpretation of treaties and multilateral conventions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	616	Jurisprudence	Introduces legal philosophy, with readings on the nature of law and legal reasoning, the relationship between law and morality and equality and social justice.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	617	Genetics and the Law	Provides background on genetics and recent genetic advances; addresses the legal consequences and issues associated with such advances.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Prerequisite(s): College of Law major or MS in Biomedical Diagnostics major. Credit is allowed for only BMD 617 or LAW 617
LAW	618	Decedent's Estates	Substantive concepts involved in transmitting wealth, including interstate succession, wills and will substitutes, the modern trust as a family protective device, creation of future interests in a planned estate, social restrictions of a nontax nature, and methods of devoting property to charitable purposes.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	620	Civil Rights Legislation	Coverage of the rights and remedies provided by federal civil rights legislation, principally, the key provisions of the Reconstruction Era Civil Rights Acts, portions of the employment discrimination legislation, and voting rights legislation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	621	Sales	Advanced issues involving the formation and interpretation of sales and lease contracts. Focuses primarily on Articles 2 and 2A of the Uniform Commercial Code.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	622	Secured Transactions	Secured transactions under Article 9 of the Uniform Commercial Code and other relevant sections. Overview of the creation, perfection, and priority effects of security interests. Financing of business enterprise and consumer credit.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	624	Community Property	Property rights of husband and wife; the Arizona community property system; homestead.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	1-2		Pre-requisite: College of Law student
LAW	625	Constitutional Law II	Fundamental protection for person, property, political, and social rights.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	626	Writing for Law Practice	Helps students attain an advanced level of writing proficiency by exposing them to a broad range of legal documents.	N	SEM	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: Juris Doctor Candidate; Credit is allowed for only LAW 626 or 665

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LAW	627	Corporate Taxation	Problems in taxability of the corporation, corporate distributions, and corporate reorganizations.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	628	Creditor-Debtor Relations	Creditors' remedies in satisfaction of claims and debtors' protection and relief under bankruptcy, other laws.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	629	Employment Law	Employment law topics including testing, privacy, OSHA, FLSA, benefits, worker's compensation, rights to compensation, workplace emotional injuries, termination, and sexual harassment.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	630	Employment Discrimination	Focuses primarily on Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act, and the Americans with Disabilities Act.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	631	Environmental Law	Litigation, administrative law, and legislation relating to problems of environmental quality. Topics covered may include air and water pollution, toxic substances, pesticides, and radiation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	632	Federal Indian Law I	Inquiry into legal problems special to American Indians and tribes.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	633	Law, Litigation, and Science	Fills a gap in the education of most lawyers, namely, how to effectively think about and use empirical evidence.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	635	Juvenile Law	Special problems in the juvenile system.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	636	Land Use Regulation	Legal problems in the regulation and control of land development by state and local governments. Administration of zoning, subdivision, and other planning controls; issues of fairness and procedure in the utilization of such controls.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	637	Lawyering Theory and Practice	Issues of competency and professionalism in the practice of law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	4		Pre-requisite: College of Law student
LAW	638	Professional Responsibility	Emphasizes the Model Rules and Model Code that govern the professional responsibility of lawyers and their interpretation and application.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	639	Natural Resource Law	Examines the constitutional basis for federal land management and the different kinds of public lands management schemes (e.g., parks, forests, wildlife refuges), emphasizing acquisition of right to, and regulation of, the different uses of public lands and resources (e.g., mining, grazing, timber, wildlife habitat, recreation).	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	640	Securities Regulation	Selected problems arising under the major statutes concerned with regulating the securities market.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	642	White Collar Crime	Examines the ways in which white collar crime is prosecuted, principally in the federal system.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	643	Water Law	Acquisition of water rights; water use controls; interstate conflicts.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	645	Patent Law	In-depth examination of substantive patent law as it applies to the commercialization and enforcement of patent rights.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	646	Copyright Law	Legal rights in original forms of human expression.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	647	Mass Tort Litigation	Examines unique procedural and substantive issues that arise in mass tort litigation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	648	International Intellectual Property	Considers patents, copyrights, and trademarks under international law and the major international treaties.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	649	Scientific Evidence	Examines the use of scientists and scientific tests or studies in criminal and civil litigation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	650	Health Law	Introduces health law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	651	Public Health Law	Addresses the relationship between the state and the population's health.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	652	Bioethics and the Law	Covers a range of issues relating primarily to human reproduction and life and death decisions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	653	Bankruptcy	Covers basic bankruptcy law and practices.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	654	Business Organizations	Covers the primary forms of business organizations: partnerships, limited partnerships, limited liability companies, and corporations.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	655	Chapter 11	Covers the law and practice of reorganizing business entities under Chapter 11 of the United States Bankruptcy Code.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	656	Valuing Real Estate and Closely-Held Businesses	Focuses on the valuation of interests in real property and closely-held businesses.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	657	Private Property Rights	Explores the conflict between property rights and the right of the government to acquire private property for public use.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	658	Arizona Constitutional Law	Examines the basic provisions of the Arizona Constitution and the judicial decisions interpreting those provisions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student; LAW 522; Pre/Co-requisite: LAW 625
LAW	660	Advanced Estate Planning	Covers advanced estate planning and estate administration issues.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	661	Constitutional Literacy	Academic complement to the Marshall-Brennan Constitutional Literacy Program where law students teach constitutional law to high school students.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		

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LAW	662	Alternative Dispute Resolution and Employment Law	The use of alternative dispute resolution has been most extensive in the area of employment law. Mediation and arbitration are widely used not only in the collective bargaining setting, but also in virtually every aspect of the employment relationship. Offers a comprehensive review of the subject with special emphasis on the extensive body of law that has developed in regulating employer-imposed arbitration. Discussion of mediation includes use of simulations to enable the students to understand how mediation can effectively resolve employment disputes. Opportunities to observe real mediations of employment disputes. Experienced attorneys discuss the "real world" use of employment ADR from a plaintiff's and a defendant's perspective.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	664	Intellectual Property	Surveys the laws conventionally grouped as intellectual property, with a focus on patents, copyrights, and trademarks. Explores the policy rationales for each body of law. Particularly relevant for two types of students: (a) those who are unsure they want to specialize in IP and want a general introduction, and (b) those who do not have room in the schedules to take all of the upper-level offerings here at ASU. Not appropriate for students who have already taken the upper-level courses in copyright, trademark, and patents; students who have taken these offerings may be withdrawn.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	665	Fundamentals of Legal Drafting	Fundamental writing skills applicable to drafting normative legal documents.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	667	FDA Regulation	Examines the regulation of drugs, medical devices, and biologics (e.g. vaccines) by the Food and Drug Administration.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Prerequisite(s): degree- or nondegree-seeking graduate
LAW	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	697	Visiting Student Program		N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	0		
LAW	701	Arbitration	Examines the Federal Arbitration Act and the Uniform Arbitration Act as it has been adopted in Arizona.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	702	Alternative Dispute Resolution	Broad exposure to methods of settling disputes in our society such as mediation, arbitration/conciliation, and negotiation, including examination of the current litigation model.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	703	Law, Science, and Technology	Legal mechanisms used in dealing with various issues raised by contemporary science and technology. Explores current legal responses to science and technology.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	704	Federal Indian Law II	Surveys the federal legal doctrines surrounding Indian ownership and exploration of resources.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	705	Media Law	Examines First Amendment principles and statutory and regulatory requirements with respect to the conventional print and broadcast media, as well as recent technologies such as cable.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	706	Immigration Law	Explores political, economic, social, and legal issues concerning immigration. Specific topics covered include citizenship and naturalization, denaturalization, deportation, and refugee rights and asylum.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	707	Elder Law	Looks at legal and policy questions related to aging individuals and an older society.	N	SEM	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	709	International Human Rights	International rules and procedures governing the protection of human rights.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	710	Real Estate Tax Planning	Discusses topics, including but not limited to real estate investments as tax shelters, alternative acquisition finance devices, refinancing techniques, and nontaxable exchanges.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	712	Religion and the Constitution	In-depth study of the establishment and free exercise clauses of the First Amendment to the U.S. Constitution.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	713	Tribal Law and Government	Analyzes particular problems in tribal law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	715	Sports Law	Unique legal problems relating to professional sports, including their relationship to antitrust laws, the nature of player contracts, and associated tax problems.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	718	Economic Development in Indian Country	Focuses on the unique legal, economic, and political issues confronting tribal governments in developing diversified reservation economies.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: Law major; Credit is allowed for only LAW 718 or PUP 718
LAW	719	International Indigenous Rights	Examines the developments in recognizing indigenous rights in people's systems of international law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	720	Indian Gaming Law	Surveys the law surrounding the Indian gaming industry.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	721	Education and the Law	Current legal problems affecting institutions of higher education, faculty, students, and governing boards.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	723	Cultural Resources Law	Focuses on the protection of Native American cultural resources and religions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	724	Privacy	Traces the development of privacy law with special attention to contemporary challenges.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		

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LAW	725	Critical Race Theory	Focuses on the idea of "race" as a social/political construct and examines the impact of American law on the construction of race. Provide historical and legal background necessary to understand the significance of race within American law and policy. Evaluate a number of legal frameworks that address issues of race and ethnicity in various contexts (e.g. segregation laws, civil rights law, federal Indian law, international human rights law). Assesses various jurisprudential accounts evaluating the ethical and moral underpinnings of the law. Critical race theory is known as a jurisprudential framework that is often critical of standard liberal approaches. Evaluates the critiques of liberalism and the scholarship of both liberal and critical theorists.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	733	Negotiation	Explores alternative models of negotiated dispute resolution, as well as the roles of lawyer and client in the negotiation process. Extensive use of simulation exercises.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	734	Products Liability	Traces the development of products liability law; analyzes the major issues currently confronting the courts in this area.	N	SEM	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	735	Teaching Assistant	Legal writing teaching assistants assist a writing professor with various tasks throughout the semester.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	736	Advanced Legal Research Seminar	Focuses on a rigorous review of basic print and electronic resources and strategies for conducting legal research, federal/state.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	737	Cults and Alternative Religions	Provides opportunity to study laws and policies governing cults. While the definition of a "cult" will be a topic of initial study in the seminar, it may be conceived of loosely as a group with a charismatic leader whose members are persuaded to relinquish their self-identities and material possessions in furtherance of the group's goals. In addition to analyzing the definition of a cult, the first part of the seminar discusses the various types of cults, studying particular cults, and learning about cultic activities. The remainder covers domestic and foreign legal and policy issues generated by cults, including the legal rights of cultic organizations, anti-cult organizations, cult members, and cult members' families. Covers conventional religions that are conceptually similar to cults, to the degree that religious movements fall outside the mainstream.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	738	Trial Advocacy	Confronts issues of trial advocacy through simulation of a variety of aspects of trial practice in a mock court setting.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: LAW 605
LAW	739	Economics and the Law	Explores premises of the law and economics movements and their applications to property, contract, and tort law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	745	The Supreme Court	Intensive examination of selected current decisions of the U.S. Supreme Court.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	768	International Business Transactions	Introduction to U.S., foreign, and international law regulating cross-border business transactions and to the structure of cross-border business deals.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: LAW 515 and 654
LAW	770	Law Journal	Academic credit for successful completion of editorial work by a member of the staff of Arizona State Law Journal.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	771	Jurimetrics Journal	Academic credit for successful completion of editorial work by a member of the staff of the Jurimetrics Journal of Law, Science, and Technology.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	772	Defender Clinic	Placement in the Public Defender Clinic and related classroom component.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		Pre-requisite: College of Law student
LAW	773	Civil Justice Clinic	Placement in the Civil Practice Clinic and related classroom component.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	774	Criminal Practice Clinic	Placement with various prosecutor offices in the Phoenix area and related classroom component.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		Pre-requisite: College of Law student; LAW 605
LAW	775	Mediation Clinic	Study of the mediation process and experience as mediators in cases pending before the justice courts and administrative agencies.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	776	Indian Legal Clinic	Provides law students the opportunity to participate in cases dealing with native peoples and Indian issues.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	777	Innovation Advancement Legal Clinic	Allows students to gain real-world experience in legal areas such as patentability of inventions, patent drafting, and technology valuation.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		Pre-requisite: College of Law student
LAW	778	Immigration Law and Policy Clinic	Live-client clinic where students represent Latinos, particularly children, in immigration proceedings and the immigration courts.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		Pre-requisite: College of Law student
LAW	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	781	Independent Study	With the approval of a faculty member, a student may research a legal subject of special interest and prepare a paper suitable for publication.	Y	IND	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	782	Independent Study	See LAW 781.	N	IND	N	OP6	College of Law	Sandra Day O'Connor College of Law	2		
LAW	783	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		

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LAW	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	785	Externship	Supervised, practical lawyering in an external placement proposed by the student or established by a sponsoring agency and approved by the Sandra Day O'Connor College of Law. In addition, an associated academic component is established by the student with a member of the faculty.	Y	PRA	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	795	Cont Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	College of Law	Sandra Day O'Connor College of Law	1		
LAW	797	Visiting Student Program		N	LEC	N	Z3	College of Law	Sandra Day O'Connor College of Law	0		
LDE	261	Landscape Architecture Design Fundamentals III	Applies design fundamentals with an emphasis on landscape architectural issues.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	4		Prerequisite(s): Landscape Architecture major; passed milestone; ALA 122 with C or better; Corequisite(s): ALA 235
LDE	262	Landscape Architecture Design Fundamentals IV	Applies design fundamentals to landscape architectural design with emphasis given to human factors.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	4		Prerequisite(s): Landscape Architecture major; LDE 261 with C or better
LDE	361	Landscape Architecture I	Site planning: analysis of natural and cultural features; site systems and implications for plan making and design.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Landscape Architecture student; ALA 226 with C or better; Co-requisites: LTC 343
LDE	362	Landscape Architecture II	Site design: site-specific design of configured space by the creative development of form.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Landscape Architecture student; LDE 361 (or PLA 361) with C or better
LDE	363	Landscape Planting Design	Functional and aesthetic use of plants in arid-region landscape design. Explores design philosophies through planting design problems.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Landscape Architecture student; Co-requisites: LTC 344, LDE 461
LDE	461	Landscape Architecture III	Landscape ecological planning: collection and application of ecological data relevant to planning and design at landscape scale.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Landscape Architecture student; LDE 362 with C or better; Co-requisites: LTC 344; LDE 363
LDE	462	Landscape Architecture IV	Advanced landscape architecture: integrative capstone studio with multifaceted design problems.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Landscape Architecture student; LDE 461 with C or better; Co-requisite: LTC 446; LPH 411
LDE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
LDE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
LDE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		

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LDE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
LDE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LES	305	Business Law and Ethics for Managers	Legal theories, ethical issues, and regulatory climate affecting business policies and decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Prerequisite(s): W.P. Carey student, or non-business student with minimum 2.5 ASU cum GPA and minimum 56 earned hours, or non-degree student with minimum 2.5 ASU cum GPA, or graduate student
LES	306	Business Law	Legal and ethical aspects of contracts, sales, commercial paper, secured transactions, documents of title, letters of credit, and bank deposits and collections.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Pre-Requisites: Student in Accountancy; Global Management student in Conditional or Professional Business status
LES	380	Consumer Perspective of Business Law	Role of law as it affects society. Uses case studies to present principles that govern business and consumers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Pre-requisites: Must have a minimum GPA of 2.00 ASU Cum GPA and a minimum total earned hours of 56, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
LES	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: Minimum 2.00 GPA; Minimum 56 hours OR Non-degree seeking student
LES	411	Real Estate Law	Legal and ethical aspects of land ownerships, interests, transfer, finance development, and regulations of the real estate industry.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	3		Prerequisite(s) with C or better: FIN 300 or 302 or 303 or REA 380; W.P. Carey BA or BS Business major OR non-business student with minimum 56 hours and 2.50 ASU and business GPA OR non-degree graduate student. Credit is allowed for only LES or REA 411
LES	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Prerequisite(s): Barrett Honors student
LES	581	Essentials of Law for Managers	Studies legal components of business decisions, multiple aspects of law affecting business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1.5-3		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	582	Ethical Issues for Managers	Studies ethical decisions; the role of business in society.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1.5-3		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIA	101	Student Success in the College of Liberal Arts and Sciences	Introduces students to resources that help them succeed in the College of Liberal Arts and Sciences.	N	SEM	N	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1		Pre-requisite: Freshman standing; Credit is allowed for only LIA 101 or 194 (Intro Liberal Arts & Sciences)
LIA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
LIA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LIA	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		Prerequisite(s): Barrett Honors student
LIA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		
LIA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		Prerequisite(s): Barrett Honors student
LIA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6	L	Prerequisite(s): Barrett Honors student
LIA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-14		
LIA	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		Prerequisite(s): Barrett Honors student
LIA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
LIA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
LIA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN		Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	501	Approaches to Research	Theories, methods and/or methodologies as well as qualitative and/or quantitative approaches to the specific discipline. Also serves as an introduction to the profession.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ENG 501 or LIN 501
LIN	510	Linguistics	Overview of linguistics, its subfields, and some of its applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Students who have credit for BLE 537, may not enroll in LIN 510
LIN	511	Phonetics and Phonology	Current trends in phonological theory and its basis in acoustic and articulatory phonetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	513	Semantics	Current approaches to linguistic meaning with particular attention to English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	514	Syntax	Analyzes syntactic structures using a generative theoretical model with a focus on English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	515	American English	Development of the English language in America, including regional and social varieties, and its relationship to other immigrant and native languages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	516	Pragmatics and Discourse Analysis	Studies language use in context and language structures in spoken and written texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN		Pragmatics and Discourse Analysis	Studies language use in context and language structures in spoken and written texts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	517	History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Students who have credit for ENG 413, many not enroll in LIN 517
LIN		History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Students who have credit for ENG 413, many not enroll in LIN 517
LIN	520	Second-Language Acquisition Theories	Theories of second-language acquisition, including the linguistic, cognitive, and sociocultural aspects.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LIN	521	Methods of Teaching English as a Second Language	Methods of teaching English as a second language, language teaching trends, practical applications, and the teaching of different skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	522	Grammar for TESL	Surveys major grammatical structures in English and how they can be taught to ESL speakers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	523	Language Testing and Assessment	Introduces the theory and practice of language test construction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	524	Curriculum Design and Materials Development	Practical guide to curriculum and materials development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	525	Teaching Second Language Writing	Provides a critical introduction to the field of second language writing as well as issues and strategies in the teaching of second language writing in a wide variety of contexts. After exploring various instructional contexts as well as the characteristics of different types of students and their texts, considers various instructional practices and strategies, focusing on course and assignment designs, reading-writing connection, teacher and peer feedback, grammar instruction, classroom assessment, plagiarism and text borrowing strategies, and negotiating language differences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only LIN 525, 591 (Teaching 2nd Language Writing) or ENG 525
LIN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	610	Advanced Studies in Linguistics	Different topics such as morphology, semantics, typology, history of linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	614	Advanced Studies in Syntax	Focuses on morphosyntactic feature checking, movement, phrase structure, and their crosslinguistic differences.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	615	Advanced Studies in Sociolinguistics	Language in its social setting, e.g., social variation among native speakers, sociolinguistics aspects of second-language acquisition, and language policy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	616	Advanced Studies in Discourse Analysis	Advanced analysis of spoken and written discourse emphasizing different methodological and theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	617	Advanced Studies in Historical Linguistics	Overview of theories on language change, the history of languages, and of methods in historical linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	620	Advanced Studies in Second-Language Acquisition	Selected topics in second-language acquisition, such as phonetics and phonology, morphology, syntax, and discourse.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LIN	625	Advanced Studies in Second Language Writing	Provides opportunities to explore advanced research topics as well as current issues and controversies in the field of second language writing--an interdisciplinary field of inquiry simultaneously situated in applied linguistics, rhetoric and composition, and teachers of English to Speakers of Other Languages.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking). Credit is allowed for only ENG or LIN 625
LIN	655	Disciplinary Discourses	Investigation of professional and disciplinary issues related to linguistics and applied linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ENG 655 or LIN 655
LIN	656	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
LIS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bac UG, Non Degree Graduate or Degree Graduate
LIS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requirement: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requirement: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requirement: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requirement: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requirement: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LIS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LNP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LNP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LNP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
LNP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LNP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LNP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LNP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LPH	310	History of Landscape Architecture	Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H & G	Pre-requisites: Landscape architecture majors; ALA 100 or ALA 102; passed the degree milestone review, or non-majors with sophomore standing

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LPH	311	20th-Century Landscape Architecture	Explores concerns, projects, and movements in landscape architecture of late 20th-century understanding; social, ecological, regional, and historical influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	Pre-requisites:Landscape architecture majors; ALA 100 or 102; passed the degree milestone review, or non-majors with junior standing
LPH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LPH	411	Landscape Architecture Theory and Criticism	Critically analyzes landscape architecture theories and projects to evaluate validity of design and contribution to society.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	L	Pre-requisites: Landscape Architecture; LDE 461 and LPH 311 with C or better; Co-requisites: LDE 462 and LTC 446
LPH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
LPH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
LPH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LPH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
LPH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
LSC	322	Fundamentals of Ecology Laboratory	Investigational field course on fundamental concepts in ecology.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre/Co-requisites: LSC 320 or BIO 320 (with C or better if completed)
LSC	347	Fundamentals of Genetics	Science of genetics, gene flow, and genetic engineering in humans and other organisms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) and CHM 116 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LSC	348	Fundamentals of Genetics Laboratory	Investigational lab using modern molecular techniques to analyze various genetic phenomena.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187) with C or better; CHM 113 with C or better; CHM 116 with C or better; Pre or Co-requisites: LSC 347 (with C or better if completed)
LSC	359	Animal Physiology Laboratory	Investigative lab experience using animals (including humans) and models.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre/Co-requisites: LSC 358 or BIO 360 (with C or better if completed)
LSC	362	The Human Environment	Evolution of humans' physiological, ecological, and behavioral interaction with their environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		
LSC	363	Genes, Race, Gender, and Society	Examines biological events and theories on race and gender and their interface with societal views.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Prerequisite(s): BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187) with C or better; BIO 340 or LSC 347 with C or better; BIO 353 (or LSC 353) with C or better; CHM 234 with C or better
LSC	365	The Human Organism	Analyzes human anatomy, physiology, and behavior in an ecological and evolutionary context with the methods of comparative biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	
LSC	375	Analytical Chemistry for Life Sciences	Presents an analysis of chemicals, including the theoretical and practical considerations regarding the separation, detection and quantitative determination of chemicals. Illustrates the application of different analytical procedures using some of the common chemicals of concern in the forensics and environmental fields.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 234 and 238 with C or better; Credit is allowed for only FOR or LSC 375
LSC	376	Analytical Chemistry for Life Sciences Lab	Provides hands-on experience with sample extraction, sample clean-up, and instrumental analysis of common chemicals. Largely focuses on the application of analytical chemistry methods to the fields of forensics and the life sciences. Mainly uses the solvent and solid-phase analyte extraction methods; gas chromatography-mass spectrometry, FTIR and NMR, generally determines analyte identification.	N	LAB	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	2		Pre-requisites: CHM 234 and 238 with C or better; Co-requisites: FOR 375 or LSC 375; Credit is allowed for only FOR or LSC 376
LSC	388	Research Fundamentals for the Natural Sciences	Teaches research skills in the natural sciences. Topics covered include the basic research techniques of the study organism and system, experimental design, literature searches, statistical analysis and preparation of scientific papers and posters.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	2		Prerequisite(s): BIO 181; BIO 182; Credit is allowed for only LSC 388 or LSC 498 (Research Fundamentals for the Natural Sciences)
LSC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
LSC	430	Environmental and Human Toxicology	Lecture/fieldwork course investigating toxic substances in the environment and their effect on the health of organisms, including humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 181 (or BIO 188), BIO 182 (or BIO 187), and CHM 116/115 with C or better
LSC	432	Fundamentals of Pharmacology	Aspects of pharmacology using an integrated approach to familiarize students with natural and synthetic therapeutic agents used in medicine.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BCH 361 or 371 or 461; BIO 340 or LSC 347; BIO 353; CHM 231 or 234
LSC	434	Marine Ecology	Examines ecological processes in oceans, seas, and estuaries that emphasizes species- and community-level phenomena.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187) with C or better; LSC 320 or BIO 320 with C or better
LSC	447	Molecular Genetics Laboratory	Investigative lab involving DNA isolation, PCR, gel electrophoresis, enzyme digestion and ligation, transformation, and hybridization analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): minimum 45 hours; Credit is allowed for only FOR 447 or LSC 447
LSC	475	Principles of Toxicology	Presents the fundamental principles of toxicology and its application to both human and environmental situations. Starts with the means of defining and quantifying toxic effects through dose response curves (e.g. LD50, EC50, LOEL, NOEL). Then focuses on absorption pathways for toxicants as well as the degradation metabolism pathways for toxicants. Finally focuses on the mechanism of toxic action for common poisons and environmental pollutants. Emphasizes toxicants that students are likely to encounter in forensics and environmental fields.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: BCH 361 (or BCH 371 or LSC 394; Modern Concepts in Biochemistry) and BIO 353. Credit is allowed for only FOR or LSC 475

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LSC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
LSC	486	Peer Mentoring in the Life Sciences	Advanced students learn and apply mentoring skills in teaching labs.	N	SEM	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): minimum 45 hours
LSC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
LSC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
LSC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
LSC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7		
LSC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
LSC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LAB	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LAB	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	540	Theoretical Views of Learning in the Learning Sciences	Theoretical perspectives that inform learning scientists. Examines affordances and limitations of theories for designing productive learning environments.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EDP 540 or LSE 540
LSE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		

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LSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		
LSE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	683	Fieldwork		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LSE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LTC	343	Landscape Construction I	Landscape constructions focusing on landform transformations. Topics include landform analysis, grading, and earthwork.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Co-requisites: LDE 361
LTC	344	Landscape Construction II	Characteristics of materials and methods used in landscape architectural construction.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Landscape Architecture student; LTC 343 with C or better; Co-requisites: LDE 363 and 461
LTC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LTC	446	Landscape Construction III	Landscape construction focusing on low-technology, biotechnical, regional, and experimental techniques or systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Landscape Architecture student; LTC 344 with a C or better; Co-requisites: LDE 462 and LPH 411
LTC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LTC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
LTC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		Pre-requisites: MAE Freshman student
MAE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	212	Engineering Mechanics	Force systems, resultants, moments and equilibrium. Kinematics and kinetics of particles, systems of particles and rigid bodies. Energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Mechanical or Aerospace Engineering student; PHY 121 C or better; Pre- or Corequisite(s): MAT 274 or 275 (with C or better if completed) or Non-Mech/Aero student; PHY 121; Pre- or Corequisite(s) : MAT 274 or 275
MAE	213	Solid Mechanics	Equilibrium, strain-displacement relations, and stress-strain-temperature relations. Applications to force transmission and deformations in axial, torsional, and bending of bars. Combined loadings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): CEE 210 (or CEE 211) or MAE 212 with C or better; MAT 274 or 275 with C or better; PHY 122 with C or better
MAE	214	Computer-Aided Engineering I	Introduces geometry and construction techniques in CAD, technical drawing conventions, generating drawings from CAD models.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Pre-requisites: Mechanical & Aerospace Engineering student; MAE 212 (or ECE 212 or ECE 214) with C or better or Co-requisite: MAE 212
MAE	215	Introduction to Programming in MATLAB	Introduces basic topics and concepts of computer programming in MATLAB.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Mechanical and Aerospace engineering BSE student; MAT 265 (or 270); Credit is allowed for only MAE 215 or 294 (Introduction to Programming)
MAE	240	Thermofluids I	Introductory concepts in thermodynamics and fluid mechanics. Conservation of mass, momentum and energy. First and second laws of thermodynamics; application to nozzles, turbines, compressors, heat exchangers. Introduction to thermodynamic cycles. Bernoulli equation. Fluid statics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Mechanical and Aerospace Engineering majors: CHM 114 or CHM 116 with C or better; MAE 212 with C or better; MAT 274 or MAT 275 with C or better OR all other students: CEE 212 or CNE 212 or MAE 212 with C or better
MAE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		Prerequisite(s): Barrett Honors student
MAE	301	Applied Experimental Statistics	Introduces key concepts in probability and statistics with engineering applications. Emphasizes modeling variation in observations, characterizing its distribution, and making inferences with regard to quality assurance and control. Develops critical skills such as fitting multivariate models, experimental design, and hypothesis testing, utilizing data from engineering projects, simulations, and laboratory experiences.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Aerospace or Mechanical Engineering BSE major; With C or better: CSE 100, CSE 110, or MAE 215; MAE 384; MAT 242, 342, or 343; MAT 274 or 275; MAT 267 or 272; Credit is allowed for only MAE 301 or MAE 394 (Applied Experimental Statistics)

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MAE	318	System Dynamics and Control	Dynamics of physical systems, system modelling, feedback control, computer simulations and real-time experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	5		Prerequisite(s): Aerospace or Mechanical Engr BSE major; EEE 202 with C or better; MAE 212 & 384 with C or better; MAT 267 or 272 with C or better; PHY 131 & 132 with C or better; Pre- or corequisite(s): MAE 301 or 394 (Applied Experimental Statistics)
MAE	341	Mechanism Analysis and Design	Positions, velocities, and accelerations of machine parts; cams, gears, flexible connectors, and rolling contact; introduces synthesis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 212 with a C or better
MAE	345	Structures in a Space Environment	Space mission environment; mechanical behavior of materials and structures for space; analysis and design of space structures; finite element procedures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Fulton Engineering undergraduate student; MAE 213 and 214 and 384 with C or better; Pre- or corequisite(s): MAE 318 and 384 with C or better if completed
MAE	351	Manufacturing Processes	Production technique and equipment. Casting and molding, forming, machining, joining and assembly, computer-integrated manufacturing, rapid prototyping, and electronics manufacturing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MSE 250 with C or better; Credit is allowed for only IEE 360 or MAE 351
MAE	372	Fluid Mechanics	Applies basic principles of fluid mechanics to problems in viscous and compressible flow.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 (or MAE 360) or MEE 340 (or MAE 340) with C or better; MAE 384 with C or better
MAE	384	Advanced Mathematical Methods for Engineers	Methods for numerical solutions to engineering problems. Nonlinear equations, quadrature, ordinary differential equations. Analytical and numerical solutions to partial differential equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3	CS	Prerequisite(s): FSE undergraduate; With C or better: MAT 274 or 275; MAT 242 or 343 (or 342 if not MAE); MAE 215 (or MAE 294 Intro to Programming, CSE 100, or 110); Pre- or corequisite(s): MAT 267 or 272 with C or better; Credit for only CEE or MAE 384
MAE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Prerequisite(s): Fulton Engineering undergraduate student
MAE	400	Engineering Profession	Impact of mechanical and aerospace engineering in a global and societal context; effects of and on globalization, environment, sustainability, economy, politics; engineering ethics and business practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3	L	Prerequisite(s): Aerospace Engineering or Mechanical Engineering BSE majors; MEE 322, MAE 322, AEE 325, MAE 325, or MAE 394 (Aerospace Structures and Materials) with C or better
MAE	404	Finite Elements in Engineering	Introduces ideas and methodology of finite element analysis. Applications to solid mechanics, heat transfer, fluid mechanics, and vibrations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 213 or ECE 313 with C or better; CEE 384 or MAE 384 or ECE 384 with C or better

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MAE	406	Advanced CAE Simulation	Solution of advanced engineering problems with engineering software for structural, dynamic, nonlinear, contact and kinematic problems; selection of modeling parameters; reliability tests on software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: MAE 323; MAE 342 with C or better. Credit is allowed for only MAE 406 or MAE 546
MAE	417	Control System Design	Tools and methods of control system design and compensation, including simulation, response optimization, frequency domain techniques, state variable feedback, and sensitivity analysis. Introduces nonlinear and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 318 with C or better
MAE	436	Combustion	Thermochemical and reaction rate processes; combustion of gaseous and condensed-phase fuels. Applications to propulsion and heating systems. Pollutant formation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 340 with C or better; Credit is allowed for only MAE 436 or MAE 536
MAE	455	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): FSE undergrad or Materials minor; With C or better: CEE 213, MAE 213, or MSE 211; MAT 242, 342, or 343; MSE 250 or Aerospace major with MAE 325 (394); Credit is allowed for only MAE 455, 513, 598 (Polymers and Composites), MSE 470 or 513
MAE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		Prerequisite(s): Barrett Honors student
MAE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
MAE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Prerequisite(s): Fulton Engineering undergraduate student
MAE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-7	L	Prerequisite(s): Fulton Engineering undergraduate student
MAE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		
MAE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	501	Linear Algebra in Engineering	Development and solution of systems of linear algebraic equations. Applications from mechanical, structural, and electrical fields of engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite: graduate Engineering major except MS Electrical Engineering, MS Electrical Engineering, MSE Electrical Engineering, PhD Electrical Engineering, or PhD Electrical Engineering (AME). Credit is allowed for only MAE 501 or MSE 501
MAE	502	Partial Differential Equations in Engineering	Development and solution of partial differential equations in engineering. Applications in solid mechanics, vibrations, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Graduate Engineering students; credit is allowed for only MSE 502 or MAE 502

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MAE	504	Experimental Methods for Thermal and Fluid Processes	Theory of analog and digital signal analysis as applied to fluid and thermal measurements; optical diagnostics and micro sensors for measuring fluid velocity, pressure and temperature in unsteady flows; particle image velocimetry and thermal anemometry. Experimental methods are applied in a weekly laboratory. Students should have familiarity with Matlab or some programming language and have completed an intermediate level course in fluid dynamics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Graduate Engineering major
MAE	505	Perturbation Methods	Nonlinear oscillations, strained coordinates, renormalization, multiple scales, boundary layers, matched asymptotic expansions, turning point problems, and WKBJ method.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering students; Credit is allowed for only APM 575 or MAE 505
MAE	506	Advanced System Modeling, Dynamics, and Control	Lumped-parameter modeling of physical systems with examples. State variable representations and dynamic response. Introduces modern control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major, Pre- or corequisite(s): APM 505 or MAE 501
MAE	507	Fundamentals of Control and Optimization	Optimal control of continuous-time dynamic systems. Linear systems and signal spaces, robust and LQR optimal control, optimization methods and LMIs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Graduate Engineering major; MAE 506 with C or better
MAE	508	Digital Control: Design and Implementation	Analysis and design of control systems in which the digital computer plays a major role. Review of continuous control and introduction to the key effects of sampling. Elements of discrete system analysis; z-transform; sampled-data systems; sampling theorem and combined discrete and continuous system and the phenomenon of aliasing. Deterministic design methods for digital control systems (root-locus, frequency response, pole placement and estimators). Multivariable, optimal control and Kalman filtering, followed by nonlinear control and system identification. Emphasizes digital control implementation topics and a case study on robot control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major, Credit is allowed for only MAE 508 or MAE 598 (Digital Control: Design and Implementation)
MAE	510	Dynamics and Vibrations	Lagrange's and Hamilton's equations, rigid body dynamics, gyroscopic motion, and small oscillation theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering students
MAE	512	Random Vibrations	Reviews probability theory, random processes, stationarity, power spectrum, white noise process, random response of single and multiple DOF systems, and Markov processes simulation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2-3		Pre-requisite: Graduate Engineering major
MAE	513	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering or Science & Engr of Materials student; Credit is allowed for only MAE or MSE 513
MAE	515	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 510 with C or better; Credit is allowed for only CEE 536, MAE 494 (Structural Dynamics) or 515
MAE	518	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Fulton Engineering Graduate students; Credit is allowed for only CHE 518, EEE 518, MSE 475, MSE 518 or MAE 518
MAE	520	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods; applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	521	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 501 with C or better; CEE 526 or MAE 527 with a C or better
MAE	523	Fracture Mechanics	Linear elastic fracture mechanics. Nonlinear problems. Fatigue fracture. Experimental methods in fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major; MAE 520 or MAE 598 (Continuum Mechanics) with C or better

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MAE	524	Theory of Elasticity	Elastic behavior in two and three dimensions. Airy stress functions and displacement potentials. Elements of fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major; MAE 520 or MAE 598 (Continuum Mechanics)
MAE	525	Mechanics of Smart Materials and Structures	Modeling and analysis of smart materials and adaptive structures. Application areas include vibration and shape control and damage detection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student; MAE 520 or MAE 598 (Continuum Mechanics)
MAE	527	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student; APM 505 or MAE 501 with C or better; Credit is allowed for only CEE 526 or MAE 527
MAE	533	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only BME 533 or CHE 533 or MAE 533
MAE	536	Combustion	Thermodynamics; chemical kinetics of combustion. Explosion and ignition theories. Reactive gas dynamics. Structure, propagation, and stability of flames. Experimental methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student. Credit is allowed for only MAE 436 or 536
MAE	540	Advanced Product Design Methodology	Surveys research in engineering design process, artifact and design, knowledge, formal and informal logic, heuristic and numerical searches, theory of structure and complexity.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: Mechanical or Aerospace Engineering graduate student
MAE	541	CADTools for Engineers	Elements of computer techniques required to develop CAD software. Data structures, including lists, trees, and graphs. Computer graphics, including 2- and 3-D algorithms and user interface techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	542	Design Geometry and Kinematics	Selected topics in geometry related to current potential applications in CAD/CAM, design theory, kinematics, and robotics. Euclidean isometrics, transformations; 4-D geometry; screw theory and its applications to robotics and assemblies. Differential geometry; curvature and torsional properties of curves and surfaces.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: Mechanical and Aerospace Engineering graduate student; Credit is allowed for only MAE 542 or 598 (Design Geometry & Kinematics)
MAE	544	Mechanical Design and Failure Prevention	Modes of mechanical failure; applies principles of elasticity and plasticity in multiaxial state of stress to design synthesis; failure theories; fatigue; creep; impact.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	546	Advanced CAE Simulation	Solution of advanced engineering problems with analysis software for structural, dynamic, nonlinear, contact and kinematic problems; selection of modeling parameters; reliability tests on software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only MAE 406 or 546
MAE	547	Modeling and Control of Robots	Homogeneous transformations, workspace, forward and inverse kinematics, differential kinematics, statics and dynamics, motion planning, motion and force control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major, Pre- or corequisite(s): APM 505 or MAE 501
MAE	557	Mechanics of Composite Materials	Analysis, design, and applications of laminated and chopped fiber reinforced composites. Micro- and macromechanical analysis of elastic constants, failure, and environmental degradation. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major; MAE 520 or MAE 598 (Continuum Mechanics)
MAE	561	Computational Fluid Dynamics	Finite-difference and finite-volume techniques for solving the subsonic, transonic, and supersonic flow equations. Method of characteristics. Numerical grid-generation techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Graduate Engineering students; Credit is allowed for only AEE 471 or MAE 471, 561
MAE	564	Advanced Aerodynamics	Perturbation method. Linearized subsonic and supersonic flows. Thin wing/slender body theories. Lifting surface theory. Panel method computation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	566	Rotary-Wing Aerodynamics	Introduces helicopter and propeller analysis techniques. Momentum and blade-element, helicopter trim. Hover and forward flight. Ground effect, autorotation and compressibility effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MAE 466 or 566

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MAE	570	Thermodynamics	Applied thermodynamics; gas mixtures, psychrometrics; property relationships, power and refrigeration cycles, and reactive systems. A basic knowledge of thermodynamics is required to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: Engineering Graduate student; Credit is allowed for only MAE 482, 570 or 598 (Thermodynamics), or MEE 482
MAE	571	Fluid Mechanics	Basic kinematic, dynamic, and thermodynamic equations of the fluid continuum and their application to basic fluid models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	573	Advanced Fluid Mechanics	Mechanics of fluids flows where either the effects of inertia or viscosity are significant. Exact and approximate solutions of the Navier-Stokes equations, laminar flow and flow at low and high Reynolds numbers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	575	Turbulence	Homogeneous, isotropic, and wall turbulence. Experimental results. Introduces turbulent-flow calculations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	577	Advanced Turbulence	Reynolds equations and their closure. Modeling of simple and complex turbulent flows, calculations of internal and external flows, and application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	578	Geophysical and Environmental Fluid Dynamics	Dynamics of large-scale flows under the influence of stratification and earth rotation. Thermally and mechanically driven flows in turbulent boundary layer. Waves and instability of geophysical flows. Global-scale circulation. Applications to environmental prediction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
MAE	581	Advanced Thermodynamics	Basic concepts and laws of classical equilibrium thermodynamics; applications to engineering systems; introduction and applications of statistical mechanics and kinetic theory; Boltzmann integro-differential equation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	585	Solar Thermal Engineering	Solar energy availability, flat-plate and concentrating solar thermal collectors, solar heating and cooling, concentrating solar power (CSP).	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Graduate Engineering student; credit is allowed for only MAE 585 or 598 (Solar Thermal Engineering)
MAE	586	Advanced Heat Transfer	Basic concepts and governing equations. Analysis of laminar and turbulent heat transfer for internal and external flows. Natural and mixed convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	587	Radiation Heat Transfer	Advanced concepts and solution methodologies for radiation heat transfer, including exchange of thermal radiation between surfaces, radiation in absorbing, emitting, and scattering media and radiation combined with conduction and convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	588	Solar Energy Colloquium	Discussion-oriented class focusing on topical issues in solar energy. Knowledge of thermodynamics or electric power systems is recommended to succeed in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisites: Graduate Engineering major; Credit is allowed for only MAE 588 or SEC 588
MAE	589	Heat Transfer	Basic concepts; physical and mathematical models for heat and mass transfer. Applications to conductive, convective, radiative, and combined mode heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; Credit is allowed for only MAE 494 topic (Heat and Mass Transfer) or 589
MAE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): graduate MAE major
MAE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisite(s): Mechanical or Aerospace Engineering graduate student
MAE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisite(s): Mechanical or Aerospace Engineering graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): graduate Engineering student
MAE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
MAE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Prerequisite(s): graduate Engineering student
MAE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Prerequisite(s): Mechanical or Aerospace Doctoral student
MAE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
MAE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Prerequisite(s): Mechanical or Aerospace Doctoral student
MAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MAS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Interdisciplinary Studies Masters student
MAS	501	Methods for Interdisciplinary Inquiry	Critical survey of current models of inquiry, tools, processes, and methods in different fields.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Interdisciplinary Studies Masters student
MAS	502	Perspectives in Interdisciplinary Studies	Introduces interdisciplinarity through explorations of epistemological and rhetorical practices that bridge traditional disciplines.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	505	Theories of Change, Culture, and Mind	Introduces graduate-level interdisciplinary study of key thinkers, movements, theories, and paradigms in 20th-century thought.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Interdisciplinary Studies Masters student
MAS	510	Science and Religion: Cosmologies and Worldviews	Examines science and religion, stressing modern scientific findings and philosophical and historical debates and dialogues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Credit is allowed for only IAS 430 or MAS 510
MAS	513	Sociology of Everyday Life	Examines institutional ethnography, a way of exploring the particular and generalized social relations that shape people's everyday experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	514	Continental Philosophy	Contemporary European thought emerges out of a crisis of the Enlightenment that unfolds throughout the nineteenth and twentieth centuries. Course dovetails with other fields like communication, cultural studies, law, political science, religious studies, literature and various social sciences.	N	SEM	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only MAS 514 or MAS 598 (Studies in Critical Theory) or MAS 598 (Continental Philosophy and Religion)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAS	550	Philosophical and Spiritual Issues in Death and Dying	From Plato to Maimonides to Heidegger to Kubler-Ross, scholars, clinicians, and spiritual writers have recognized that attitudes about death and dying contribute to understandings of human existence. Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to integration of body-mind-spirit, this course introduces basic concepts and practices of care ethics and spirituality. Focuses on relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. Theoretically, the course is inter-faith in approach, holistic in scope, and specialized in content. Practically, students examine real-life issues in care ethics and spirituality from multiple perspectives	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3-9		Prerequisite: Graduate (degree or nondegree) student; Credit is allowed for only MAS, PHI 550 or REL 585
MAS	573	Art and Politics	Explores issues and relationships between the arts and politics through historical examples, significant artists and works, key thinkers, and theoretical approaches. Considers topics such as: the arts and ideology, art and the politics of representation, propaganda, censorship, state-supported art, human rights, revolution and war, cultural change, and political aesthetics. Emphasizes interdisciplinary arts and period study, including the arts and The Russian Revolution, the art in the Weimar Republic and Nazi Germany, and, generally, the arts, art and social movements (e.g., U.S. Civil Rights era, Eastern Europe's solidarity movement and Velvet Revolutions), as well as the arts and politics in selected contemporary contexts (e.g., China, the Middle East).	N	LEC	N	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	585	Capstone Course	Assists students in preparing their capstone project, which represents the culmination of their study for the MA in Interdisciplinary Studies.	N	RSC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3-4		Pre-requisites: Interdisciplinary Studies Masters student
MAS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Interdisciplinary Studies Masters student
MAS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Interdisciplinary Studies Masters student
MAS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Interdisciplinary Studies Masters student
MAS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Pre-requisites: Interdisciplinary Studies Masters student
MAS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT		Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): Mathematics Placement Test
MAT	106	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): Mathematics Placement Test
MAT		Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): Mathematics Placement Test

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT		Enhanced Freshman Mathematics	Individually paced, computer-mediated course designed to prepare students for college-level mathematics. Students work on various modules in an online adaptive learning technology platform created to help students progress through the course material based on individual needs in preparation for enrollment in the next level math course required by the student's major (pre-MAT 117 "Track 1" or pre-MAT 142 "Track 2"). Upon completion of this course, students should see improvement of basic math skills, an increase in the confidence in mathematical abilities, and advancement in ability to relate math to real-life applications. Credit for this course does not count towards university graduation requirements	N	LEL	N	ELG	College of Letters & Sciences	College of Letters and Sciences	0-3		Prerequisite(s): Mathematics Placement Test below 32% for majors that require MAT 142 OR Mathematics Placement Test 32-39.9% for majors that require MAT 117 or higher (consult your major map)
MAT	110	Enhanced Freshman Mathematics	Individually paced, computer-mediated course designed to prepare students for college-level mathematics. Students work on various modules in an online adaptive learning technology platform created to help students progress through the course material based on individual needs in preparation for enrollment in the next level math course required by the student's major (pre-MAT 117 "Track 1" or pre-MAT 142 "Track 2"). Upon completion of this course, students should see improvement of basic math skills, an increase in the confidence in mathematical abilities, and advancement in ability to relate math to real-life applications. Credit for this course does not count towards university graduation requirements	N	LEL	N	ELG	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	0-3		Prerequisite(s): Mathematics Placement Test below 32% for majors that require MAT 142 OR Mathematics Placement Test 32-39.9% for majors that require MAT 117 or higher (consult your major map)
MAT		Enhanced Freshman Mathematics	Individually paced, computer-mediated course designed to prepare students for college-level mathematics. Students work on various modules in an online adaptive learning technology platform created to help students progress through the course material based on individual needs in preparation for enrollment in the next level math course required by the student's major (pre-MAT 117 "Track 1" or pre-MAT 142 "Track 2"). Upon completion of this course, students should see improvement of basic math skills, an increase in the confidence in mathematical abilities, and advancement in ability to relate math to real-life applications. Credit for this course does not count towards university graduation requirements	N	LEL	N	ELG	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	0-3		Prerequisite(s): Mathematics Placement Test below 32% for majors that require MAT 142 OR Mathematics Placement Test 32-39.9% for majors that require MAT 117 or higher (consult your major map)
MAT		College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics.	N	LEL	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	MA	Prerequisite(s): MAT 110 (or MAT 194: EFM with skills mastered for MAT 117 if completed) or Mathematics Placement Test with a score of 40% or higher
MAT	117	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 110 (or MAT 194: EFM with skills mastered for MAT 117 if completed) or Mathematics Placement Test with a score of 40% or higher
MAT		College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 110 (or MAT 194: EFM with skills mastered for MAT 117 if completed) or Mathematics Placement Test with a score of 40% or higher
MAT		Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	MA	Prerequisite(s): MAT 117, 170, 210, or 270 with C or better or Mathematics Placement Test with a score of 50% or higher
MAT	119	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 117, 170, 210, or 270 with C or better or Mathematics Placement Test with a score of 50% or higher
MAT		Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 117, 170, 210, or 270 with C or better or Mathematics Placement Test with a score of 50% or higher

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT		College Mathematics	Applies basic college-level mathematics to real-life problems. Topics include numerical reasoning, sets, counting techniques, probability, basic statistics and finance. Appropriate for students whose major does not require MAT 117 or 170.	N	LEL	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	MA	Prerequisite(s): MAT 110 (or 194: EFM) with skills mastered for MAT 142 if completed, MAT 117 with C or better or Mathematics Placement Test with a score of 32% or higher
MAT	142	College Mathematics	Applies basic college-level mathematics to real-life problems. Topics include numerical reasoning, sets, counting techniques, probability, basic statistics and finance. Appropriate for students whose major does not require MAT 117 or 170.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 110 (or 194: EFM) with skills mastered for MAT 142 if completed, MAT 117 with C or better or Mathematics Placement Test with a score of 32% or higher
MAT		College Mathematics	Applies basic college-level mathematics to real-life problems. Topics include numerical reasoning, sets, counting techniques, probability, basic statistics and finance. Appropriate for students whose major does not require MAT 117 or 170.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 110 (or 194: EFM) with skills mastered for MAT 142 if completed, MAT 117 with C or better or Mathematics Placement Test with a score of 32% or higher
MAT		Precalculus	Intensive preparation for calculus. Topics include functions (including trigonometric), vectors and complex numbers.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	MA	Prerequisite(s): MAT 117 with C or better or completed the Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only MAT 170 or 171
MAT	170	Precalculus	Intensive preparation for calculus. Topics include functions (including trigonometric), vectors and complex numbers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 117 with C or better or completed the Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only MAT 170 or 171
MAT		Precalculus	Intensive preparation for calculus. Topics include functions (including trigonometric), vectors and complex numbers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 117 with C or better or completed the Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only MAT 170 or 171
MAT	171	Precalculus: Science, Technology, Engineering and Mathematics (STEM)	Robust treatment of advanced algebraic skills and trigonometry that are vital in calculus. Algebra topics include functions, compositions, inverses, transformations, complex numbers, roots of polynomial functions, rational functions, exponential and logarithmic functions and their properties. Trigonometry is approached via the unit circle as well as the right triangle. Topics include the trigonometric functions, their graphs and identities, inverse trigonometry, the laws of sine and cosine, vectors and the dot product with an application toward work, and polar coordinates and roots of complex numbers (deMoivre's theorem).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4	MA	Prerequisite(s): MAT 117 with C or better or completed the Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only MAT 170 or MAT 171
MAT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
MAT		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	0-5		
MAT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	0-5		
MAT		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	0-5		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	207	Algebra and Geometry in the High School	Provides a conceptually rigorous treatment of the central ideas of algebra and geometry in high school. Explores and develops familiar mathematical content from a very different perspective. Focuses squarely on creating meaning for concepts and on building coherence of meaning across concepts and various representations of them. As such, course activities and assessments (class/lab activities, homework assignments, and exams) reflect these expectations, focusing on both doing high school mathematics with meaning and on expressing and communicating that meaning accurately and coherently in verbal and written form. Prior to enrolling in this course, students should have experience with algebra/geometry to at least the high school level.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Co-requisite: MTE 210
MAT	208	Discrete Mathematics for Secondary Teachers	Potential secondary teachers of mathematics should master the Math Standards proposed by the National Council of Teachers of Mathematics for college-intending students. Focuses on those aspects of these standards that apply to discrete mathematics with particular emphasis on: mathematical problem solving, mathematics as communication, mathematical reasoning, and discrete mathematics. Taking a broader view, introduces mathematics as a discipline that uses known methods to discover and verify new conclusions through the study of discrete mathematics.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		
MAT		Brief Calculus	Differential and integral calculus of elementary functions with applications.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	MA	Prerequisite(s): MAT 117, 119, 170, or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT	210	Brief Calculus	Differential and integral calculus of elementary functions with applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 117, 119, 170, or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT		Brief Calculus	Differential and integral calculus of elementary functions with applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 117, 119, 170, or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT		Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	211	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT		Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	242	Elementary Linear Algebra	Introduces matrices, systems of linear equations, determinants, vector spaces, linear transformations, and eigenvalues. Emphasizes development of computational skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	2		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT		Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: Minimum Sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	243	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: Minimum Sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT		Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: Minimum Sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	251	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT		Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT	265	Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	MA	Prerequisite(s): MAT 170 or 171 with C or better OR Mathematics Placement Test with a score of 60% or higher and the Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or MAT 270
MAT		Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 170 or 171 with C or better OR Mathematics Placement Test with a score of 60% or higher and the Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or MAT 270
MAT	266	Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	MA	Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT		Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT	267	Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	MA	Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 267 or 272
MAT		Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 267 or 272
MAT		Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 60% or higher and Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or 270

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	270	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 60% or higher and Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or 270
MAT		Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 60% or higher and Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or 270
MAT	271	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences and series.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4	MA	Pre-requisites: MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT		Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences and series.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	MA	Pre-requisites: MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT	272	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4	MA	Prerequisite(s): MAT 266 or MAT 271 with C or better. Credit is allowed for only MAT 267 or MAT 272
MAT		Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	MA	Prerequisite(s): MAT 266 or MAT 271 with C or better. Credit is allowed for only MAT 267 or MAT 272
MAT	274	Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	MA	Pre-requisites: MAT 266 or MAT 271 with C or better; Credit is allowed for only MAT 274 or 275
MAT		Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Pre-requisites: MAT 266 or MAT 271 with C or better; Credit is allowed for only MAT 274 or 275
MAT		Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better; Credit is allowed for only MAT 274 or 275
MAT	275	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better; Credit is allowed for only MAT 274 or 275
MAT		Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better; Credit is allowed for only MAT 274 or 275
MAT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
MAT		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
MAT	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
MAT	300	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	L	Pre-requisites: MAT 210, 251, 265 or 270 with C or better

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MAT	300	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Pre-requisites: MAT 210, 251, 265 or 270 with C or better
MAT	310	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 272 or 267 with C or better
MAT		Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 272 or 267 with C or better
MAT	340	Theory of Interest	Compound interest, discount rates, annuities, present values, depreciation, and bond valuations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 210, 251, 265 or 270 with C or better; Credit is allowed for only ACT 310 or MAT 340
MAT	342	Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 267 or 272 with C or better; Credit is allowed for only MAT 342 or 343
MAT		Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 267 or 272 with C or better; Credit is allowed for only MAT 342 or 343
MAT		Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB.4	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 342 or 343
MAT	343	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB.4	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 342 or 343
MAT		Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB.4	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 342 or 343
MAT	350	Techniques and Applications of Applied Mathematics	Mathematical techniques and applications representative of the range of applied mathematics used in operations research, biology, economics, finance, and sociology. In depth exploration of these techniques in detail by focusing on selected applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 274 or MAT 275; MAT 342 or MAT 343; Co-requisite: STP 420
MAT	351	Mathematical Methods for Genetic Analysis	Discrete mathematics, probability, statistics, and associated computer packages. Applications to genomics, bioinformatics, forensics, and DNA/protein sequence patterns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 270 (or MAT 251 or 265) with C or better
MAT	355	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 119, 210, 243, 251, 265, 270 or STP 220, 231 or 226 with C or better; Credit is allowed for only BIO 355, CPI 480, MAT 355 or MBB 355
MAT	362	Advanced Mathematics for Engineers and Scientists	Vector analysis, Fourier analysis, and partial differential equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 272 (or 267) with C or better; MAT 274 (or 275) with C or better
MAT	370	Intermediate Calculus	Theory behind basic 1-variable calculus: continuity, derivative, Riemann integral, sequences, and series.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 272 (or 267) with C or better; MAT 300 (or 243) with C or better; Credit is allowed for only MAT 371 (with C or better) or MAT 370
MAT	371	Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with C or better
MAT		Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 272 (or MAT 267) and MAT 300 (or 243) with C or better

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MAT	372	Advanced Calculus II	Open, closed, compact sets in R^n continuity, differentiation, partial differentiation, integration in R^n Inverse/implicit function theorems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 371 with C or better; Pre/Co-requisite: MAT 342 or 343 (with C or better if completed); Credit is allowed for only MAT 372 or MAT 460
MAT		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
MAT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
MAT	410	Introduction to General Topology	Topological spaces, metric spaces, compactness, connectedness, and product spaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 300 with C or better
MAT	411	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	HU & H	Credit is allowed for only IAS 411 or MAT 411
MAT	415	Introduction to Combinatorics	Enumerating permutations and combinations of sets and multisets, inclusion-exclusion, recurrence relations, generating functions, Polya theory and combinatorial structures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 300 (or 243) with C or better; MAT 342 (or 242 or 343) with C or better; Credit is allowed for only MAT 415 or 512
MAT	416	Introduction to Graph Theory	Trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 300 (or 243) with C or better; MAT 342 (or 242 or 343) with C or better; Credit is allowed for only MAT 416 or 513
MAT		Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Prerequisite(s) with C or better: ACO 101 (or ACO 102 or CSE 100 or 110 or 205); MAT 242 (or MAT 342 or 343), 300
MAT	419	Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s) with C or better: ACO 101 (or ACO 102 or CSE 100 or 110 or 205); MAT 242 (or MAT 342 or 343), 300
MAT	420	Scientific Computing	Surveys and applies programming languages, libraries, and scientific visualization tools. Programming assignments emphasize software development skills. Completion of advanced calculus recommended prior to this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: CSE 205; MAT 274 (or MAT 275), 342 (or MAT 343)
MAT		Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 272 (or 267) with C or better
MAT	421	Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisites: MAT 272 (or 267) with C or better
MAT	423	Numerical Analysis I	Solution of systems of linear and nonlinear equations, optimization, eigenvalues, round-off error, and floating point arithmetic. Fluency in computer programming is required for enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 342 (or 343) with C or better
MAT	425	Numerical Analysis II	Analysis of and algorithms for numerical interpolation, integration, and differentiation. Numerical solution of ordinary and partial differential equations, introductory level. Applications. Fluency in computer programming is required for success in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 274 (or 275) with C or better; MAT 371 recommended
MAT	429	Optimization	A variety of optimization models and their applications to management, economics, engineering, and science. Topics include linear programming, integer programming, nonlinear programming, and stochastic programming. Stresses formulation and modeling as well as numerous applications and solving algorithms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 343 with C or better; MAT 350 or 419 with C or better
MAT	440	Group Theory	Covers basic group theory. Students learn about the concept of a "group," related structures, their underlying theory and examples of how they arise in mathematics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 300; MAT 342 or 343
MAT	441	Ring Theory	Covers basic ring theory. Students learn about the concept of a "ring," related structures, their underlying theory, and examples of how they arise in mathematics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 300; MAT 342 or 343
MAT	442	Advanced Linear Algebra	Fundamentals of linear algebra, dual spaces, invariant subspaces, canonical forms, bilinear and quadratic forms, and multilinear algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: MAT 300; MAT 342 or 343

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	443	Introduction to Abstract Algebra	Introduces concepts of abstract algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: MAT 300; MAT 342 or 343. Students may not enroll in MAT 443 if credit earned in MAT 444.
MAT		Introduction to Abstract Algebra	Introduces concepts of abstract algebra.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: MAT 300; MAT 342 or 343. Students may not enroll in MAT 443 if credit earned in MAT 444.
MAT	444	Intermediate Abstract Algebra	Basic theory of groups, rings, and fields, including an introduction to Galois theory. Appropriate as preparation for MAT 543.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 442 or 443 with C or better
MAT	445	Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: MAT 300, 342 (or MAT 343)
MAT		Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: MAT 300, 342 (or MAT 343)
MAT	447	Cryptography I	Block ciphers, stream ciphers, congruence arithmetic, information theory, public key cryptosystems, key exchange, electronic signatures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: CSE 100 (or CSE 110 or 205); MAT 242 (or MAT 342 or 343), 300
MAT	448	Cryptography II	Mathematical underpinnings of contemporary cryptosystems, electronic signatures, key exchange, primality testing and factorization algorithms.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 447. Credit is allowed for only MAT 448 or MAT 494. Cryptography II
MAT	450	Mathematical Models in Biology	Introduces mathematical models in biological systems. Applications range from the cellular level to systems level and may include applications from areas such as physiology, ecology, epidemiology, population biology, computational and systems biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 343 (or 342) with C or better; MAT 275 (or 274) with C or better
MAT	451	Mathematical Modeling	Detailed study of 1 or more mathematical models that occur in the physical or biological sciences. May be repeated for credit with instructor approval.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 274 or 275 with C or better; MAT 242, 342 or 343 with C or better
MAT	452	Introduction to Chaos and Nonlinear Dynamics	Properties of nonlinear dynamical systems; dependence on initial conditions; strange attractors; period doubling; bifurcations; symbolic dynamics; Smale-Birkhoff theorem; and applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 274 or 275 with C or better; MAT 242, 342 or 343 with C or better; MAT 371 is recommended
MAT		Introduction to Chaos and Nonlinear Dynamics	Properties of nonlinear dynamical systems; dependence on initial conditions; strange attractors; period doubling; bifurcations; symbolic dynamics; Smale-Birkhoff theorem; and applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 274 or 275 with C or better; MAT 242, 342 or 343 with C or better; MAT 371 is recommended
MAT	460	Vector Calculus	Vectors, curvilinear coordinates, Jacobians, implicit function theorem, line and surface integrals, Green's, Stokes', and divergence theorems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 274 or 275 with C or better; MAT 242, 342 or 343 with C or better; MAT 371 is recommended; Credit is allowed for only MAT 372 or 460
MAT	461	Applied Complex Analysis	Analytic functions, complex integration, Taylor and Laurent series, residue theorem, conformal mapping, and harmonic functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 267 or 272 with C or better
MAT	462	Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 274 or 275 with C or better; MAT 242, 342 or 343 with C or better
MAT		Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 274 or 275 with C or better; MAT 242, 342 or 343 with C or better
MAT	472	Intermediate Real Analysis I	Introduces analysis in metric spaces with emphasis on the real line.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 371 with C or better
MAT	473	Intermediate Real Analysis II	Analysis in \mathbb{R}^n : implicit function theorem, introduction to manifolds, Lebesgue integration, change of variables formula, convergence theorems for integrals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 472 with C or better

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MAT	475	Differential Equations	Linear and nonlinear ordinary differential equations, asymptotic behavior of solutions, stability, existence and uniqueness, limit sets, Poincaré-Bendixson theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 242, 342 or 343 with C or better; MAT 274 or 275 with C or better; MAT 370 or 371 with C or better
MAT	476	Partial Differential Equations	First-order quasilinear, second-order linear (wave, Laplace, heat). Characteristics, harmonic functions, maximum principles, Fourier series, separation of variables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 242, 342 or 343 with C or better; MAT 274, 275 or 475 with C or better; MAT 370 or 371 with C or better
MAT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): Minimum 45 hours
MAT		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): Minimum 45 hours
MAT	485	History of Mathematics	Topics from the history of the origin and development of mathematical ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 267 or 272 with C or better
MAT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
MAT		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
MAT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MAT		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MAT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
MAT		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
MAT	495	Supervised research in mathematical sciences	Supervised research in mathematical sciences.	N	RSC	Y	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): minimum 45 hours. Credit is allowed for only MAT 494 (UG Research in Math) or MAT 495
MAT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
MAT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
MAT		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
MAT	512	Introduction to Combinatorics	Enumerating permutations and combinations of sets and multisets, inclusion-exclusion, recurrence relations, generating functions, Polya theory and combinatorial structures. Same topics as MAT 415; mastery at much higher level required. Students with MAT 415 (even as undergraduates) may not enroll.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: Graduate student; Credit is allowed for only MAT 415 or 512
MAT	513	Introduction to Graph Theory	Rigorous introduction to graph theory. High-level mastery in topics such as trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MAT 416 or 513
MAT	514	Enumerative Combinatorics I	First semester of a systematic development of enumerative combinatorics, including elementary counting techniques, sieve methods, and partially ordered sets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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MAT	515	Enumerative Combinatorics II	Second semester of a systematic development of enumerative combinatorics, including lattices, exponential structures, symmetric functions, and selected special topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	516	Graph Theory I	First semester of a systematic development of graph theory, including matchings, connectivity, arboricity, planarity, coloring, network flows.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	517	Graph Theory II	Second semester of a systematic development of graph theory, including dense and sparse graphs, Ramsey theory, hamiltonicity, random graphs, minors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	541	"p"-Adic Numbers	Introduces "p"-Adic numbers and analysis. Topics include valuations, completions of number fields, extensions of the field of "p"-adic numbers and "p"-adic analysis. Students should have previously taken courses in analysis and algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	542	Elliptic Curves	Geometry and arithmetic of elliptic curves, points of finite order, the group of rational points, curves over finite fields, complex multiplication. Students should have previously taken a senior-level course in abstract algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	543	Abstract Algebra I	Groups, modules, rings and fields, Galois theory, homological algebra, and the representation theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	544	Abstract Algebra II	Continuation of groups, modules, rings and fields, Galois theory, homological algebra, and the representation theory	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 543
MAT	545	Abstract Algebra III	Covers modules, Galois theory, and preparation for advanced study in algebraic parts of mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 544
MAT	547	Algebraic Number Theory	Algebraic properties of number fields and their completions. Topics include rings of integers, ramification, finiteness of the class group, and Dirichlet's unit theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 544
MAT	561	Ecological Modeling	Mathematical modeling of animal populations, food-web structural and ecological processes in space and time. May use modeling tools on computer clusters.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ABS, BIO 560 or MAT 561
MAT	570	Real Analysis I	Lebesgue integration, selected function spaces, differentiation, abstract measure theory, and elements of functional analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	571	Real Analysis II	Continuation of Lebesgue integration, selected function spaces, differentiation, abstract measure theory, and elements of functional analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 570
MAT	572	Complex Analysis I	Analytic functions, series and product representations, entire and meromorphic functions, normal families, Riemann mapping theorem, harmonic functions, and Riemann surfaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	573	Complex Analysis II	Continuation of analytic functions, series and product representations, entire and meromorphic functions, normal families, Riemann mapping theorem, harmonic functions, and Riemann surfaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 572
MAT	578	Functional Analysis I	Locally convex, normed, and Hilbert spaces. Linear operators, spectral theory, and application to classical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	579	Functional Analysis II	Continuation of locally convex, normed, and Hilbert spaces. Linear operators, spectral theory, and application to classical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 578
MAT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MBB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	343	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	L	Pre-requisites: MBB 347 or BIO 340 with a C or better; Credit is allowed for only BIO 343 or MBB 343
MBB	347	Molecular Genetics: From Genes to Proteins	Emphasizes molecular and cell biology and gene technology, both at the basic and applied research levels, in the growing areas of biotechnology and the molecular biosciences; focuses on molecular processes that allow genetic information to be expressed and regulated and by introducing applications to real-world situations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 282 (or BIO 181 and 182); CHM 116. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
MBB	350	Applied Genetics	Introduces molecular genetics with emphasis on application of genetics to solve biological questions and to engineer organisms for biotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 340 or MBB 247 or MBB 347 with C or better. Credit is allowed for only MBB 350 or PLB 350
MBB	355	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 or STP 231 or STP 226 with C or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
MBB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	440	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better; Credit is allowed for only BIO 440 or CBS 540 or MBB 440 or MCB 540

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MBB	444	Techniques in Functional Genomics	Practical introduction to modern functional genomics techniques, including microarray analysis and DNA sequencing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 440 or MBB 440 (with C or better if completed)
MBB	445	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation, immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or MBB 347 with C or better; MBB 247 or MIC 302 with C or better; Credit is allowed for only MBB 445 or MIC 445
MBB	446	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB or MIC 446
MBB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Minimum 3.3 GPA; Molecular Biology student
MBB	490	Capstone: Issues in Biotechnology	Integrates science and biotechnology industry issues dealing with intellectual property, regulatory issues, business practices, and commercialization. Both MBB 490 and MBB 491 for L General Studies credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	2	L	Prerequisite(s): MBB 343 with C or better
MBB	491	Capstone: Issues in Molecular Biosciences	Integrates molecular science and societal issues dealing with ethics, regulatory issues, and societal needs that pertain to molecular biosciences. Both MBB 490 and MBB 491 for L General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2	L	Prerequisite(s): BIO 340 or MBB 347 with C or better
MBB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
MBB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MBB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
MBB	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Junior or senior standing; Credit is allowed for only BIO, MBB, MIC, HPS or PLB 496
MBB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Minimum 3.0 GPA; Molecular Bioscience/Biotechnology student
MBB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
MCB	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	501	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	503	Bioimaging Lab	Provides a fundamental understanding of light-based microscopy through the training and use of instruments contained within the SOLS Keck Bioimaging laboratory. Examines the use of bright field, contrast, epifluorescent, total internal reflective fluorescence (TIRF), confocal, multiphoton and atomic force microscopy and how they are applied to various research applications. Additional focus given toward image ethics, analysis, and presentation using programs such as Adobe Photoshop and ImageJ. During the second half of the semester, students propose and develop an experimental project, based on their graduate research, in which they collect data, do analysis, and prepare results for a final project presentation.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisites: BIO 504, MCB 504, or BIO 598 (Bioimaging Current Techniques); Credit is allowed for only BIO or MCB 503

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MCB	504	Bioimaging	Lecture survey of modern techniques for imaging tissues, cells, and macromolecules, including light microscopy (e.g. video, fluorescence, confocal, multiphoton, single molecule), electron microscopy (e.g. transmission, scanning, cryogenic, tomographic) and ancillary techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO or MCB 504
MCB	506	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6		Credit is allowed for only ASM, BIO or MCB 506
MCB	540	Functional Genomics	Functional relevance of genomic sequences; DNA arrays, proteomics, analysis of genomic information for metabolic physiology of organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 440 or CBS 540 or MBB 440 or MCB 540
MCB	555	Advanced Molecular and Cellular Sciences	Study of structural and functional organization of biomolecules and cells, based on current literature.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MCB or NEU 555
MCB	556	Advanced Molecular and Cellular Biology II	Continuation of MCB 555.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	701	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MCE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
MCE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MCE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MCE	447	Diversity in Families and Communities in Multicultural Settings	Diversity and the changing role of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Admission to Professional Teacher Preparation Program
MCE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
MCE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
MCE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
MCE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MCE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
MCE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-7		
MCE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
MCE	548	Multicultural Perspectives on Teaching and Learning	Facilitates understanding of key components related to cultural diversity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MCE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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MCE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCO	120	Media and Society	Covers the role of newspapers, magazines, radio, television and motion pictures in American society.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Credit is allowed for only JMC 110 or MCO 110 or MCO 120
MCO		Media and Society	Covers the role of newspapers, magazines, radio, television and motion pictures in American society.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB	Credit is allowed for only JMC 110 or MCO 110 or MCO 120
MCO	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	240	Media Issues in American Pop Culture	Examines the production and consumption of popular culture as disseminated by the mass media with emphasis on the societal implications.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		
MCO	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	302	Media Research Methods	Surveys research methods used in the social sciences, with a focus on mass communication.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major with minimum cumulative 2.50 GPA OR nonmajor with minimum cumulative 2.00 GPA OR graduate Mass Communications major OR ASU Online student with minimum cumulative 2.00 GPA
MCO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
MCO		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	418	History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & H	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR a non-Journalism & Mass Comm student with minimum 2.0 GPA OR ASU Online student with minimum 2.00 GPA OR Graduate Mass Communications student
MCO		History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB & H	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR a non-Journalism & Mass Comm student with minimum 2.0 GPA OR ASU Online student with minimum 2.00 GPA OR Graduate Mass Communications student
MCO	420	Strategic Sports Communication	Covers the wide-ranging field of strategic sports communication. Prepares students for an entry-level position in the strategic sports communication field.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism or W.P. Carey major; minimum 45 hours
MCO	425	Digital Media Literacy	Helps students begin to navigate the 21st-century media, starting by becoming active users of media, not just passive consumers. The Internet-fueled democratization of media creation has enabled anyone to be a publisher, and given audiences' almost infinite choices, with both great and questionable effects. In a world of information abundance, it can be difficult to discern fact from opinion and truth from fiction. We need to know how to wade through this barrage of information with a critical eye, to be better informed, and ultimately become creators of media ourselves.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism & Mass Communication major; minimum 2.50 GPA OR non-Journalism & Mass Communication major; min 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate MCO major. Credit for only MCO 425 or MCO 494 (Digital Media Literacy)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	430	International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	G	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR a non-Journalism & Mass Comm student with minimum 2.0 GPA OR ASU Online student with minimum 2.00 GPA OR Graduate Mass Communications student
MCO		International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	G	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR a non-Journalism & Mass Comm student with minimum 2.0 GPA OR ASU Online student with minimum 2.00 GPA OR Graduate Mass Communications student
MCO	435	Social Media	Explores and critically analyzes the social, cultural, legal, ethical, economic, and technological dimensions of social media tools from Facebook to Foursquare, Twitter to Flickr and beyond.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	450	Visual Communication	Theory and tradition of communication through the visual media with emphasis on the continuity of traditions common to modern visual media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	HU	Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	455	War and Mass Media	Provides a better understanding of the role and impact of the mass media in shaping public perceptions about one of humanity's most monumental undertakings, the act of war. Through a combination of lectures, readings, documentaries, and motion pictures, examines and critically analyzes media portrayals, real and fictional, of issues, events, and the changing dynamic among: the government, the military, and public opinion as shaped by the media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	456	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate, and image creation.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB	Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	460	Race, Gender, and Media	Readings seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	C	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR non-JMC student with minimum 2.0 GPA OR ASU Online student with a minimum 2.00 GPA OR Graduate Mass Communications student; Credit for AFR or MCO 460
MCO	465	Sports and Media	Designed for aspiring journalists and media users, explores why great sports journalism is essential to our society. Establishes the goals, dreams, and expectations for sports journalism and introduces ethical philosophy and popular ethical models and decision-making tools. Students then apply these tools to sports journalism.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	473	Sex, Love, and Romance in the Mass Media	The role of the mass media in constructing and/or reinforcing unrealistic mythic and stereotypic images of sex, love, and romance.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB	Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		Prerequisite(s): Barrett Honors student
MCO	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6	L	Prerequisite(s): Barrett Honors student
MCO	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		Prerequisite(s): Barrett Honors student
MCO	498	Pro Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-7		
MCO	502	Journalism Skills	Teaches basic journalism skills for print, digital and broadcast. Students get significant hands-on practice writing and reporting stories on deadline as well as an immersion in the principles and practices of good journalism.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	8		Prerequisite(s): Master of Mass Communication or Sports Journalism MA major
MCO	503	Media Law	Examines philosophical and legal aspects of press freedom. Emphasizes First Amendment theory evolution from 1791 to present.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student
MCO	505	Depth Reporting	Teaches in-depth and investigative reporting and writing techniques. Students produce long-form, deeply sourced articles with the goal of publication.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication or Sports Journalism MA major
MCO	510	Data Journalism	Uses data to tell stories, negotiates with government officials for public records and uses the Internet and other online sources to find information and sources for stories. Uses computer spreadsheets, database software, mapping programs and statistical techniques and explores how these tools can be used across a wide variety of beats and stories.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	515	Advanced Online Media	Covers online trends, Web design and usability, and copyright; legal, and ethical issues facing online journalists. Students critically examine journalistic Web sites and recognize excellence as well as mediocrity. Hands-on experience in using Photoshop, Dreamweaver, CSS, Soundslides, Final Cut, and Flash to produce original, compelling multimedia stories as well as an online magazine.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student
MCO	525	21st-Century Media Organization and Entrepreneurship	Focuses on the future of journalism, the future of journalism business organizations and entrepreneurship, new media experiences, online solutions to popular media problems, financial realities of the media, and media innovation.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication student
MCO	526	Advanced Issues in 21st-Century Sports and Media	Through critical analyses of major contemporary issues in sports and media, provides tools and information needed to more fully engage in and become fluent with the main conversations about the business, technology and the future of sports journalism.	N	SEM	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism MA major
MCO	529	Ethics and Diversity in Sports Journalism	Explores the connection among sports media, journalism and society in an ethical and issue-oriented context. Students gain an understanding of the issues and ethics of the sports journalism profession while becoming better and more informed consumers of sports media. At the end of the course students have a better understanding of the importance of sports in our society and how that is reflected in coverage by local and national media outlets.	N	SEM	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism MA major; MCO 502
MCO	530	History, Philosophy, and Ethics of Journalism	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student
MCO	531	Advanced Broadcast Reporting	Teaches news and information practices of networks and local television stations. Students report, write and edit broadcast packages with an emphasis on video.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication or Sports Journalism MA major
MCO	535	Latino and Transnational Issues	Provides background and understanding of some of the most pressing and controversial issues of the day that are taking place in the Southwest borderlands. Successful students move on to the Borderlands Initiative depth reporting project in the spring semester that includes an international reporting experience.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication or Sports Journalism MA major
MCO	536	Public Relations Research	Learns about the importance of research in communications, conducts research using qualitative and quantitative methods, and analyzes data to understand implications within a specific communications context. Critically evaluates published academic and professional research and exposes types of research and their application in the field of public relations.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Master of Mass Communication major. Credit is allowed for only MCO 536 or 598 (PR Research)
MCO	540	Sports Reporting	Sports reporting, writing, scriptwriting and video production. Fast-paced and demanding. Students report and write/produce professional-level, clear, well-reported, accurate stories and video packages about athletes and sports stories newsworthy in the Valley and beyond.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism MA major; MCO 502
MCO	550	Issues in Coverage of Business and the Economy	Exposes the basics of business and economic reporting, one of the fastest-growing areas of journalism. Students learn what skills are needed to cover business and economic stories as well as the basics of how private companies operate and the factors that drive the economy. They also learn about opportunities in the field and hear from leaders in business journalism.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): ASU graduate online student OR Masters of Mass Communication major
MCO	553	Reporting on Business and the Economy	Trains students in the basics of reporting about business and the economy. Helps students tell the stories behind companies, people and money, while improving competence in using numbers in stories. Offers the opportunity to have stories appear in print, online or broadcast.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication major; MCO 502; Credit is allowed for only MCO 553 or 598 (Reporting on Business and the Economy)
MCO	555	Digital Media Entrepreneurship	Students identify a marketable idea and transform it into a product and/or company. In the process, they learn about key concepts of entrepreneurship and practice skills that they can employ as entrepreneurs themselves. Students are exposed to a range of national and regional entrepreneurs and emerge with a deeper understanding of entrepreneurship's importance within the media and communications landscape.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): graduate Mass Communication major. Credit is allowed for only JMC 455, JMC 494 (Digital Media Entrepreneurship), MCO 555, or MCO 598 (Digital Media Entrepreneurship)
MCO	560	Arizona Media Law	Case study approach to first amendment issues, media access, libel, confidentiality, and invasion of privacy as applied to media organizations in Arizona.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student

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MCO	570	Master of Mass Communication Capstone	Master's degree hands-on culminating experience. Students may specialize in the various areas, i.e. print, broadcast, online, digital media, or public relations.	Y	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Master of Mass Communication student
MCO	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Pre-requisite: Masters of Mass Communication student
MCO	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisite: Masters of Mass Communication student
MCO	710	Research Methodology in Mass Communication	Identifies research problems in mass communication and provides an overview of questionnaire construction as well as attention to survey, historical, content analysis, experimental and legal research methods.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism Mass Communication PHD students
MCO	711	Critical, Historical, Legal Research Methods in Mass Communication	Critical, legal and historical methods necessary to conduct qualitative mass communication research.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Journalism Mass Communication PhD student
MCO	712	Freedom of Expression Theory	Examines philosophical and legal aspects of press freedom; emphasizes First Amendment theory evolution from 1791 to present.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Journalism Mass Communication PhD student
MCO	720	Mass Communication Theory	Analyzes various theoretic models of mass communication with emphasis on the applications of these theories to professional communication.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism and Mass Communication PhD student
MCO	722	Philosophy of Mass Communication	Mass media as social institutions, particularly interaction with government and public; emphasizes criticism and normative statements. Seminar. Prerequisite: Journalism and Mass Communication PhD student.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism and Mass Communication PhD student
MCO	755	Research Apprenticeship	Students and faculty work on a research project with the expected outcome of a scholarly publication.	N	RSC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Pre-requisite: Journalism and Mass Communication PhD student
MCO	765	Teaching Apprenticeship	Assists PhD students with the transition from the industry to the classroom in order to become better university instructors.	N	REC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-2		Pre-requisites: Journalism and Mass Communication PhD student
MCO	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Cronkite School-Jour/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MDC	211	Introduction to Digital Sound	Examines how technology is used as listeners, creators, critics, remixers, and a wide variety of other roles to participate in and gain a deeper understanding of music and its role in our lives.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Credit is allowed for MDC 211 or MUE 294 Open Minds, Digital Ears
MDC	311	Composing and Performing for Hybrid Ensembles	Provides opportunities to perform music in a variety of digital and hybrid contexts using both physical and digital instruments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only MDC 311 or MUE 394 (Performing in Digital and Hybrid Music Groups)
MDC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MDC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MDC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MDL	410	Laboratory Leadership	Clinical lab leadership and management. Applies the principles of personnel management and supervision, allocation of resources, and staff communication.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite: Admission to Medical Laboratory Science program
MDL	420	Advanced Clinical Urinalysis and Body Fluids	Theory and applications of principles in urinalysis with emphasis on the etiology, pathophysiology, and clinical manifestations of renal and other metabolic defects as reflected by the analysis of urine and other body fluids.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	2		Pre-requisites: BIO 182; Admission to Medical Laboratory Science program
MDL	421	Advanced Practicum in Clinical Urinalysis and Body Fluids	Correlation and application of theory in a supervised clinical laboratory. Processing, analysis, and evaluation of urine and body fluids, emphasizing manual and automated techniques of specimen analysis.	N	PRA	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisites: Medical Laboratory Sciences BAS major; MDL 420 with C or better
MDL	430	Advanced Hematology and Hemostasis	Theory and application of principles in hematology, with emphasis on techniques to evaluate blood dyscrasias and analyze body fluids. Etiology, pathophysiology, clinical manifestations, and treatment of blood dyscrasias/hemostatic defects.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 182; Admission to Medical Laboratory Science program
MDL	431	Advanced Practicum in Hematology and Hemostasis	Correlation and application of theory in a supervised clinical laboratory. Processing, analysis, and evaluation of blood samples, emphasizing manual and automated techniques of specimen analysis.	N	PRA	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		
MDL	440	Advanced Immunohematology and Immunology	Theoretical and practical application of clinical immunology and immunohematology. Emphasizes serological techniques that aid disease diagnosis and blood donor selection.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 182; MIC 205; Admission to Medical Laboratory Science program
MDL	441	Advanced Practicum in Immunohematology and Immunology	Correlation and application of theory in a supervised clinical laboratory. Processing, analysis, and evaluation of samples, emphasizing manual and automated techniques of specimen analysis.	N	PRA	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Pre-requisites: Medical Laboratory Sciences BAS major; MDL 440 with C or better
MDL	450	Advanced Clinical Microbiology	Theoretical and practical application of clinical microbiology. Emphasizes identification of pathogenic organisms, molecular techniques, mycology, virology, and parasitology.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: MDL 410; 420; 421; 430; 431; 440; 441
MDL	451	Advanced Practicum: Clinical Microbiology	Introduces instructional strategies appropriate for the teaching of group exercise classes in secondary school settings.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisite: MDL 450 with C or better
MDL	460	Advanced Clinical Chemistry	Theoretical and practical applications of clinical chemistry with particular emphasis on correlation of test results to disease status, statistical analysis, pre-analytical testing, critical values, calibration, and trending and tracking of quality control results.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: MDL 410; 420; 421; 430; 431; 440; 441
MDL	461	Advanced Practicum: Clinical Chemistry	Correlation and application of theory in a supervised clinical laboratory. Processing, analysis, and evaluation of samples, emphasizing manual and automated techniques of specimen analysis routinely used clinical chemistry testing.	N	LAB	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisites: MDL 460 with C or better
MDL	470	Research Paper	Focuses on the creation of a research paper, written in a scientific fashion, on a relevant topic in the clinical laboratory field.	N	RSC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisite: MDL 460
MDL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
MED	100	Introduction to Medical Studies	Presents basic concepts related to sciences, social sciences, humanities, statistics and other topics related to medical and health studies. Solidifies concepts through the use of assignments, exams and discussions.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	1		
MED	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-3		

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MED	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
MED	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
MED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
MED	417	Impact of Violence on Health	Approaches violence from a public health perspective, using the Centers for Disease Control, National Center for Injury Prevention and Control, as a benchmark. Applies an interprofessional approach to violence, to include medicine, nursing, law, law enforcement, social work, psychology, economics and education, among others. Discusses principles of epidemiology, underlying etiologies and sequelae and evidence-based strategies for prevention throughout the course.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours
MED	445	Science of Helping in Health	One of the strongest weapons in the health care arsenal is helping people make healthier lifestyle choices. But this weapon is only effective when it results in sustained behavior change. Explores the complex interactions among genetics, biology, psychology and society that drive lifestyle choices and the science surrounding motivation and compliance in facilitating behavioral change.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): Minimum 45 hours
MED	450	Leadership and Professionalism	Leadership, leadership theory and inter-professionalism in practice. Applies didactic content to case studies and activities designed to promote critical thinking and effective teamwork. Solidifies concepts through the use of assignments, exams and discussions.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Pre-requisite: HCD 100 or MED 100. Credit is allowed for only HCD 301 or MED 450
MED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	YGB	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): minimum 3.00 GPA
MED	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	College of Health Solutions	1-6		Prerequisite(s): Barrett Honors student
MED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	College of Health Solutions	College of Health Solutions	1-6	L	Prerequisite(s): Barrett Honors student
MED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
MED	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-7		
MED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Health Solutions	College of Health Solutions	1-3		
MEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		
MEE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MEE	322	Structural Mechanics	Three-dimensional stress and strain analysis, generalized Hooke's Law, failure theories for ductile and brittle materials, combined loading, stress concentrations, energy methods, mechanical vibrations and structural dynamics, fatigue.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Mechanical Engineering BSE student; MAE 213 and 384 with C or better; MAT 267 or 272 with C or better; Credit is allowed for only AEE 325 (or MAE 325), MEE 322, or MAE 394 (Structural Materials in Aerospace)

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MEE	323	Computer-Aided Engineering II	Introduces finite-element analysis, pre- and postprocessing, solving problems with FEA.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2		Prerequisite(s) with C or better: BSE Aerospace Engineering major; AEE 325 (or MAE 325 or 394 Aerospace Structures and Materials); MAE 214 or BSE Mechanical Engineering major; MAE 214; MEE 322 (MAE 322)
MEE	340	Thermofluids II	Intermediate concepts of thermodynamics, fluid mechanics, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 240 with C or better; MAT 267 or 272 with C or better; Pre- or corequisite(s): MAE 384 with C or better if completed
MEE	342	Principles of Mechanical Design	The design process; conceptual and embodiment design of mechanical elements; form synthesis; material selection, failure modes, manufacturability tolerances, common mechanisms and machine elements.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MEE 322 with C or better; MSE 250 with C or better; Pre- or corequisite(s): MAE 318 and MEE 323 with C or better if completed
MEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MEE	434	Internal Combustion Engines	Performance characteristics, combustion, carburetion and fuel-injection, and the cooling and control of internal combustion engines. Computer modeling.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MEE 340 or MEE 482 with C or better; Credit is allowed for only MEE 434 or MAE 598 (Internal Combustion Engines)
MEE	446	Energy Systems Design	Applies mechanical engineering principles and techniques to modeling, analysis, and synthesis of energy systems and components. Design optimization. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Mechanical Engineering (Energy and Environment) BSE major; MAE 301 and 400 with C or better; MEE 340 and 342 and 482 with C or better
MEE	482	Thermodynamics	Applied thermodynamics; gas mixtures, psychrometrics, property relationships, power and refrigeration cycles, and reactive systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 240 with C or better; Credit is allowed for only MAE 382 or MAE 570 or MAE 598 (Thermodynamics) or MEE 482
MEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MEE	488	Mechanical Engineering Design I	Conceptual and embodiment design; modeling; rapid prototyping. Team project. MEE 488 and 489 must be taken in consecutive semesters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Mechanical Engineering major; MAE 301 and 318 and 384 with C or better; MEE 340 and 342 with C or better; Pre- or corequisites(s): MAE 400 with C or better if completed
MEE	489	Mechanical Engineering Design II	Detail design; fabrication and testing. Team project. MAE 488 and 489 must be taken in consecutive semesters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MEE 488 with C or better

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MEE	491	Experimental Mechanical Engineering	Experimental and analytical studies of phenomena and performance of fluid flow, heat transfer, thermodynamics, refrigeration, and mechanical power systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3	L	Prerequisite(s): Fulton Engineering undergraduate student; MAE 301 and 318 with C or better; MEE 340 with C or better
MEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		Prerequisite(s): Barrett Honors student
MEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
MEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-7		
MEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		Prerequisite(s): minimum 45 hours
MET	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-3		
MET	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
MET	211	Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia. May be repeated for credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre/Co-requisites: PHY 121 (or PHY 111 as pre-requisite); MAT 265 or MAT 270
MET	212	Applied Engineering Mechanics: Dynamics	Masses; motion kinematics; dynamics of machinery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 211 (or CON 221 or MAE 212); MAT 266 (or MAT 271)
MET	213	Applied Mechanics of Materials	Stress, strain, stress-strain relations. Axial, shear, bending, torsional and combined loads and deflections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: MET 211 or CEE 210, or MAE 212
MET	214	Applied Mechanics of Materials Laboratory	Measurements of loads and deformations relating stress and strain in axial, shear, bending, torsional, and combined loading configurations.	N	LAB	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1		Pre-requisites: MET 213, MAE 213, MSE 211, CON 223, CEE 213 OR be co-enrolled in MET 213
MET	230	Introduction to Engineering Materials	Introduces materials and their properties, emphasizing basic concepts and structures and how these properties relate to manufacturing and design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	2		
MET	231	Manufacturing Processes	Design documentation and material processes on plastics, ferrous and nonferrous materials, emphasizing orthographic projection, geometric dimensioning and tolerances.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 160 and MET 230
MET	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
MET	300	Applied Material Science	Principles of materials science emphasizing concepts relevant to design, manufacturing, and use. Covers metals, polymers, ceramics, and composites.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR MSE 250 OR Applied Science (Manufacturing Technology & Management) major; MET 230
MET	302	Welding Survey	Theory and application of industrial welding processes: introductory welding metallurgy and weldment design; SMAW, GTAW, GMAW, oxyacetylene, and brazing experiences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Fulton Schools of Engineering student

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MET	309	Nondestructive Testing and Quality Assurance	Part and material inspection using metrology and nondestructive inspection tools and techniques. Theory and application with use of pertinent standards.	N	LAB	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR Applied Science (Manufacturing Technology & Management) major
MET	321	Introduction to Automotive Engineering	Engineering principles and the design of ground vehicles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MET 212. Pre- or corequisite(s): MET 213, 340
MET	331	Machine Design I	Applies mechanics to design of machine elements and structures. Stress analysis, failure modes, tolerances, cylindrical fits, and shaft design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 213 (or CON 223 or MAE 213)
MET	340	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli's equation, applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: PHY 112 or PHY 131; MAT 266 or MAT 271; Credit is allowed for only EGR or MET 340
MET	341	Manufacturing Analysis	Organizational and functional requirements for effective production. Analysis of industrial specifications, geometric dimensioning and tolerancing, costs, and group technology. Writing assembly production plans.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR Applied Science (Manufacturing Technology & Management) major
MET	344	Casting and Forming Processes	Analyzes various forming processes to determine load requirements necessary for a particular metal-forming operation. Information used to select equipment and design tooling. Metal casting processes and design of castings. Introduces powder metallurgy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR Applied Science (Manufacturing Technology & Management) major
MET	345	Advanced Manufacturing Processes	Material removal processes emphasizing advanced turning, milling, and machinability studies using cutting tools. CNC programming for machining and turning centers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR Applied Science (Manufacturing Technology & Management) major
MET	351	Introduction to Automation	Introduces automation. Topics include assembly techniques, fixed and flexible automation systems, robots, material-handling systems, sensors, and controls.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 210
MET	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
MET	396	Professional Orientation	Topics related to a successful career in engineering technology industry. Includes safety, life-long learning, ethics, and career planning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1		Pre-requisite: Junior or Senior standing
MET	401	Quality Assurance	Statistical quality control methods, design of experiments, sampling, gauge requirements and specifications, use of quality assurance tools.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: STP 420 (or APM 301); Credit is allowed for only MET 401 or 501
MET	409	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Junior or Senior standing; Credit is allowed for only MET 409 or 509
MET	410	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: MET 341; Credit is allowed for only MET 410 or 510
MET	415	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 341; STP 420; Credit is allowed for only MET 415 or 515
MET	416	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3	CS	Pre-requisite: MET 341; Credit is allowed for only MET 416 or 516

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MET	418	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 300 or MSE 250. Credit is allowed for only MET 418 or 518
MET	421	Vehicle Powertrains	Internal combustion engine design, performance and operation, and power transmission systems within vehicles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 321
MET	423	Vehicle Chassis and Running Gear Design	Design and manufacture of chassis, structures, steering and braking systems and components, wheels and tires, suspension systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 321; MET 331
MET	424	Vehicle Electrical Systems	Vehicle electrical power and signal systems, computer control and analog control systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 210; MET 321; MET 421
MET	426	Vehicle Thermal Design	Heat management in vehicle systems, including thermal design of engine and transmission cooling systems, cabin heating, and air conditioning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 421; Pre/Co-requisite: MET 434
MET	427	Vehicle System Integration and Testing	Systems engineering principles. Design of the interfaces between vehicle subsystems. Testing of integrated systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 423; MET 424
MET	432	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 340 or MAE 240; Credit is allowed for only EGR or MET 432
MET	434	Engineering Thermo-Fluids III	Transient conduction, convection and radiation heat transfer, heat exchangers, thermo-fluid systems engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 340
MET	435	Alternate Energy Sources	Alternate energy systems, energy use and its impact on the environment, and demonstrating practical alternative energy sources to fossil fuels.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 340
MET	438	Machine Design II	Applies mechanics to the design of machine elements and structures. Emphasizes basics of gears, springs, brakes, clutches, and bearings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 331 OR Fulton Schools of Engineering graduate student
MET	440	Finite Element Analysis	Analyzes machine elements, frames, and aerospace structures employing finite element analysis and software. Includes sensitivity analysis and estimating accuracy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 331
MET	442	Specialized Production Processes	Nontraditional manufacturing processes, emphasizing EDM, ECM, ECG, CM, PM, HERF, EBW, and LBW.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218 (or EGR 294 [Engineering Materials & Manufacturing] or MET 231). Credit is allowed for only MET 442 or MET 502
MET	443	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 345; Credit is allowed for only MET 443 or 514
MET	444	Production Tooling	Design and fabrication of jigs, fixtures, and special industrial tooling related to manufacturing methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre- or corequisite(s): MET 309. Credit is allowed for only MET 444 or MET 504
MET	455	Automation Systems Integration	Applies sensors and devices and their integration with PLCs and computers into automated devices and systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 351
MET	460	Capstone Project I	Group project designing, evaluating, and analyzing components, assemblies, and systems. Develop products/manufacturing techniques demonstrating state-of-the-art technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 300; 331; 340; 345
MET	461	Capstone Project II	Small-group projects applying manufacturing techniques, with emphasis on demonstrating state-of-the-art technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 460
MET	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		
MET	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
MET	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student
MET	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Pre-requisites: Fulton Schools of Engineering student; Minimum Junior status
MET	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-7		Pre-requisites: Fulton Schools of Engineering student; Minimum Junior status

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MET	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-3		
MET	501	Statistical Quality Control Applications	SPC problem-solving techniques for implementation in industrial setting; design and analysis of experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 401 or 501
MET	502	Specialized Production Processes	Specialized production processes including lasers, electronic beam, abrasive and water jet, and chemical and thermal processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 442 or 502
MET	504	Applications of Production Tooling	Design and fabrication of fixtures, jigs, templates, and specialized industrial tooling for manufacturing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 444 or 504
MET	509	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate; credit is allowed for only MET 409 or 509
MET	510	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 410 or 510
MET	514	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 443 or 514
MET	515	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 415 or 515
MET	516	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 416 or 516
MET	518	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 418 or 518
MET	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		
MET	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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MET	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-3		
MGT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
MGT	290	My Life Venture	Interdisciplinary course that engages students in aspects of self-discovery and entrepreneurship. Students learn about themselves, their decisions, and their goals, and see how entrepreneurship could play a role in their lives. Introduces students to concepts in entrepreneurship and personal finance in the context of not-for-profit, business, political, and artistic realms. Includes both individual and team activities and is open to any ASU student.	N	LEL	N	GNA	W.P. Carey School of Business	Department of Management	3		Credit is allowed for only MGT 290 or MGT 294 (My Life Venture) or WPC 294 (My Life Venture)
MGT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		
MGT	300	Organization and Management Leadership	Analyzes strategic, behavioral, and human resource management perspectives, including principles of strategic management and leadership of human resources.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Prerequisite(s) with C or better: ACC 231, 232 or 261; ECN 221 or ECN 231 or IEE 380 or STP 280; MAT 211, 266 or 271; WP Carey, Engr Mgmt, Sec Ed (Bus) major or Business minor; Pre- or corequisite(s): ACC 240, 241, 242 or 271 with C or better if complete
MGT	302	Principles of International Business	Multidisciplinary analysis of international economic and financial environment. Operations of multinational firms and their interaction with home and host societies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3	G	Pre-requisites: W. P. Carey BS or BA student (or non-business student with minimum 2.5 GPA and minimum 56 hours); ECN 212 or 214 with C or better; Credit is allowed for only AGB 302 or MGT 302 or BUA 394 Perspectives in Global Business

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MGT	303	Honors Organizational Strategies, Leadership, and Behavior	Overview of business strategy principles, management processes, motivation, and leadership.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Prerequisites: W.P. Carey School of Business Honors student; PSY 101 (or PGS 101) or PSY 304 (or SOC 304) or SOC 101 or SOC 301 with C or better; ECN 221 or 231 with C or better. Pre- or corequisite: ACC 241 or 242 or 271 with C or better if completed
MGT	310	Collaborative Team Skills	Development of skills in managing and working in collaborative environments. Theories and applications in small group dynamics and team facilitation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Pre-requisites: W.P. Carey BS or BA student OR Non-business student with min 3.5 ASU cum GPA and min 56 earned hours.
MGT	320	Organizational Behavior	Management processes, fundamentals of business-level strategy, individual difference issues, motivation and leadership of people in organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Pre-requisites with C or better: ACC 241 (or ACC 242 or 271); ECN 221 (or ECN 231); MGT 300 (or MGT 303); PSY 101 (or PGS 101) or PSY 304 (or SOC 304) or SOC 101 (or SOC 301); BS Business Entrepreneurship or Management major
MGT	340	Creativity and Innovation	Teaches key concepts and useful tools and techniques of creativity and innovation to students in order to encourage development of creative skills and habits that can propel them in their career or guide them down a path to start a new venture of their own. Coursework and activities involve complex problem solving activities and relevant trend and environmental analysis in order to explore alternative approaches to challenges. Coursework includes both individual and team activities.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3	L or HU	Pre-requisite: W. P. Carey BS or BA student OR non-business student with min 2.50 ASU cum GPA and min 56 earned hours and Pre/Co-requisite: MGT 290 or 294 My Life Venture; Credit is allowed for only MGT 340 or MGT or WPC 394 (Creativity and Innovation)
MGT	360	Entrepreneurship and Value Creation	In-depth application of entrepreneurial concepts including opportunity recognition, value creation, and new business management. Students learn how to identify the needs of a market and problem solve to meet those needs through innovation. Students learn common mistakes made in the new venture process and how to work to avoid these mistakes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Prereq(s): Business undergrad; ACC 241 or 242 with C or better OR Engineering juniors OR non-business junior; min 2.50 cum ASU gpa; MGT 290 with C or better; Pre- or coreq(s): MGT 340 w/C or better if completed; Credit allowed only for FSE 301 or MGT 360
MGT	380	Management and Strategy for Nonmajors	Introduces the functions and applications of management in organizations, including controlling, decision making, leadership, motivation, planning, and social responsibility. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
MGT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W. P. Carey BS or BA student; Pre/Co-requisite: ACC 240 or ACC 241 or ACC 242 or ACC 271 with C or better

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MGT	400	Cross-Cultural Management	Cultural role in international business relations; applied principles of cross-cultural communications, negotiations, and management; regional approaches to business relations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3	C & G	Pre-requisites: WP Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better.
MGT	404	Chinese Language and Global Business Communication	Capstone course designed to synthesize the knowledge acquired from business, language and cultural coursework in the BA in Business: concentration in Chinese Language and Culture. Analyzes case studies in which Chinese language and cultural skills are used to develop communication strategies in doing business in China. Learn new tools and techniques of analysis to enhance communication with Chinese business counterparts. Applies language and cultural skills to a major project in which students demonstrate complex and integrated knowledge of negotiating with the Chinese and using global business skills. Integrates international business knowledge into presentations, research and the use of sophisticated tools of analysis to provide practical training for the global business environment. Students are proficient in communicating in Chinese prior to taking this course.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3		Prerequisite(s): W.P. Carey BA or BS major; CHI 302 with C or better; LES 305 with C or better; MGT 300 with C or better; SCM 300 with C or better
MGT	405	Spanish Language and Global Business Communication	Synthesizes the knowledge acquired from business, language and cultural coursework in the BA in Business: concentration in Spanish Language and Culture. Students proficient in communicating in Spanish analyze case studies in which Spanish language and cultural skills are used to develop communication strategies in doing business in Spanish-speaking countries. Students learn new tools and techniques of analysis to enhance communication with their Spanish-speaking business counterparts. Applies language and cultural skills to a major project in which students demonstrate complex and integrated knowledge of negotiating with Spanish speakers and using global business skills. Integrates international business knowledge into presentations, research and the use of sophisticated tools of analysis to provide practical training for the global business environment.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3		Prerequisite(s): W.P. Carey BA or BS major; LES 305 with C or better; MGT 300 with C or better; SCM 300 with C or better; SPA 314 with C or better
MGT	410	Responsible Management	Values, core beliefs, legal and ethical mandates and cultural norms as they apply to the conduct of organizations; application through a Service Learning project.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Pre-requisites: W.P. Carey BS or BA student, or non-business student with minimum 3.5 gpa and minimum 56 hours; MGT 300, 303, 320 or 380 with C or better
MGT	411	Leading Organizations	Comprehensive overview of leadership in organizations. Provides students with understanding of leadership research and its applications to global organizations and the development of leaders.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Pre-requisites: W.P. Carey BS or BA student or non-business student with minimum 2.50 ASU cum GPA and minimum 56 earned hours; MGT 300, 303, 320 or 380 with C or better
MGT	420	Human Resource Management	Development of skills and knowledge to lead associates effectively: hiring, developing, evaluating, retaining, and rewarding employees. Preparation for leadership roles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Pre-requisites: WP Carey BS or BA student, OR non-business student with min 3.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better
MGT	421	Compensation in Organizations	Develops knowledge of theory and research in motivation, compensation and rewards, and skill in applying such knowledge to important compensation and reward decisions. Discusses strategic compensation and reward systems issues. Explores in detail a variety of monetary and nonmonetary reward systems; the motivational impact these systems have on employees, teams, and CEOs; and the performance impact they have on organizations.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better
MGT	422	Staffing	Focuses on the effective management of the flow of talent into and through organizations. Covers human resource planning, recruiting and selection, career transitions and other workforce movement. Provides opportunities to develop hands-on skills that are relevant to effectively managing talent flow.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better

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MGT	423	Training and Development in Organizations	Familiarizes students with the training and development function in organizations. Although tailored to students interested in human resources management, the course may also be relevant to students who may at some point be involved in training and development within an organizational context.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better
MGT	424	Employment Law	Provides an overview of U.S. employment law at both the federal and state levels. Reviews employment at will and wrongful discharge, employment torts, privacy, discrimination law, worker's compensation, occupational safety and health, unemployment, federal compensation laws, and the law of noncompetition and trade secrets. Designed for individuals preparing for careers in human resource management, labor relations or dispute resolution.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better
MGT	425	Global Human Resources	Explores the importance of international business management in the context of international human resource management, including topics on culture, compensation and benefits, international organizations and their structures, international assignment management and the legal and regulatory considerations that global organizations face. Identifies differences in operating a domestic versus international business and how business practices need to be adapted to operate successfully in foreign markets. Covers global strategy and structure; understanding and managing cultural differences; design and alignment of global HRM practices; and the global HR function.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better
MGT	430	Negotiations	Improves student's understanding of and skills in the art of negotiation. For most managers, negotiation is a significant aspect of their day-to-day jobs, not to mention a major element of everyday life. Give students experience in bargaining and negotiation, as well as provide a foundation in the essential knowledge bases crucial to being an effective negotiator. Emphasizes experiential learning--students spend most of their time participating in exercises and negotiation simulations, as well as discussing negotiation-based cases involving issues that often arise in the workplace. Provides a fundamental understanding of what it takes to be an effective negotiator, as well as several experiences to draw upon in future negotiation situations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Pre-requisites: MGT 300 or 303 or 310 with C or better; W.P. Carey BS or BA student or non-business student with minimum 3.00 ASU cum GPA and minimum 56 earned hrs; Students with credit for MGT 494 topic 187 may not take MGT 430
MGT	440	Entrepreneurship	Prepares students for the challenges of assembling and growing high-potential innovative ventures through the use of analytical frameworks that encompass uncertainty inherent in entrepreneurship (or in entrepreneurial activity). In-depth discussion of cases provides a strong empirical foundation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Pre-requisites: W.P. Carey BS or BA student; FIN 300, 302 or 303 with C or better; MGT 300, 310 or 303 with C or better
MGT	445	Business Model Development	Develops a complete strategic business model emphasizing the planning process undertaken by successful small business owners and entrepreneurs.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3		Pre-requisites: W.P. Carey BS or BA student; MGT 440 with C or better
MGT	446	Venture Capital Experience	Students learn the details of the startup funding process and available resources. Exposes the history of venture capital and other types of capital, current trends, and the trends that are anticipated in the future. Students learn due diligence process as performed by investors and applies these concepts to building and growing their own ventures. Coursework includes both individual and team activities and is open to students in any major of study with the required prerequisite.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3		Pre-requisite: W. P. Carey BA or BS student; ACC 240, 241 or 242 with C or better OR Non-business student; Minimum 2.50 GPA, Minimum 56 hours; Credit is allowed for only MGT 446 or 494 (Venture Capital Experience)
MGT	447	Lean Launch	Students learn lean and customer development methodologies to test assumptions made about a new business concept that they wish to explore or launch. Teaches how to effectively utilize business models and critically assess the assumptions made through the testing of hypotheses to create innovative and market-ready ventures. Includes weekly presentations of learning points and team activities outside of the classroom. Open to students in any major of study with the required prerequisite.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	3		Prerequisite(s): W.P. Carey BA or BS major; ACC 241 or 242 or 271 with C or better OR non-Business student with minimum ASU 2.50 GPA; minimum 56 hours. Credit is allowed for only HON 447 or MGT 447 or MGT 494 (Lean Launch)

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MGT	450	Consulting Projects	Describes and analyzes business processes. Generates and evaluates alternatives. Creates improvement and implementation plans.	N	PRA	N	OPT	W.P. Carey School of Business	Department of Management	3	L	Prerequisite(s): W.P. Carey BS or BA major; ENG 301 or 302 with C or better; MGT 300 or 303; MGT 411 with C or better; MKT 300, 302 or 303 with C or better; Pre- or Corequisite: FIN 300, 302 or 303 (with C or better if completed)
MGT	459	International Management	Concepts and practices of multinational and foreign firms. Objectives, strategies, policies, and organizational structures for operating in various environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3	G	Pre-requisites: WP Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA and min 56 earned hours; MGT 302 or ECN 306 with C or better
MGT	460	Strategic Management	Systems theory of organizations, strategy formulation and administration in organizations, creating organizational cohesiveness, and leading change within organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	3	L	Pre-requisites: W.P. Carey Management BS student; MGT 303 or 320 with C or better; MGT 410 or 411 with C or better; FIN 300, 302 or 303 with C or better; MKT 300, 302 or 303 with C or better
MGT	464	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 464 or MGT 464 or SOS 474
MGT	465	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 465 or MGT 465 or SOS 475
MGT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Prerequisite(s): W.P. Carey BA Human Resources or BS Business Entrepreneurship or BS Management major
MGT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	W.P. Carey School of Business	Department of Management	1-6		Prerequisite(s): Barrett Honors student
MGT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	W.P. Carey School of Business	Department of Management	1-6	L	Prerequisite(s): Barrett Honors student
MGT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W.P. Carey BS or BA student OR non-business student with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and min 56 earned hrs; MGT 300 or 302 or 303 or 310 or IBS 300 with C or better
MGT	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-6		Prerequisite(s): Barrett Honors student
MGT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-7		Pre-requisites: W. P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students

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MGT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-3		Pre-requisites: W. P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students
MGT	502	Organization Theory and Behavior	Understands human side of organizations through management theories and applications. Develops knowledge and skills for successful management of self and others.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: Specific W.P. Carey students
MGT	513	Mindful Leadership	Provides a transformative experience that aids in developing skills associated with being a mindful leader. Focuses on introducing the concept of mindful leadership and explaining how to use it to achieve personal and professional goals. Then concentrates on using mindful leadership to lead individuals and teams. Specific learning goals include: (1) to enhance understanding of mindful leadership; (2) to improve skills in using mindful leadership to achieve personal goals; (3) to improve skills in using mindful leadership to lead individuals and teams; and (4) to propose a transformative plan aimed at increasing use of mindful leadership.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1-3		Prerequisite(s): W.P. Carey graduate student
MGT	520	High-Impact Leadership	Addresses the inherent ambiguity surrounding effective leadership by providing a toolkit of tangible behaviors to ensure leaders create "high impact" in all areas of their professional and personal lives. Emphasizes what high-impact leaders do differently and uniquely to achieve results while also inspiring loyalty in relationships. Covers core topics including building executive maturity and presence, developing and delivering compelling messages, inspiring those around you, building a strong relationship network, establishing credibility, and managing upward relationships. Includes peer dialogue, extensive presentation skills training, and assignments based on students' real-life leadership experiences.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1-3		Pre-requisite: W.P. Carey School of Business graduate student; Credit is allowed for only MGT 520 or 591 (High Impact Leadership)
MGT	530	Negotiations	This course is designed to improve students' understanding of and skills in the art of negotiation. For most managers, negotiation is a significant aspect of their day-to-day jobs, not to mention a major element of everyday life. This course is designed to give students experience in bargaining and negotiation, as well as provide a foundation in the essential knowledge bases crucial to being an effective negotiator. The emphasis of the course is on experiential learning - students will spend most of their time participating in exercises and negotiation simulations (including negotiating job offers), as well as discussing negotiation-based cases involving issues that often arise in the workplace. The goal is to provide students with a fundamental understanding of what it takes to be an effective negotiator, as well as several experiences to draw upon in future negotiation situations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1-3		Pre-requisite: W.P. Carey School of Business graduate student; Credit is allowed for only MGT 530 or 591 (Negotiations)
MGT	540	Entrepreneurship	Capstone case-based course covering all aspects of starting a business: opportunity identification, evaluation, concept development, identifying required resources, acquiring those resources, launching the entity, managing growth, and ultimately, harvesting the enterprise. Revolves around a series of cases, readings and class discussions designed to build a comfort level with understanding and solving problems faced every day, in real life, by a broad spectrum of entrepreneurs at various phases of venture development. Significant emphasis on understanding the valuation and financing of entrepreneurial ventures interwoven through discussions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1-3		Pre-requisite: ACC 502 and FIN 502 with C or better; W.P. Carey School of Business graduate student; Credit is allowed for only MGT 540 or 591 (Entrepreneurship)
MGT	545	Becoming Leaders Who Matter	Addresses core questions: What does it mean to be a leader who really matters? How can you become such a leader? Today's competitive and complex environment requires leaders who are equipped with not just the functional and technical skills necessary to run a business but, more significantly, the leadership skills that allow the business and the people involved in it to thrive. Provides an opportunity to reexamine thinking about leadership and assess current skills and competencies in this area. Highly interactive learning environment with case analyses, exercises, discussion, guided reflection activities, assessments and group work. Covers topics such as self awareness (motivations, values, and leadership style), developing perspective as leaders, the social context of leadership, the role of emotions in the workplace, using life experiences to extract leadership lessons.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1-3		Pre-requisite: W.P. Carey School of Business graduate student; Credit is allowed for only MGT 545 or 594 (Leading w/Authenticity & EI OR Becoming Leaders Who Matter)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MGT	550	Toxic Leadership and Dysfunctional Organizations	Examines origins and impact of bad behavior in the workplace. Identifies and investigates dysfunctional organizational policies and toxic leadership practices. Case studies and consultation reports provide students with detailed accounts of destructive leaders motivated by or responding to greed, questionable ethics, organizational and marketplace pressures, crisis and psychopathology. Students learn best practices for early detection of toxic leadership and organizational dysfunction and strategies for positive intervention and transformation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1-3		Pre-requisite: W.P. Carey School of Business graduate student; Credit is allowed for only MGT 550 or 591 (Toxic Leadership and Dysfunctional Organizations)
MGT	559	International Management	Studies international and cross-cultural influences on management processes and development of global leadership capabilities for experienced management professionals.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	1-3		Pre-requisites: W.P. Carey Graduate student
MGT	565	Business Strategy and Public Policy	Takes a managerial perspective to examine the interface between businesses and their external political environments. Potential changes in public policy can affect current operations and future opportunities. Examines how managers can anticipate and affect the formation, modification and enforcement of public policy in various institutional environments.	N	LEL	Y	GNA	W.P. Carey School of Business	Department of Management	1-4		Prerequisite(s): W.P. Carey MBA Executive Program or W.P. Carey School of Business graduate student; Credit is allowed for only MGT 565 or MGT 591 (Business and Public Policy)
MGT	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Management	0-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	588	Strategic Leadership	Explores the general manager as organizational leader. Focuses on competitive advantage and how each functional area contributes to it.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: MBA degree student
MGT	589	Strategic Management	Formulation of strategy and policy in the organization, emphasizing the integration of decisions in the functional areas.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management	2-4		Pre-requisites: MBA degree student
MGT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	0-12		Pre-requisites: Graduate W.P. Carey students
MGT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: MBA degree student
MGT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	0-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MGT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	700	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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MGT	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
MGT	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Management	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	140	Music as Culture	Introduces a range of practical and intellectual challenges presented by encounters with various kinds of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & G	Pre-requisites: Music major
MHL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	201	Media Literacy for Musicians	Instruction in basic Macintosh computer literacy, including generic applications and music-specific programs with hands-on experience.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	CS	
MHL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MHL	341	Music History I	Western European art music from Antiquity through Baroque. Identification/analysis through listening; application of historical and analytical concepts; research project comprising fresh thesis, detailed musical research, personal reflection, fluent English writing, correct citation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Pre-requisites: Music Education, Music Therapy or BA major: MTC 221 with C or better OR Non-Music Education, Music Therapy or BA major: MTC 223 with C or better
MHL	342	Music History II	Western European, American art music from Classical period to present. Identification/analysis through listening; transfer/application of music/analytical concepts; research project comprising fresh thesis, insightful musical research/reflection, fluent English writing, correct citation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Pre-requisites: Music Education, Music Therapy or BA major: MTC 221 with C or better OR Non-Music Education, Music Therapy or BA major: MTC 223 with C or better
MHL	344	Music in World Cultures	Examines the relations among music, dance, theatre, religion, and social status in Asia, Africa, Oceania, Europe, and the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & G	
MHL	363	Survey of Russian Music	Examines music and musical life in Russia, the Soviet Union, and the post-Soviet C.I.S. from the Middle Ages to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Prerequisite(s): Music student; MHL 342 with C or better
MHL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	437	Music in the Baroque Era	Examines music, culture and aesthetics in the 17th and early 18th centuries.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): Music major or minor; minimum 45 hours. Credit is allowed for only MHL 437 or MHL 494 (Topics in Baroque Music) or MHL 494 (Music in the Baroque Era)
MHL	438	Topics in 18th-Century Music	Selected topics exploring the musical styles of the 18th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3	L & H	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with C or better
MHL	439	Topics in 19th-Century Music	Selected topics exploring the musical styles of the 19th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3	L & H	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with C or better

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MHL	440	Music Since 1900	Examines stylistic trends, major composers and their works, and cultural contexts in music since 1900.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	L or HU	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with a C or greater
MHL	456	History of Opera	Development of opera from its creation ca. 1600 to present. Emphasis placed on major stylistic developments and representative works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	466	North American Indian Music	Various styles of Indian music in the United States, Canada, and Mexico. Open to Music majors and nonmajors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	(L or HU) & C	
MHL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MHL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Prerequisite(s): Barrett Honors student
MHL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MHL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MHL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MHL	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	532	Music Bibliography	Major historical and analytical writings; systematic and historical collections of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Graduate Music student
MHL	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MHL	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Graduate Music student

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MHL	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	632	Applied Musicology	Explores practice-oriented entrepreneurial opportunities and methods in musicology, acquires knowledge and develops skills in community engagement and outreach, explores pathways of professional publication and network building, and participates in organizing curated concert series and scholarly conferences.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): MHL 532
MHL	657	Topics in Symphonic Literature	Examines the evolution of the symphony and symphonic poem from the early classic era through the 19th century, with emphasis on the analysis of selected works.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	668	Introduction to Ethnomusicology	Experiencing theory and methodology by being ethnomusicologists through musical performance, primary writings on fieldwork, career structuring, the history of the discipline, its relationship with historical musicology, and the cultural theories which ethnomusicologists draw on.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	670	Area Studies in Ethnomusicology	Study of the music of a particular culture, country, or area (e.g., music of Mexico, Latin America, China, Africa).	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	675	History of Choral Music and Institutions	Examines the history of choral music through the lens of choral institutions: patronage, education, ritual, performing forces, status (professional vs. amateur), and locale.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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MHL	798	Research Colloquium	Interactive research forum featuring research presentations and discussion among musicology students, faculty and guest speakers from across campus and other institutions. Encourages students to engage in constructive dialogue with their peers as well as with faculty and guest speakers in a collegial environment conducive to exchange and collaboration. Supervised by a faculty panel from the musicology division.	N	RSC	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MSI 601 or 602
MHL	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIC	205	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SG	Pre-requisite: CHM 101 or 113
MIC	205	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	SG	Pre-requisite: CHM 101 or 113
MIC	206	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit.	N	LAB	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1	SG	Pre/Co-requisite: MIC 205 or MIC 220 (with a C or better if completed)
MIC	206	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1	SG	Pre/Co-requisite: MIC 205 or MIC 220 (with a C or better if completed)
MIC	220	Biology of Microorganisms	Introductory microbiology for students majoring in the life sciences. Detailed study of microbial cells, their structure, genetics, physiology, and taxonomy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 or 282; CHM 116
MIC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
MIC	302	Advanced Bacteriology Laboratory	Advanced lab techniques in bacterial growth, physiology, and genetics, with an emphasis on quantitative data and formal lab reports. Both MIC 302 and 401 must be taken to secure L General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2	L	Pre-requisite: MIC 206 with C or better; MIC 220 with C or better
MIC	314	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only MIC 314 or SSH 314
MIC	314	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only MIC 314 or SSH 314
MIC	360	Bacterial Physiology	Mechanisms and control of cell metabolism, structures, and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 220 with C or better
MIC	379	Medical Bacteriology	Principles of medical bacteriology with emphasis on bacterial infections, diagnostic testing, clinical symptoms, pathogenesis, and treatments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 220
MIC	380	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 220 with C or better
MIC	380	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: MIC 220 with C or better
MIC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	401	Research Paper	Paper of 15 or more pages based on library or lab research in collaboration with a faculty member. Required of all Microbiology majors. Both MIC 302 and 401 must be taken to secure L General Studies credit.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1	L	Prerequisite(s): MIC 206, 220 with C or better; senior standing
MIC	420	Immunology: Molecular and Cellular Foundations	Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 353, BIO 360 or MIC 220 with C or better
MIC	420	Immunology: Molecular and Cellular Foundations	Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: BIO 353, BIO 360 or MIC 220 with C or better
MIC	421	Experimental Immunology	Introduces the basic techniques, methods, and assays used in immunology.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisite: MIC 220, MBB 247, BIO 353 or BIO 360 with C or better

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MIC	425	Advanced Immunology	Surveys recent advances in immunology, including lymphocyte membranes, lymphokines/biochemistry, molecular genetics, theoretical immunology, immunoregulation, neuroimmunology, and immunologic diseases.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 420 with C or better
MIC	426	Medical Immunology	Concepts and clinical applications of medical immunology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 181 (or BIO 188 or MBB 247) and BIO 182 (or BIO 187 or MBB 245) and BIO 353 with C or better
MIC	427	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisite: MIC 420, PSY 325, PSY 425, BIO 353, BIO 462, or BIO 467 with C or better; Credit is allowed for only MIC 427 or PSY 427
MIC	428	Immunophilosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 420, PHI 317, HPS 314, or PHI 428 with C or better; Credit is allowed for only MIC 428 or PHI 428
MIC	441	Bacterial Genetics	Surveys genetic exchange and regulatory processes in bacteria and their viruses. Bacteria and viruses as tools in genetic engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or MBB 347 with C or better; MIC 220 with C or better
MIC	442	Bacterial Genetics Laboratory	Techniques of mutagenesis, mapping, and strain and genetic library construction.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Pre/Co-requisite: MIC 441
MIC	443	The Microbial Universe	Diversity and physiology of microorganisms with emphasis on recent advances in the biology of microorganisms of environmental and medical importance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: BIO 353 (LSC 353) with C or better; Pre/Co-requisite: MIC 444 (LSC 445) (with C or better if completed); Credit is allowed for only MIC 205 or 443
MIC	444	The Microbial Universe Laboratory	Techniques used to explore the microbial universe with emphasis on structural, metabolic, genetic, and growth characteristics relevant to the identification and characterization of microorganisms of environmental and medical importance. Not open to students with credit in MIC 206.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisite: LSC 444 or MIC 443 with C or better or co-enrolled in MIC 443
MIC	445	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutagenesis; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or MBB 347 with C or better; MBB 247 or MIC 302 with C or better; Credit is allowed for only MBB 445 or MIC 445
MIC	446	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutagenesis; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB 446 or MIC 446
MIC	461	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and metals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
MIC	470	Bacterial Diversity and Systematics	Biology, classification, and enrichment culture of the nonpathogenic bacteria.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: MIC 302 with C or better
MIC	475	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite with C or better: AST 112 (or BIO 182 or BIO 282 or GLG 102 or SES 122), one 300-level course in AST or BIO or CHM or GLG or MIC or PHY or SES. Credit is allowed for only AST 460 or GLG 460 or MIC 475
MIC	481	Bacterial Pathogenesis	Human host-bacterial interactions in infectious diseases with emphasis on pathogenesis and molecular mechanisms of bacterial virulence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 220 with C or better; MIC 360 or MIC 441 with C or better
MIC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		

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MIC	485	General Virology	Fundamental principles of viruses, their molecular biology, replication, genetics, and pathogenesis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: MIC 206 with C or better; MIC 220 with C or better
MIC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
MIC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MIC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
MIC		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
MIC	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Junior or Senior standing; Credit is allowed for only BIO, MBB, MIC, HPS or PLB 496
MIC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
MIC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
MIC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
MIC	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	520	Evolution and Ecology of Emerging Infectious Diseases	Applying principles and concepts from Ecology, Evolution, and Epidemiology for studying emerging infectious diseases. Emphasizing the interplay of these areas. Intended for life sciences majors and first year graduate students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only EVO or MIC 520
MIC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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MIC	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MIS	101	Introduction to the Military I	Overview of mission, organization, and structure of the Army and its role in national defense; discussion of current military issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	102	Introduction to the Military II	Introduces problem-solving methods, critical thinking, decision making, and group cohesion as applied in a military environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	201	Introduction to Leadership Dynamics I	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	202	Introduction to Leadership Dynamics II	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	205	Leader's Training Course	6-week training program emphasizing practical hands-on skills and leadership development. Taken in lieu of MIS 101, 102, 201, 202. Conducted at Fort Knox, Kentucky.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4		
MIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	301	Advanced Military Science I	Theory and dynamics of the individual soldier and military units in offensive combat operations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3	L	
MIS	302	Advanced Military Science II	Theory and dynamics of military units in defensive combat operations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3	L	
MIS	303	National Advanced Leadership Camp	6-week training program emphasizing leadership development and advanced military skills, including tactics, land navigation, and physical training. Conducted at Fort Lewis, Washington.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4		
MIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	401	Advanced Military Science III	Military legal system; preparation and conduct of military training; leadership development; ethics and professionalism of the military officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	402	Advanced Military Science IV	Military correspondence; career planning and personal affairs in service; conduct of training; leadership development; ethics and professionalism of the military officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	410	American Defense Policy I	Evolution, organization, and execution of U.S. national security policy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3	SB & G & H	
MIS	412	American Defense Policy II	Contemporary problems and analytical issues in the formation and implementation of U.S. national security.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3	SB & G & H	
MIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-12		
MIS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Military Science	1-6	L	Prerequisite(s): Barrett Honors student
MIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		

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MIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-7		
MIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-3		
MIS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Military Science	0		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-3		
MKT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		
MKT	300	Marketing and Business Performance	The dynamic role of marketing within society and organizations. Emphasizes frameworks and analytical tools that ensure customer focus and drive organizational performance.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Marketing W.P. Carey BA or BS or non-business major with minimum 2.50 ASU GPA and minimum 56 hours; ECN 211, 212, 213, or 214 with C or better. Credit is allowed for only MKT 300 or MKT 301 (Fundamentals of Marketing)
MKT	302	Applied Marketing Management and Leadership	Market planning, execution, and assessment. Emphasizes decision and communication skills related to market opportunity analyses and marketing program development as a core business function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3	L	Prerequisite(s): W.P. Carey Marketing BS major; ECN 221 or 231 with C or better; MAT 211 with C or better. Pre- or corequisite(s): ACC 241 or 242 or 271 with C or better if completed
MKT	303	Honors Marketing Theory and Practice	Covers basic applications of marketing concepts to problems that are common to marketing managers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3	L	Prerequisite(s): W.P. Carey Honors student; ECN 221 or 231 with C or better; MAT 211 with C or better; Pre- or corequisite(s): ACC 241 or 242 or 271 with C or better if completed; Credit is allowed for only MKT 300 or MKT 302 or MKT 303
MKT	311	Sports Business	Focuses attention on components ranging from professional sports to collegiate sports, as well as sports-related products.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BA major; minimum 56 hours
MKT	352	Marketing Research	Knowledge and skills to make intelligent decisions in the design, evaluation and application of marketing research and market data.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3	L	Prerequisite(s): W. P. Carey Marketing student; MKT 302 or MKT 303 with C or better
MKT	365	Advertising Management	Advertising as a communications tool in marketing and business. Consideration of market segmentation and positioning, creative strategy, media management, and metrics of effectiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BS student; MKT 300, 302 or 303 with C or better

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MKT	370	Professional Sales and Relationship Management	Investigate the vital role of sales, its relationship to other functions within the firm, and its impact on customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): MKT 300 or 302 or 303 with C or better; W.P. Carey BA or BS major, or non-business major with minimum 2.50 ASU GPA and minimum 2.50 ASU business GPA and minimum 56 hours
MKT	390	Essentials of Marketing	Focuses on the nature and processes of marketing with an emphasis on practical application. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR Non-degree OR be a Graduate student (degree seeking or nondegree seeking)
MKT	391	Essentials of Selling	Focuses on the selling process and its practical applications within consumer and business markets. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-business student, and minimum ASU cumulative GPA of 2.00, and minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student
MKT	392	Essentials of Business Marketing	Provides the tools and specialized knowledge for developing and executing marketing strategy in the business-to-business market. Covers how to identify forces that drive buying behavior in organizations, measure market opportunity, identify profitable segments and develop strategy, particularly for turbulent, high-technology markets.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business major; Minimum 2.00 ASU cumulative GPA; Minimum 56 hours; MKT 390 with C or better; or Non-degree seeking undergraduate or Degree seeking or Non-degree seeking graduate student
MKT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): Non-business student, and minimum cumulative GPA of 2.00, and minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student
MKT	395	Essentials of Advertising and Marketing Communication	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Pre-requisite: W. P. Carey BA student or non-business student, and minimum ASU cumulative GPA of 2.00, and minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a Graduate student; Credit is allowed for only BUA 382 or MKT 394
MKT	396	Essentials of Services Marketing	Focuses on challenges of managing service brands and delivering quality service to customers across industry sectors. Emphasizes skills and knowledge needed to implement quality service and service strategies, frameworks for customer-focused management, and how to increase customer satisfaction and retention through service strategies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business major; Minimum 2.00 ASU cumulative GPA; Minimum 56 hours; MKT 390 with C or better; OR BA Business(Retail Management) major OR Nondegree-seeking student; OR Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MKT	397	Essentials of Global Marketing	Introduces the concepts of globalization in markets and gives an appreciation and understanding of the differences between marketing in the student's home country and marketing globally. The rapid adoption of technology has fundamentally changed the dynamics of marketing and created new competitive paradigms that must be understood for firms to be successful.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business major; Minimum 2.00 ASU cumulative GPA; Minimum 56 hours; MKT 390 with C or better; or Non-degree seeking undergraduate or Degree seeking or Non-degree seeking graduate student
MKT	398	Essentials of Sports Business	Introduces the concepts of sports business. Builds knowledge, skills and understanding of the fundamentals of sports business. Develops an appreciation for and understanding of the multiple stakeholders and diverse interests in and around sports business, and how they impact sports business practice and performance.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business major; Minimum 2.00 ASU cumulative GPA; Minimum 56 hours; MKT 390 with C or better; or Non-degree seeking undergraduate or Degree seeking or Non-degree seeking graduate student
MKT	402	Consumer Behavior	Applies behavioral concepts in the analysis of consumer behavior and the use of behavioral analysis in marketing strategy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W. P. Carey Marketing student; MKT 352 with C or better
MKT	410	Sales Management	Constructive investigation of selling processes, their application in business and consumer contexts, and management of the sales function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W. P. Carey BA or BS major; MKT 300, 302, or 303 with C or better
MKT	420	Retail Management	The role of marketing in retailing and retail performance. Challenges and processes of retail management across various institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BA Business (Retail Management) major; MKT 300 or 302 or 303 with C or better
MKT	421	Fan Behavior and Sports Marketing	Focuses on what it means to be a consumer in a sports marketing context society and what, as a marketer, you need to know to develop, evaluate and implement effective marketing strategies for fans.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BA or BS major; Pre- or corequisite(s): MKT 300 or 302 or 303 with C or better if completed
MKT	425	Global Marketing Management	Analyzes marketing strategies and practices developed by firms to compete in global markets and adapt to changing international environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3	G	Prerequisite(s): W.P. Carey BA or BS major, or non-business major with minimum 2.50 ASU cum GPA and minimum 2.50 ASU business GPA and 56 earned hours; MKT 300 or 302 or 303 with C or better
MKT	430	Sports Business	Builds knowledge, skills, and understanding of sports business; exposure to leading-edge thought, methods, and practices in sports business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W. P. Carey BS student; must have completed MKT 300, MKT 302 or MKT 303 with a grade of C or better.
MKT	431	Sports Events and Facility Management	Project-based course that encompasses the administration, coordination and evaluation of any type of event related to sports.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BA or BS major; Pre- or corequisite(s): MKT 300 or 302 or 303 with C or better if completed
MKT	435	Entrepreneurial Marketing	Identifies and evaluates marketing opportunities; motivates an appreciation of entrepreneurial marketing and its different environmental contexts for general marketing principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W. P. Carey BA or BS student; MKT 300, MKT 302, or MKT 303 with grade of C or better.
MKT	440	Digital Marketing in Practice	Puts digital marketing into practice, expanding on the foundations learned from other marketing courses. Covers strategy and planning but focuses on practical application. Designed to jump start the learning process for any student interested in marketing goods and services in contemporary society.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	1-3		Prerequisite(s): W. P. Carey major; MKT 302 (or 303) with C or better; Credit is allowed for only MKT 440 or 494 (Digital Marketing in Practice)

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MKT	441	Sports Revenue Generation	Focuses on selling and how to create, maintain and build relationships within the sports context. Students gain knowledge and develop skills in choosing a sales career including attributes of a sales person, sales call preparation, value propositions, creating value for the client, team selling, questioning and listening techniques, negotiating, persuasion and closing techniques.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BA or BS major; Pre- or corequisite(s): MKT 300 or 302 or 303 with C or better if completed
MKT	442	Services Marketing Strategy	Concepts, skills, and strategies for addressing the imperative marketing challenges and opportunities involving service.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W.P. Carey Marketing major; Minimum 2.50 GPA; Minimum 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	450	Social Media and Content Marketing	Centers on how to effectively use social media and content marketing to build relationships between a company and its customers. Students learn to create content, how to deliver content through social media and community management, as well as how to optimize content for maximum effectiveness.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	1-3		Prerequisite(s): W. P. Carey Marketing major; MKT 302 (or 303) with C or better; Credit is allowed for only MKT 450 or 494 (Social Media Mktg and Com Mgmt)
MKT	452	Business-to-Business Marketing Strategy	Concepts, skills, and strategies for performing competitively in the business market where organizations rather than households are the customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): MKT 302 (or MKT 303), 352 with C or better; W.P. Carey Marketing major with minimum 2.50 ASU GPA, minimum 2.50 ASU business GPA and minimum 56 hours. Pre- or corequisite(s): MKT 402
MKT	455	Brand Management	Focuses on understanding brand management and the concepts associated with building brand equity and managing brand identity and positioning. Students learn how firms create a competitive advantage by incorporating consumer insight into an effective branding strategy. In addition, students gain an understanding of the role of branding on product portfolio management. Heavily features case discussion, projects and real brands. Applies brand management knowledge to an actual branding strategy project for a small firm.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W. P. Carey Marketing major; MKT 302 (or 303) with C or better; Credit is allowed for only MKT 455 or 494 (Brand Management)
MKT	460	Sports Revenue Generation	Focuses on providing a sophisticated understanding of revenue generation in the context of sports. Students gain knowledge of key marketing, management and administrative functions that play a critical role in revenue-generation strategies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W.P. Carey BS major; MKT 300 (or 302 or 303) with C or better
MKT	462	Competitive Marketing Strategy	Strategy formulation and decision making by the marketing executive. Integrates marketing programs and considers competitive marketing issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W.P. Carey Marketing student; MKT 302 or (MKT 303 and MKT 352) with C or better; Pre/Co-requisite: MKT 402.
MKT	465	Projects in Sports Business	Focuses on providing students with an innovative opportunity to work directly with sports business industry professionals to address real-world and real-time issues faced by these organizations. Students develop an appreciation for and understanding of the multiple stakeholders and diverse interests in and around sports business, and of their constantly changing and interactive impact on sports business practice and performance.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey Sports and Media Studies BA major or W.P. Carey BS major; MKT 300 or 302 or 303 with C or better; MKT 311 or 430 with C or better
MKT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): W.P. Carey BA or BS major; MKT 300 or 302 or 303 with C or better
MKT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-6		Prerequisite(s): Barrett Honors student
MKT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	W.P. Carey School of Business	Department of Marketing	1-6	L	Prerequisite(s): Barrett Honors student
MKT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W. P. Carey BS or BA student; MKT 300 (or 302 or 303) with C or better

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MKT	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	IND	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-6		Prerequisite(s): Barrett Honors student
MKT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-7	L	Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours
MKT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-3		Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours
MKT	502	Marketing Management	Managing the marketing function; market and environmental analysis; marketing planning, strategy, and control concepts. Development and management of marketing programs.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: Specific W.P. Carey Graduate students only
MKT	520	Services Marketing and Management	Focuses on challenges of managing service brands and delivering quality service to customers across industry sectors. Emphasizes skills and knowledge needed to implement quality service and service strategies, frameworks for customer-focused management, and how to increase customer satisfaction and retention through service strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	525	Excel in Services	Focuses on challenges of managing services and delivering quality service to customers. The attraction, retention, and building of strong customer relationships through quality service (and services) are at the heart of the course content. The course is equally applicable to organizations whose core product is service and to organizations that depend on services for competitive.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	530	Creativity and Innovation	Multidisciplinary approaches to theories and practices of inspiring and managing innovation and change for sustainable competitive advantage. Focuses on both the student's individual creativity and the planning and implementation of innovations, technologies, processes, or systems that pose significant uncertainty. Places special attention on the processes surrounding understanding the consumer, ideation and implementation. Inclusive in this are methods such as environmental scanning, scenario planning, contextual research, storytelling, concept testing and prototyping. Also includes the many aspects of the organization's structure and culture regarding innovation and creativity.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	535	Global Marketing Strategy	Introduces the concepts of globalization in markets and gives an appreciation and understanding of the differences between marketing in a home country and marketing globally.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	540	Consumer Markets and Brand Strategy	Provides an intensive examination of factors that drive consumer behavior. Covers topics such as understanding factors contributing to a superior value proposition, identifying elements associated with the stability of the existing alternative, specifying components linked to reducing the level of uncertainty associated with the new alternative; articulating independent influences (e.g., regulatory and social) operating in a particular change context, and comprehending biases that exist in the search and decision making process. Also places additional emphasis on brand development as well as on the role that social media assumes in the change process.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	545	Entrepreneurial Marketing	Introduces the process of developing a plan for starting a business and presenting that plan to potential investors in order to obtain financing. Covers the purposes of a business plan, the varying objectives of different types of investors or financial institutions, and how they complement or conflict with the interests of an entrepreneur. Topics include proprietary positioning, types of organization, and differing management objectives.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	550	New Product and Service Development	Intimately familiarizes students with the front end of the new product design process and provides concrete tools for determining strategies for developing new products based on input from customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	555	Business-to-Business Marketing	Provides the tools and specialized knowledge for developing and executing marketing strategy in the business-to-business market. Covers how to identify forces that drive buying behavior in organizations, measure market opportunity, identify profitable segments, and develop strategy, particularly for turbulent, high-technology markets.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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MKT	560	Customer Relationship Management	Focuses on the tools, metrics, and systems used to measure and manage customer relationships. Key to the development and use of sound customer metrics are market research skills including competencies in research design, sampling, measurement, data collection, and data analysis. Covers how to use types of data such as surveys, purchased data, transactional data, the Web, and social media to measure and manage customer relationships.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	570	Advanced Marketing Strategy	Covers strategic marketing concepts (portfolio management and resource allocation, market segmentation and positioning, competitive advantage); marketing tools (perceptual mapping, conjoint analysis, portfolio analysis, regression); and market and competitive analysis (analyze changes in market attractiveness, evaluate different courses of action, plan long term).	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W. P. Carey MBA Full Time student.
MKT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Global Management Graduate student; MKT 502 with C or better
MKT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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MKT	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MLS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
MLS	501	Writing about Social Issues: Culture, Gender, Society, and Well-Being in the Southwest	Reading and discussion of nonfiction writing on social issues that integrate cultural, gender, and societal issues that affect the well-being of urban communities with special attention to the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3		Pre-requisite: Master of Liberal Studies student
MLS	502	Religion, Culture, and Health: Where Cultures Intersect	Focuses on how cultural and religious notions may come into conflict around issues of health. Contrasts two societies, not necessarily contemporary, from different continents.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3		Pre-requisite: Master of Liberal Studies student
MLS	503	Ethics, Science, and Culture	Introduces ethics related to the practice of art, science, and medical practice in modern and premodern society.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3		Pre-requisite: Master of Liberal Studies student
MLS	504	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	REC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3		Pre-requisite: Master of Liberal Studies student OR MAS in American Media and Popular Culture student. Credit is allowed for only FMS or MLS 504
MLS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MLS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Pre-requisite: Master of Liberal Studies student
MND	101	First-Year Chinese I	Beginning course in Modern Standard Chinese designed for students who have little or no previous background in the language. Adopts different pedagogical approaches such as group practice, role play and situational dialogues to help students acquire basic skills in listening, speaking, reading and writing in Modern Standard Chinese. While linguistic elements are the focus of this course, also includes cultural information that go along with language use.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	5		Credit is allowed for only CHI 101 or MND 101

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MND	102	First-Year Chinese II	Beginning course in Modern Standard Chinese designed for students who have completed MND 101. Different pedagogical approaches such as group practice, role play and situational dialogues are designed to help students acquire basic skills in listening, speaking, reading and writing in Modern Standard Chinese. While linguistic elements are the focus of this course, also includes cultural information with application to global business communication.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	5		Prerequisite(s): MND 101; Credit is allowed for only CHI 102 or MND 102
MND	201	Second-Year Chinese I	First part of a two-semester course of intermediate Modern Standard Chinese for students who have successfully completed First-Year Chinese I and II. Adopts different pedagogical approaches such as group practice, role play and situational dialogues to help students acquire basic skills in listening, speaking, reading and writing. While linguistic elements are the focus of this course, also includes cultural information that accompanies language use along with a deep emphasis on global work situations.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	5		Prerequisite(s): MND 101; MND 102; Credit is allowed for only CHI 201 or MND 201
MND	202	Second-Year Chinese II	Second part of a two-semester course of intermediate Modern Standard Chinese for students who have successfully completed three semesters of Modern Standard Chinese at the college level or equivalent. Builds on the vocabulary introduced in the first three courses, with deeper emphasis on global work situations. Adopts different pedagogical approaches such as group practice, role play and situational dialogues to help students acquire basic skills in listening, speaking, reading and writing Modern Standard Chinese. While oral proficiency is the focus of this course, also includes cultural information that accompanies language use in the teaching as well.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	5		Prerequisite(s): MND 101; MND 102; MND 201; Credit is allowed for only CHI 202 or MND 202
MSA	101	Elementary Arabic I	Introductory Arabic language focuses on pronunciation of Arabic sounds and basic writing skills. Students learn Arabic culture through standard greetings, common phrases, vocabulary and performance of appropriate social behaviors common in the Arab world which prepares students for work in global organizations.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Credit is allowed for only ARB 101 or MSA 101
MSA	102	Elementary Arabic II	Continuation of Elementary Arabic I, adopts different pedagogical approaches such as group practice, role play and situational dialogues to help increase listening, speaking, reading and writing skills. While linguistic elements are the focus, cultural and intellectual contexts provide a medium for understanding the Arab-Islamic world and the global business setting.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Prerequisite(s): MSA 101; Credit is allowed for only ARB 102 or MSA 102
MSA	201	Intermediate Arabic I	Directed to students who have completed the first two courses of college-level Arabic. Students reach an advanced level of oral proficiency through concentrating on new verbs, vocabulary and unique structures of sentences which enable them to master a highly sophisticated usage of the language.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Prerequisite(s): MSA 101; MSA 102; Credit is allowed for only ARB 201 or MSA 201
MSA	202	Intermediate Arabic II	Provides advanced ability to understand, read, write and communicate in Arabic and is directed to students who have completed the first two Arabic elementary courses and the first intermediate course. Focuses on transitive, intransitive and passive and active verbs which enable students to express themselves in highly sophisticated Arabic styles and discourse. Students study how Arabic people perceive and communicate important cultural, historical and economic themes as well as major historical figures and their contributions to Arabic society.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Prerequisite(s): MSA 101; MSA 102; MSA 201; Credit is allowed for only ARB 202 or MSA 202
MSE	100	Introduction of Materials Engineering	Engineering design process, concepts about materials, and the materials engineering profession, including teaming, computer models, communication, and societal impact. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	2		Pre-requisites: Undergraduate Engineering or University College student
MSE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-3		
MSE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
MSE	208	Patterns in Nature	Examines topics from optics to analytical techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	4	SQ	Credit is allowed for only MSE 208 or PHS 208
MSE	211	Introduction to Mechanics of Materials	Topics include stress, strain, elasticity, axial loading, torsion, bending, yield criteria, fracture, general energy methods and Castigliano's Theorem.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: PHY 121; PHY 122; MSE 250 with a C or better
MSE	215	Materials Synthesis	Introduces contemporary techniques for synthesizing both traditional and novel materials and the corresponding correlation to synthesized materials properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre/Co-requisite: MSE 250 with C or better if completed

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MSE	250	Structure and Properties of Materials	Basic concepts of material structure and its relation to properties. Application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): CHM 114 or 113 with Pre- or corequisite(s): CHM 116 ** DO NOT TOUCH REQUIREMENTS W/OUT SUPERVISOR APPROVAL!**
MSE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
MSE	301	Materials and Civilization	Focuses on exploring how materials technology can change people's lives. Traces how societies evolved based on the access to materials and the ability to exploit them and trade them among nations. Studies the role of materials in a variety of contexts such as food, art, warfare, transportation, medicine, information and energy from the Stone Age through the industrial revolution to the modern world. Analyzes the connection between the dramatic developments in civilization and advances in materials through the lens of structure, properties and processing of materials.	N	LEC	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisites: Minimum Junior standing; Credit is allowed for only MSE 301 or 394 (Materials and Civilization)
MSE	308	Sensing the World	Project-oriented science course develops critical thinking and technical skill using Internet modules on the five senses.	N	LEL	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	4	SQ	Pre-requisite: MSE 208
MSE	330	Thermodynamics of Materials	Principles of statistical mechanics, statistical thermodynamics of single crystals, solutions, phase equilibrium, free energy of reactions, free electron theory, and thermodynamics of defects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate or Materials minor student, OR other majors with minimum 3.00 GPA; MSE 250 or ECE 350
MSE	335	Materials Kinetics and Processing	Introduces kinetics in processing of materials as illustrated through real-world materials processing examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or students with approved Materials minor; MSE 330
MSE	355	Structure and Defects	Elements of the structure of metals and alloys, measurement of mechanical properties, and optical metallography.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or students with approved Materials minor; MSE 250 with a C or better; Pre- or corequisite(s): MAT 343 OR Fulton Engineering graduate student
MSE	356	Structures, Properties, and Defects Lab	Lab experiments correlating atomic structure, defects and microstructure of processed metals, ceramics polymers and composites to their mechanical and thermal properties.	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Pre/Co-requisite: MSE 355
MSE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
MSE	415	Mathematical and Computer Methods in Materials	Mathematical, computational, and statistical methods and computer programming used to model materials science phenomena and materials engineering applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3	CS	Prerequisite(s): Fulton Engineering undergraduate student or Materials minor, OR other majors with minimum 3.00 GPA; MAT 274 or 275 with C or better; MSE 250 with C or better; Credit is allowed for only MSE 415 or MSE 598 (Math and Comp Mthds in MatrIs)
MSE	420	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, deformation, and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 355 OR Fulton Engineering graduate student; Credit is allowed for only MSE 420 or MSE 514
MSE	421	Physical Metallurgy Laboratory	Focuses on analysis of microstructure of metals and alloys and includes correlation with mechanical properties to some extent.	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Pre/Co-requisite: MSE 420

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MSE	440	Mechanical Properties of Solids	Effects of environmental and microstructural variables of mechanical properties, including plastic deformation, fatigue, creep, brittle fracture, and internal friction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 355; Credit is allowed for only MSE 440 or MSE 516
MSE	442	Fatigue, Fracture, and Creep of Materials	Relationship between microstructure and fracture; fatigue and creep properties of materials. Environmental effects and recent developments. Current theories and experimental results.	N	LEC	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 250 with C or better; Credit is allowed for only MSE 442 or MSE 494 (Fatigue, Fracture, Creep) or MSE 540
MSE	450	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; PHY 131; MSE 355; Credit is allowed for only MSE 450 or MSE 510
MSE	451	Introduction to Materials Characterization Lab	Lab for materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES.	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; Corequisite(s): MSE 450
MSE	458	Introduction to Electronic, Magnetic, and Optical Properties	Introduces electrical, optical, and magnetic properties of solids and microstructure effects as examined through materials-based examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 415; PHY 241 or 361; Credit is allowed for only MSE 458 or MSE 515 or MSE 598 (Intro to Electronic, Magnetic & Optical Properties)
MSE	460	Nanomaterials in Energy Production and Storage	Emphasizes the relationship among fundamental materials properties, chemical and energy transformation, as well as energy storage. Applications include the role of materials for photovoltaics, nanocatalysts, batteries, and fuel cells. Stresses fundamental principles and charge transfer processes in nanostructured materials in addressing energy needs.	N	LEC	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 250; Credit is allowed for only MSE 460 or MSE 494 (Nanomat. In Energy Production) or MSE 560 or MSE 598 (Nanomat. In Energy Production)
MSE	470	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): FSE undergrad or Materials minor; With C or better: CEE 213, MAE 213, or MSE 211; MAT 242, 342, or 343; MSE 250 or Aerospace major with MAE 325 (394); Credit is allowed for only MAE 455, 513, 598 (Polymers and Composites), MSE 470 or 513
MSE	471	Introduction to Ceramics	Principles of structure and property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 355

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MSE	475	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 250 with C or better; Credit is allowed for only MSE 475 or MSE 518 or EEE 518 or MAE 518 or CHE 518
MSE	476	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 250 with C or better; Credit is allowed for only MSE 476 or MSE 519
MSE	482	Materials Engineering Design	Principles of the design process. Feasibility and optimization. Manufacturing processes, materials selection, failure analysis, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3	L	Prerequisite(s): Fulton Engineering undergraduate student; MSE 420 OR Materials minor, Chemistry, Engineering, or Physics major; MSE 355 and 356; minimum 87 hours; Pre- or corequisite(s): MSE 470 and 471 OR Fulton Engineering graduate student
MSE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
MSE	489	Capstone Design Project I	Covers how to plan an open-ended design project, including experience with technical writing and technical presentations. Both MSE 489 & 490 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1	L	Co-requisite: MSE 482
MSE	490	Capstone Design Project II	Students learn how to conduct an open-ended design project, including experience with technical writing and technical presentations. Both MSE 489 and 490 must be taken to secure L General Studies designation.	N	RSC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	2	L	Prerequisite(s): MSE 489
MSE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-6		Prerequisite(s): Barrett Honors student
MSE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
MSE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		Prerequisite(s): Fulton Engineering undergraduate student
MSE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-7	L	Prerequisite(s): Fulton Engineering undergraduate or graduate student
MSE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-3		
MSE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student

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MSE	501	Linear Algebra in Engineering	Development and solution of systems of linear algebraic equations. Applications from mechanical, structural, and electrical fields of engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite: graduate Engineering major except MS Electrical Engineering, MS Electrical Engineering (AME), MSE Electrical Engineering, PhD Electrical Engineering, or PhD Electrical Engineering (AME). Credit is allowed for only MAE 501 or MSE 501
MSE	502	Partial Differential Equations	Development and solution of partial differential equations in engineering. Applications in solid mechanics, vibrations, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MAE or MSE 502
MSE	510	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 450 or 510
MSE	513	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering or Science & Engr of Materials student; Credit is allowed for only MAE or MSE 513
MSE	514	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, and deformation and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 420 or 514
MSE	515	Introduction to Electronic, Magnetic, and Optical Properties	Electrical, optical and magnetic properties of solids and microstructure effects as examined through materials-based examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Graduate Engineering major; Credit is allowed for only MSE 515 or 598 (Intro to Electronic, Magnetic & Optical Properties)
MSE	516	Mechanical Properties of Solids	Effects of environmental and microstructural variables of mechanical properties, including plastic deformation, fatigue, creep, brittle fracture, and internal friction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering or Science & Engr of Materials student; Credit is allowed for only MSE 440 or 516
MSE	517	Introduction to Ceramics	Principles of structure, property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	519	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 476 or 519
MSE	523	Structural and Mechanical Properties of Materials	Designed for first-year PhD students in the School of Materials. Topics include crystallography theory, tensor properties of materials, elasticity, crystal defects, dislocation theory, plasticity, fracture, fatigue, and creep.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisites: Graduate Engineering student
MSE	524	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only CHM 541 or MSE 524
MSE	526	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only MSE 526 or NAN 511 or PHY 511

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MSE	527	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; MSE 526; Credit is allowed for only PHY 482 or PHY 512 or NAN 512 or MSE 527
MSE	540	Fracture, Fatigue, and Creep	Relationship between microstructure and fracture; fatigue and creep properties of materials. Environmental effects and recent developments. Current theories and experimental results.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisites: Graduate Engineering student; Credit is allowed for only MSE 442, 494 (Fatigue, Fracture, Creep) or 540
MSE	544	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only CHM 544 or MSE 544 or NAN 544 or PHY 444 or PHY 544
MSE	546	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only NAN 546 or MSE 546 or PHY 546
MSE	548	Fundamentals of Microelectronics Packaging	Multidisciplinary course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): graduate Fulton Engineering student. Credit is allowed for only CHE 518 or EEE 518 or MAE 518 or MSE 475 or MSE 548
MSE	550	Advanced Materials Characterization	Analytical instrumentation for characterization of materials; SEM, SIMS, Auger, analytical TEM, and other advanced research techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	552	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only MSE 552 or NAN 552 or PHY 552 or SEM 552
MSE	553	Electron Microscopy Laboratory I	Lab support for MSE 552.	N	LAB	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Corequisite(s): MSE 552 or PHY 552; Credit is allowed for only MSE 553 or PHY 553
MSE	554	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent-beam diffraction, and electron holography. Novel developments and applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only MSE 554 or PHY 554
MSE	555	Electron Microscopy Laboratory II	Lab support for MSE 554.	N	LAB	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
MSE	560	Nanomaterials in Energy Production and Storage	Emphasizes the relationship among fundamental materials properties, chemical and energy transformation, as well as energy storage. Applications include the role of materials for photovoltaics, nanocatalysts, batteries, and fuel cells. Stresses fundamental principles and charge transfer processes in nanostructured materials in addressing energy needs.	N	LEC	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): graduate Chemistry, Engineering or Physics major. Credit is allowed for only MSE 460 or MSE 494 (Nanomaterials In Energy Production and Storage) or MSE 560 or MSE 598 (Nanomaterials In Energy Production and Storage) or NAN 560
MSE	561	Phase Transformations, Kinetics, and Diffusion in Solids	Hetero/homogeneous diffusion-controlled transformations, order-disorder transformations, and shear martensitic) athermal transformations in solids. Courses in advanced thermodynamics and structure and properties of materials are strongly recommended in preparation for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisites: Graduate Engineering student

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MSE	565	Structural Materials in Nuclear Power Systems	Provides an overview of reactor systems and discusses the structural materials used in reactor components (e.g., fuel/core, wall/blanket, heat exchanger, and steam turbine materials). Discusses design considerations and materials degradation processes that occur in service. Emphasizes the effect of radiation damage on materials properties. Reviews reactor systems, including fission- (e.g., PWR, LWR, BWR, LMFBR) and fusion-based reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only MAE 494 (Structural Materials in Nuclear Power Systems) or MSE 494 (Structural Materials in Nuclear Power Systems) or MSE 565
MSE	571	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples from physics, chemistry and nanoscience.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only MSE 571 or NAN 571 or PHY 571
MSE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisites: Graduate Engineering student
MSE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisites: Graduate Engineering student
MSE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisites: Graduate Engineering student
MSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisites: Graduate Engineering student
MSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
MSE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		Pre-requisite: Graduate Engineering student OR Science & Engr of Materials student
MSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MSE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisite: Materials Science & Engineering PhD student
MSE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
MSE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-15		Pre-requisite: Materials Science & Engineering PhD student
MSI	601	Contemporary Topics in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from the arts and other disciplines that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): doctoral Music students
MSI	602	Current Issues in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from current public policies, events, and popular culture that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): doctoral Music students
MSI	755	Historical Research in Music	Required for all PhD in Music students. Knowledge and insights related to conducting historical research in music. Includes development of a mini-proposal for a dissertation on the history of music education, or draft of a historical research paper suitable for presentation or publication.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): doctoral Music students
MTC	123	Beginning Composition	Intended for freshmen and sophomores in the composition concentration. Introduces composing. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Theory and Composition student
MTC	125	Basic Music Theory	Notation, scales, keys, modes, intervals, chords, basic part writing and composition. Development of related aural skills through sight-singing and dictation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student
MTC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	221	Music Theory: 18th Century	Styles, techniques, and idioms of 18th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 125 with C or better
MTC	222	Music Theory: 19th Century	Styles, techniques, and idioms of 19th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 221 with C or better
MTC	223	Music Theory: 20th Century	Styles, techniques, and idioms of 20th-century music; emphasizes innovative treatments of musical elements, analysis, and composition; related aural skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 222 with C or better
MTC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MTC	315	Modern Arranging I	Analysis of scores and recordings, application of orchestration and four and five-part harmonization techniques frequently used in arranging for the contemporary jazz ensembles and studio orchestra	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MUP 236 with C or better
MTC	316	Modern Arranging II	A continuation of MTC 315, analysis of scores and recordings, application and creation of new arrangements for contemporary jazz ensembles and/or studio orchestra.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite: Bachelor of Music student; MTC 315 with C or better
MTC	320	Modal Counterpoint	Counterpoint based on 16th-century vocal polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MTC 221 with C or better
MTC	321	Tonal Counterpoint	Counterpoint based on 18th-century polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MTC 221 with C or better
MTC	323	Composition	Writing music compositions, with emphasis on basic techniques and smaller structures. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Prerequisite(s): MTC 123 with C or better OR BMUS Theory and Composition (Composition) or BMUS Theory and Composition (Theory) major with minimum 55 hours
MTC	327	Intermediate form and Analysis	Organizing elements in the most important contrapuntal and homophonic musical forms from the Renaissance through the 19th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 222 with C or better

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MTC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	422	Musical Acoustics	Properties of sound and tone. Harmonic series, instruments, the ear, auditorium acoustics, and the reproduction of sound. Assumes a thorough knowledge of musical notation, intervals, scales, and harmony, or 2 years of music theory.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; Passed audition
MTC	425	Studies in 20th-Century Theory	Continued development of analytical techniques and aural skill, with an examination of the theoretical systems applicable to 20th-century music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 223 with C or better
MTC	428	Advanced form and Analysis	Organizing principles of the large forms of musical composition in the 19th and 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 223 with C or better
MTC	429	Canon and Fugue	Writing of canons and fugues in tonal style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MTC 321 with C or better
MTC	430	20th-Century Counterpoint	Counterpoint studies utilizing 20th-century idioms.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MTC 223 with C or better
MTC	433	Orchestration	Studies scoring music for full and chamber orchestras; examines individual orchestral instruments (characteristics and performance techniques).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student
MTC	436	Electronic Studio Techniques I	The study of computer music systems emphasizing advanced audio synthesis and resynthesis as well as their application to professional compositional environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: MTC 223
MTC	437	Electronic Studio Techniques II	Principles of digital electronic music systems and their applications in the composition of electronic music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		
MTC	440	Jazz Theory and Ear Training	Advanced study of jazz harmonic systems. Daily oral drills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		
MTC	441	Jazz Composition	Creative writing in the smaller forms and in the idiom of jazz.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Music student; MTC 440; MUP 236 with C or better
MTC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MTC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Prerequisite(s): Barrett Honors student
MTC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	495	Final Project	Half recital of compositions or approval of a large-scale composition or a research paper.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	0		
MTC	496	Theory Project	Supervised individual writing project dealing with music theory.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MTC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MTC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7	L	
MTC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MTC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	516	Baroque Music	Detailed analysis of selected examples of music from the Baroque period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	517	Classic Music	Detailed analysis of selected examples of music from the Classic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	518	Romantic Music	Detailed analysis of selected examples of music from the Romantic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	519	Late 19th-Early 20th Century Music	Detailed analysis of selected examples of music from the late 19th and early 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	520	Analytical Techniques	Analytical techniques systematically applied to music. Concentration on structural and compositional procedures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student

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MTC	523	Advanced Composition	Advanced music composition, including complex techniques and larger structure. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Graduate Music student
MTC	525	Pedagogy of Theory	Practices and principles of teaching music theory. Emphasizes most desirable and practical offerings possible. Comparative studies of existing practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	528	History of Music Theory	Theory from the 17th century to the present. Need not be taken in sequence with MTC 527.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	540	Jazz Theory and Ear Training	Surveys some of the most influential trends in the jazz tradition with in-depth analysis of harmonic systems, linear elements, and compositional strategies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisite: Graduate Music student
MTC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	723	Advanced Composition	Special problems in writing in complex forms and textures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): doctoral Music student
MTC	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

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MTC	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MTC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MTE		Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	College of Letters & Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE	180	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE		Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE		Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MTE 180 with C or better
MTE	181	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: MTE 180 with C or better
MTE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 earned hours
MTE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MTE	210	Mentored Tutoring Internship	Introduces math education students to issues of balancing the content of precalculus mathematics with the needs of someone learning it. Addresses core issues, including articulating what is involved in learning the mathematical idea(s); interpreting students' questions; analyzing student thinking and inferring their underlying rationale from a learner-centered perspective; techniques of question-posing, problem-posing, and instructional scaffolding.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Co-requisite: MAT 207
MTE	250	Technology and Mathematical Visualization	Uses several software packages for exploring mathematics and for preparing mathematical materials, starting from introductory skills and leading to advanced techniques. Places particular emphasis on using computer software with the aim of visualizing mathematical relationships, structures, and processes.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 207, 270, and MTE 210 with C or better
MTE	280	Investigating Quantity: Number, Operations & Numeration Systems	Investigation of mathematical principles and processes regarding the real number system and its properties develop number sense and qualitative reasoning abilities. Designed to meet the requirements for preservice elementary school teachers.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): General Studies MA course with C or better
MTE	281	Investigating Space: Geometry, Measurement, and Visualization	Explores three aspects of geometry: spatial visualization, measurement, and proof. Uses visualization, spatial reasoning, and geometric modeling to solve problems. Provides opportunities for participants (1) to use physical models, technology, and pattern-finding strategies to identify properties of and develop formulas for measuring two- and three-dimensional shapes; and (2) to develop powerful ways of thinking to justify geometric relationships	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): General Studies MA course with C or better
MTE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student

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MTE		Investigating Change: Patterns, Functions, and Modeling	Examines different conceptions of algebra as the study of (1) generalized arithmetic, (2) reasoning with symbols, (3) reasoning with patterns and functions, (4) structure in the number system, and (5) modeling. Distinguishes arithmetic from algebraic reasoning, and develops an appreciation for the pervasiveness of the function concept in the K-8 school mathematics curriculum. Features algebraic thinking and representation using algebra tiles and other concrete models, realistic problems, dynamic geometry software, graphing calculators, and a variety of virtual tools and Web sites. Topics include, but are not limited to: patterns, relations, functions and covariational thinking; multiple conceptions of quantity, variables, constants, and unknowns; inductive, deductive, and analogical reasoning; rate of change and proportional thinking; algebra learning trajectories; and comparisons of additive vs. multiplicative, absolute vs. relational, and arithmetic vs. algebraic thinking.	N	LEC	N	GNA	College of Letters & Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: Admission to the Professional Program
	301											
MTE		Investigating Change: Patterns, Functions, and Modeling	Examines different conceptions of algebra as the study of (1) generalized arithmetic, (2) reasoning with symbols, (3) reasoning with patterns and functions, (4) structure in the number system, and (5) modeling. Distinguishes arithmetic from algebraic reasoning, and develops an appreciation for the pervasiveness of the function concept in the K-8 school mathematics curriculum. Features algebraic thinking and representation using algebra tiles and other concrete models, realistic problems, dynamic geometry software, graphing calculators, and a variety of virtual tools and Web sites. Topics include, but are not limited to: patterns, relations, functions and covariational thinking; multiple conceptions of quantity, variables, constants, and unknowns; inductive, deductive, and analogical reasoning; rate of change and proportional thinking; algebra learning trajectories; and comparisons of additive vs. multiplicative, absolute vs. relational, and arithmetic vs. algebraic thinking.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Admission to the Professional Program
MTE	320	Conceptual Foundations of 7-12 Mathematics Curricula and Assessment	Focuses on concepts of mathematics curricula and their relationships to perspectives on learning, instruction, and assessment. Using a variety of participation formats (e.g., individual and small group work, and whole group discussions) and directed activities, participants examine curricular principles underlying the historical development of mathematics curricula and assessment, and current curricula and curricular recommendations and controversies surrounding them.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 207; MTE 210 and 250 with C or better
MTE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	402	Service Learning	K-12 tutoring and mentoring internship related to academic course work in mathematics education. Requires weekly reflective reading and writing. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	C	Pre/Co-requisite: MAT 117 or MAT 142 or other course meeting General Studies MA requirement
MTE	412	Mathematics in Elementary Schools	Methods of teaching mathematics to all students at the K-8 level, instructional planning and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 412 or MTE 412 or SPE 410
MTE	430	The Development of Mathematical Thinking	This capstone course requires students' sustained engagement with, and analysis of, artifacts from research on learning mathematics from instruction. The artifacts include: curricular/instructional task sequences, samples of student work, video-cases showcasing students' involvement in instruction, problem-solving interviews, and teaching experiments.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MTE 320 with C or better
MTE	482	Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 310 with C or better; Teacher Education milestone
MTE		Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: MAT 310 with C or better; Teacher Education milestone
MTE	483	Mathematics in the Secondary School	Topics in geometry, number theory, algebra, and analysis. Emphasizes unifying principles.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 310 with C or better
MTE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MTE	485	Teaching Standards-Based Middle and High School Mathematics	Detailed exploration of the Common Core State Standards (CCSS) for middle school and high school mathematics. In addition to an in-depth coverage of the CCSS content and practices, students engage with, review and analyze existing instructional task sequences addressing the CCSS. Students also design and construct partial and complete lesson plans to cover specific mathematical content and practices.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 271 or minimum 45 hours; Credit is allowed for only MTE 485 or MTE 494 Adv Mthds Tchng Math Sec Schl
MTE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
MTE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MTE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MTE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
MTE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
MTE	585	Modern Geometry for Teachers	Euclidean, projective, and non-Euclidean geometries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		
MTE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		
MTE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MTE		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MTE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	605	Research-based Practices, Pedagogy and Instructional Leadership in Mathematics	Examines research-based practices, pedagogy, and instructional leadership in mathematics classrooms K-8. Emphasizes learning and teaching mathematics for understanding. Featured practices and pedagogy for fostering symbolic thinking include inductive and deductive concept development, problem-based learning, cognitively guided instruction, learning trajectories, and use of physical manipulatives and virtual tools to facilitate mathematical thinking. Mathematics instructional leadership projects emphasize development of mentoring techniques and professional development expertise. Prepares K-6 and 5-9 mathematics teachers as mathematics teacher leaders, specialists, or coaches in middle schools and the elementary grades.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MTE	610	Number and Operations 2	Examines different conceptions of number and operations as the study of (1) patterns and relationships of numbers, (2) the meaning of operations, (3) reasoning through estimations and conjectures, (4) structure in the number system, and (5) modeling. Participants develop a deeper sense of numbers and operations as they progress through the K-8 curriculum. Various manipulatives and electronic tools facilitate investigations. Topics include: base systems, composing and decomposing numbers, operational relationships, operational strategies, integer meaning, and rational numbers.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MTE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MTE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		
MTE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MUD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
MUD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MUD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
MUD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
MUD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
MUD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
MUD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		

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MUD	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
MUE	101	The ASU School of Music Experience	Introduces all new first-time ASU students to the unique elements, culture, challenges and opportunities of their university, the School of Music and the Herberger Institute for Design and the Arts. Covers the music education and music therapy programs in the School of Music.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	1		Credit is allowed for only MUE 101 or 194 (ASU School of Music Experience for Music Education)
MUE	110	Introduction to Music Education	Overview of music education and career options. Orientation to student characteristics, teacher roles, teaching qualities, and philosophical and historical foundations. Requires school observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music major
MUE	154	Gesture and Sound	Covers fundamentals of musical leadership through gestures associated with sounds in the performance of music.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	1		
MUE	161	Introduction to Music Therapy	Overview of the profession of music therapy and its applications in mental health, rehabilitation, and special education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		
MUE	162	Introduction to Music Therapy Lab	Develops skills needed to lead music experiences in a variety of settings.	N	LAB	N	GNA	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music education or therapy major; Corequisite(s): MUE 161
MUE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	211	Music in Recreation	Materials, methods, and organizational structures appropriate for recreational music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		
MUE	261	Music Therapy as a Behavioral Science	Orientation to preclinical experience with emphasis on observation skills, assessment, goal setting, and professional ethics. Requires off-campus observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MUE161 with C or better
MUE	262	Music Therapy as a Behavioral Science Lab	Develops skills needed to lead music experiences in a variety of settings.	N	LAB	N	GNA	Herberger Inst Design & Arts	School of Music	1		Corequisite(s): MUE 261
MUE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUE	310	Music in Early Childhood	Examines music through the lens of the culture(s) of young children, which (though they intersect with adult cultures) are unique, different from adult experiences, and particular to them. Emphasizes the musical content of children's songs as well as the music they hear, and the kinds of musical engagements that are particular to young children. Also emphasizes the uses, functions, and meanings of music for children.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Pre-requisites: ENG 102 with C or better; minimum 30 hours
MUE	311	Music in the Lives of Children and Youth	Examines the role of music in the lives of young people with particular attention to child and youth learning and development (cognitive, social, emotional, personal/identity, musical). Includes examination and critique of music intended for children and youth (e.g., social and gendered meanings), as well as consideration of how music is related to individual and social identity.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Pre-requisites: BLE 220, RDG 291, SPE 222 or TEL 215, or minimum 30 hours
MUE	317	Strings Lab	Students apply educational theory to the development and refinement of specialized skills in string teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music major; Passed music education interview
MUE	319	Digital and Hybrid Lab	Provides a foundation for integrating a range of technologies and digital media in music teaching and learning. Encourages critical and creative thinking while considering the possibilities for innovative applications of technology and digital media based upon contemporary curricular, theoretical and pedagogical frameworks. Students demonstrate skills and understanding related to using technology and digital media in the context of musicianship, music teaching and learning.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUE	321	Jazz Lab	Jazz rehearsal and performance techniques and repertoire appropriate for rehearsing jazz ensembles in K-12 schools.	N	LEC	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music Education major; Credit is allowed for only MUE 321 or MUE 394 (Jazz Lab)
MUE	323	Keyboard Lab	Piano keyboard skills appropriate for music educators.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): minimum 45 hours; Credit is allowed for only MUE 323 or MUE 394 (Keyboard Lab)
MUE	327	Brass Lab	Students apply educational theory to the development and refinement of specialized skills in brass teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music major; Passed music education interview

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUE	334	Guitar Lab	Guitar skills for teaching guitar classes in K-12 schools.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music Education major; Credit is allowed for only MUE 334 or MUE 394 (Guitar Lab)
MUE	335	Educational Methods for Guitar	Students apply educational theory to the development and refinement of specialized skills in guitar teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music major; Passed music education or therapy interview
MUE	336	Percussion Lab	Students apply educational theory to the development and refinement of specialized skills in percussion teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music major; Passed music education interview
MUE	337	Woodwinds Lab	Students apply educational theory to the development and refinement of specialized skills in woodwind teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music major; Passed music education interview
MUE	338	Educational Methods for Double Reed Instruments	Students apply educational theory to the development and refinement of specialized skills in woodwind teaching. 3 hours per week.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music major; Passed music education interview
MUE	381	Music Therapy Research	Statistics and research design appropriate for investigations in music therapy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	L	Pre-requisite: Music Therapy student
MUE	384	Therapy Preclinical I	Paired students provide music therapy for small groups at a community agency for mentally retarded, geriatric, or physically disabled clients for a minimum of 10 clock hours.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	385	Therapy Preclinical II	Individual placement in ASU Music Therapy Clinic.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	386	Therapy Preclinical III	See MUE 385.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	387	Therapy Preclinical IV	Individual clinical work in a community mental health facility.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	388	Therapy Preclinical V	See MUE 387.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		
MUE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisites: Music Education or Music Therapy student
MUE	413	The Art of Teaching Children Music	Methods of instruction, planning, and presentation of appropriate contents in music. For music educators and music therapists.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music student
MUE	415	The Art of Teaching Contemporary Musicians	Curriculum, student characteristics, and teaching strategies for general music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music major
MUE	436	Percussion Methods for Music Therapy	Provides knowledge and practical performance skills on percussion instruments, further improving the effectiveness of the student in the practice of music therapy. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music Therapy student
MUE	441	Psychology of Music	Psychological and physiological aspects of music emphasizing musical behavior, function, perception, and learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	463	Music Therapy Techniques	Organization, administration, and use of music in rehabilitation with various client populations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music Therapy student; MUE 467 with C or better
MUE	465	Children's Music for Music Therapy	Methods of music therapy instruction, planning, and presentation of appropriate contents in music for children ages 2-12.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music Therapy student; Minimum Junior standing
MUE	467	Music Therapy Theory and Practice in Psychopathology	Influence of music on behavior; principles and practices of music therapy and psychiatric clients.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	475	Group Process and Music Therapy	Principles of group process, verbal counseling, professional writing, as related to music therapy practice.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisite: Music Therapy student; MUE 463 (MUE 362) with C or better or Graduate student in Clinical Music Therapy
MUE	476	Internship in Music Therapy	Full-time, 6-month, off-campus residency in an approved clinical institution.	N	PRA	N	Z1	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 211 with C or better

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MUE	480	The Art of Teaching Choral Musicians	Methods of instruction, organization, and presentation of appropriate content in choral music classes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music major with passed audition; minimum 55 hours
MUE	481	The Art of Teaching Beginning Instrumentalists	Instrumental music as a means of developing music skills, understandings, and attitudes in elementary and secondary school students.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music major with passed audition; minimum 55 hours
MUE	482	The Art of Teaching Advanced Instrumentalists	Advanced instrumental music as a means of developing music skills, understandings, and attitudes in elementary and secondary school students.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music major with passed audition; minimum 55 hours
MUE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	489	Repertoire for Music Therapy	Music skills repertoire for music therapy, including units on brass, strings, woodwinds, electronic instruments, computer music, and improvisation techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy student; MUE 211 with C or better
MUE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Prerequisite(s): Barrett Honors student
MUE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUE	501	Introduction to Professional Music Therapy	Introduces the profession of music therapy through lecture, active discussion, and observations of clinical sessions. Experiential learning is achieved through music making in peer groups.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy graduate student or Clinical Music Therapy graduate student
MUE	536	Percussion Methods for Music Therapy	Designed to provide knowledge and practical performance skills on percussion instruments, further improving the effectiveness of the student in the practice of music therapy. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music Therapy MM Student
MUE	548	Introduction to Research in Music Education	Survey of research methods and literature in music education. Focuses on interpretation and evaluation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	549	Foundations of Music Education	A treatment of historical perspectives, philosophy-aesthetics identified with music education, and learning theories applied to music teaching/learning. Basic research and writing skills appropriate to graduate studies in music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	550	Studies in Music Curricula	Scope and sequence of musical experiences. Develops criteria for the evaluation of music curricula.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	551	Listening and Creating	Studies the nature of music listening and music creating and their relationship. Reviews research and pedagogical practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MUE	552	Advanced Studies in Secondary General Music	Organization and content of school music classes that are not performance oriented.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	555	String Pedagogy and Rehearsal Techniques	String pedagogy and orchestral rehearsal skills for teachers who work with K-12 string classes.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only MUE 555 or MUE 598 (String Pedagogy and Rehearsal Techniques)
MUE	560	Jazz Pedagogy	Study of pedagogy, repertoire, and technique of instruction in jazz styles, ensemble techniques, and performance practice for school ensembles.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	562	Jazz Rehearsal Techniques	Conducting and rehearsal techniques for school jazz ensembles.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		
MUE	563	Music Therapy Techniques for Children	Organization, administration, and use of music in rehabilitation with children and adolescents with special needs.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy MM student; MUE 581 with C or better
MUE	564	Instrumental Music, Advanced Rehearsal Techniques	In-depth analysis of instrumental techniques in preparation for a thorough discussion of band tuning problems and solutions. Discussion of productive conducting and rehearsal techniques for school music teachers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		

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MUE	565	Children's Music for Music Therapy	Methods of music therapy instruction, planning, and presentation of appropriate contents in music for children ages 2-12.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music Therapy Graduate student
MUE	566	Instrumental Literature and Pedagogy for Schools	Provides an in-depth examination of ensemble music and teaching techniques to instrumental music teachers.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	567	Professional Practicum I	Students provide music therapy for small groups at a community agency providing services to people who are intellectually disabled, physically disabled, and the elderly.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music Therapy Graduate student or Clinical Music Therapy Graduate student
MUE	568	Choral Music, Advanced Rehearsal Techniques	Musical and vocal techniques necessary for presentation of choral literature. Analysis and experimentation with psychological, acoustical, and other problems of rehearsal and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	569	Professional Practicum II	Continuation of MUE 567. Practicum.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music Education Graduate student; MUE 567 with C or better
MUE	570	Choral Literature for Schools	Comprehensive study and analysis of choral music for the high school with special emphasis on octavo literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	571	Music Therapy Seminar I: Supervision and Administration	Covers health care administrative skills pertinent to music therapy practice, including budgeting, resource allocation, and staff supervision.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2		
MUE	572	Music Therapy Seminar II with Lab: Advanced Practice in Music	Deepens and broadens knowledge and skills in music therapy clinical practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	573	Music Therapy Seminar III with Lab: Music Therapy Theory and Philosophy	Explores current theory in music therapy and develops the theoretical basis for the profession.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy MM student
MUE	574	Music Therapy Music Skills I: Improvisation	Teaches new forms of musical improvisation pertinent to music therapy practice, broadening and deepening existing skills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music Therapy MM student
MUE	575	Music Therapy Music Skills II: Accompaniment	Teaches new forms of musical accompaniment pertinent to music therapy practice, broadening and deepening existing skills.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music Therapy MM student
MUE	579	Psychology of Music	Nature of musicality and its evaluation. Review of recent research.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	581	Music Therapy Theory and Practice in Psychopathology	Influence of music on behavior; principles and practices of music therapy and psychiatric clients.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy Graduate student or Clinical Music Therapy Graduate student
MUE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	585	Vocal Acoustics and Production	In-depth approach to the psychological/physiological workings of the vocal mechanism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	586	Music Therapy Graduate Clinical Project	Develops clinical- and research-based music therapy skills in selected cognate area.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	2-6		Pre-requisites: MUE 571, 572, 574, and 575
MUE	589	Repertoire for Music Therapy	Music skills repertoire for music therapy, including units on brass, strings, woodwinds, electronic instruments, computer music, and improvisation techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy MM Student
MUE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		

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MUE	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	754	Teacher Education Research and Policy	Reading and discussion of research and policy documents in teacher education with a focus on arts and music teacher preparation. Includes development of a research project or essay suitable for publication or presentation, an abbreviated prospectus for a dissertation, or literature review.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Doctoral Student in Music Education
MUE	756	Qualitative Research in Music Teaching and Learning	Studies qualitative research and methods in music education, including readings and discussion, data collection and data analysis. Includes development of an abbreviated prospectus for a qualitative dissertation, or a draft of a qualitative research paper suitable for presentation or publication. Prerequisite: doctoral student in music education.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Doctoral Student in Music Education
MUE	757	Quantitative Research in Music Teaching and Learning	Studies quantitative research and methods in music education, including readings and discussion, data collection, and analysis. Includes development of an abbreviated prospectus for a quantitative dissertation or a draft of a quantitative research paper suitable for presentation or publication.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Doctoral Student in Music Education
MUE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1		
MUE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
MUP	100	Concert Attendance	6 semesters required for all music majors. A total of 4 convocations and 6 approved recitals required each semester.	N	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	0		
MUP	101	The ASU School of Music Experience	Orientation to university and School of Music resources and procedures as well as career planning and guidance. Through various course discussions and assignments, music students examine the concept of academic integrity and its potential impact on their future and learn about taking an interdisciplinary perspective. Required for all music majors.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	1		Credit is allowed for only MUP 101 or 194 (ASU School of Music Experience)
MUP	111	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	117	Applied Jazz Improvisation	Principles, methods, and theory of jazz performance and pedagogy. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition

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MUP	121	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	127	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	4		Prerequisite(s): Music major who has passed audition
MUP	131	Class Piano	4-semester sequence (with MUP 132, 231, and 232) designed for those with little or no piano experience. Emphasizes keyboard technique, sight reading, simple accompaniments, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student
MUP	132	Class Piano	4-semester sequence designed for those with little or no piano experience. Emphasizes keyboard technique, simple accompaniments, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music student; MUP 131 with C or better
MUP	133	Class Voice	4-semester sequence (with MUP 134, 233, and 234) open to all students. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	134	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student
MUP	170	Music Theatre I	Development of performance skills for opera and music theater emphasizing the portrayals of simple and complex emotions, character development, solo and ensemble performance, music and dialogue analysis, body awareness, and freedom of the vocal and breath mechanisms.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Music	2		
MUP	172	Music Theatre II	Further development of performance skills for opera and music theater, broadening the portrayals of simple and complex emotions, character development, solo and ensemble performance, music and dialogue analysis, body awareness, and freedom of the vocal and breath mechanisms. Students learn to research and develop characters in order to perform various types of songs and dramatic scenes.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: MUP 170
MUP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		Prerequisite(s): Music major who has passed audition
MUP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisite(s): Music major who has passed audition
MUP	209	Beginning Choral Conducting	Essentials of choral conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	210	Beginning Instrumental Conducting	Essentials of instrumental conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	217	Applied Jazz Improvisation	Emphasizes basic jazz literature, chord symbol reading, melodic patterns and concepts, ear training, analysis of improvised solos, and pedagogical issues.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 117 with C or better
MUP	231	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music student; MUP132 with C or better
MUP	232	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student; MUP231 with C or better
MUP	233	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	234	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student
MUP	235	Jazz Piano	2-semester sequence (with MUP 236) designed for jazz keyboard experience. Emphasizes chord symbol reading, simple improvisation, and voicing. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student
MUP	236	Jazz Piano	See MUP 235.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	250	Diction for Singers	Use of phonetics in the study of song and opera literature. Language emphasis differs each semester. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	270	Music Theatre III	Further development of performance skills for music theater emphasizing the portrayals of simple and complex emotions, character development, solo and ensemble performance, music and dialogue analysis, body awareness, and freedom of the vocal and breath mechanisms. Students learn to develop characters and project various moods and scenarios through song.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 172

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MUP	272	Music Theatre IV	Further development of performance skills for opera and music theater emphasizing the portrayals of simple and complex emotions, character development, solo and ensemble performance, music and dialogue analysis, body awareness, and freedom of the vocal and breath mechanisms. Students conduct in-depth analyses of characters from both the historical and contemporary repertoire of music theatre.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 270
MUP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisite(s): Music major who has passed audition
MUP	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Barrett Honors Music students who have passed audition
MUP	301	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 232. Emphasizes accompaniments, ensemble playing, score reading, advanced harmonizations, repertoire, technique, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music student; MUP 232 with C or better
MUP	302	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 301. A sequential continuation of MUP 301 skills that include both group and studio instruction. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student; MUP301 with C or better
MUP	311	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	317	Applied Jazz Improvisation	Emphasizes listening, analysis, and performance of advanced jazz literature and composition in contemporary styles. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	319	Advanced Audio Engineering in the Arts	Synthesis and application of analog and digital recording methods (voices and instruments), mixing and the advanced skills needed to create professional recordings (CDs, DVDs, internet sound files, etc.). Further emphasis on electronic music production, computer based applications, MIDI, and contemporary studio hardware.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Minimum Junior standing in the Herberger Institute for Design in the Arts
MUP	321	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	327	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Prerequisite(s): Music major who has passed audition
MUP	337	Studio Instruction: Collaborative Piano	Repertoire to be selected from vocal and instrumental literature. 1 hour lesson per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	339	Choral Conducting	Elements of choral conducting technique and interpretation. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 209 or MUP 210
MUP	340	Instrumental Conducting	Fundamentals of score reading and interpretation of instrumental music. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 210 with C or better
MUP	370	Music Theatre V	Development of specific skills for musical-dramatic interpretation and of specific physical theatre skills for the actor. Performance-based class provides an opportunity to connect physically, emotionally and intellectually to the body of the musical theatre actor, and provides an opportunity to explore strong, clear acting choices. Students participate in various movement theories and techniques in class and complete independent performance projects utilizing the body and the body with voice, choosing a song from various categories to workshop and perform.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): MUP 272
MUP	373	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus). May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	374	Music Theatre: Production	In-depth study of approaches to Technical Music Theatre. Classroom study of costumes, sets and lighting (Section 1, Topic: Tech) is followed by practical experience on a technical running crew for a Lyric Opera Theatre production (Section 2 Topic: Problems). The two sections should be taken in consecutive semesters.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	385	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition

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MUP	388	Collaborative Piano	Performance class for collaborative piano majors. Repertoire includes vocal and instrumental selections. Advanced analysis of ensemble techniques, style and performance practice in preparation for graduate study or professional application.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: 4 terms of MUP 127 with C or better
MUP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	440	Keyboard Harmony	Performance-oriented class emphasizing chord progressions, harmonization, figured bass realization, stylistic improvisation, transposition, open score reading, and sight reading.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	442	Instrumental Ensembles	Students participate in numerous ensembles and artistic and educational projects that together, comprise a rich assortment of musical experiences. During the academic year, each student participates in a variety of projects that present a wide range of musical experiences. Curriculum accommodates the distinctive needs of each student in that artistic-educational experiences are, to a large extent, tailor made to each individual's career aspirations. Consequently, learning outcomes are highly individualized and student driven, rather than institutionally convenient. Each artistic-educational project focuses on specific pedagogical and/or musical learning outcomes that, in various ways, promote the primary course objective: the enhancement of musical diversity and artistic depth in every student.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): Music major or nonmajor who has passed audition
MUP	443	Choral Ensembles	Active, thoughtful participation in music ensembles can provide for development beyond the possibilities of individual study alone. The ensemble setting is, in part, a forum for the synthesis of component parts of a complete music education. Includes the study and performance of diverse musical expressions that represent a variety of historical and cultural perspectives. These ensembles provide the opportunity to prepare and present varied music composed for the mixed choir from the major stylistic periods with the intent of serving composers, performers and listeners by performing choral music of the highest possible quality.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): Music major or nonmajor who has passed audition
MUP	448	Classical Style: Performance and Analysis	Integrates historical and theoretical analysis with performance, examining classical period repertoire.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music major who has passed audition; Junior standing; Credit is allowed for only MUP 448 or 494 (Classical Style: Performance and Analysis)
MUP	449	The Unaccompanied Music of JS Bach: Performance and Analysis	Integrates historical and theoretical analysis with performance, examining the unaccompanied works of J.S. Bach.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music major who has passed audition; Junior standing; Credit is allowed for only MUP 449 or 494 (Unaccompanied Bach: Performance & Analysis)
MUP	450	Choral Union	Large mixed ensemble focuses on the study, synthesis, and performance of major choral masterworks while gaining in-depth understanding of significant choral repertoire and historical ramifications. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Credit is allowed for only MUP 450 or 550
MUP	451	Repertoire	In-depth study of music for performing, involving advanced interpretive and technical concepts from historical, stylistic, and performance-related perspectives.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Completed 4 semesters of 100-level studio instruction
MUP	453	Song Literature	Early Italian, English, German, and French art song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	454	Song Literature	American, Russian, Spanish, Scandinavian, and contemporary song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	455	Men's Chorus	Membership in this ensemble involves the in-depth study and application of specialized musical skills in the performance of a variety of historically and musically standard male repertoire, within historical context. An audition is required to participate in the ensemble.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Credit is allowed for only MUP 455 or 555
MUP	457	Women's Chorus	Membership in this ensemble involves the in-depth study and application of specialized musical skills in the performance of historically and musically important repertoire for treble voices. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUP	459	Barrett Choir	The Barrett Choir is an opportunity for students from all over the university, but primarily from Barrett, The Honors College, to participate in a high-quality choral ensemble. The group seeks to harness the creativity and intellect of honors students to create a collaborative ensemble that operates on a unique model of student-centered learning. The repertoire, mostly chosen by the members, is highly varied, ranging from world music to pieces in the great choral tradition to newer music and popular music. There are normally two major concerts per semester, with some occasional smaller performances.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): minimum 45 hours
MUP	460	The Visiting Quartet Residency Program	Develops skills as a chamber musician and provides opportunities to work with members of the visiting string quartet in residence.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Pre-requisite: Music major (bass, cello, viola, violin) who has passed audition
MUP	461	Marching and Concert Bands	Development of specific professional performing skills through staging of formations and drills for football games and other events (Marching Band); the development of specific professional performing skills for concert settings, with in-depth study of masterpieces of symphonic band literature (Concert Band). An audition may be required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	465	Music Theatre VI: Advanced Acting	Process class with exercises specifically developed to assist the student actor to learn the fundamental techniques of acting with an emphasis on the actor's approach to characterization.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: MUP 370; Credit is allowed for only MUP 465 or 494 (Acting for Singers)
MUP	470	Music Theatre VII: Broadway Dance	Designed for students in the collaborative performance areas of musical theatre (music, theater and dance). Examines the development of landmark styles and theories specifically in musical theater and Broadway dance.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: MUP 465; Credit is allowed for only MUP 470, 494 (Musical Theatre Dance) or 566
MUP	471	Music Theatre: Workshops	Development of specific skills for musical-dramatic interpretation. Section 1 (Aria Preparation); Section 2 (Broadway I); Section 3 (Broadway II).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite: Music major
MUP	472	Music Theatre VIII	Development of specific skills and effective practices for musical theatre auditioning and development of specific skills for musical-dramatic interpretation. This is a performance-based class providing an opportunity to explore strong, clear acting choices for the musical theatre performer in a setting with a scene partner or scene partners, requiring the performance of songs, monologues, scenes, and choreography.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: MUP 470
MUP	476	New Music Ensemble	In-depth study, synthesis, and performance of classical works written within the last twenty years for small ensemble and for instruments with electronics. Involves discussion and realization of advanced interpretive and technical concepts related to contemporary music.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	479	Chamber Music Ensembles	Faculty-coached ensembles involving in-depth study and application of specialized, professional skills in performing with two or more players of like or unlike instruments and/or voice.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	481	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music students who have passed audition
MUP	482	Piano Pedagogy	Continuation of MUP 481 (Piano). Problems and techniques of teaching intermediate to advanced piano students.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): Music major who has passed audition
MUP	486	Jazz Band	Analysis, rehearsal and performance of new, traditional, and Latin literature for jazz ensembles. Development of advanced sight-reading and instrumental doubling skills. 4 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	487	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week. May not be taken for audit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	489	Ethnomusicology Ensembles	Students apply indigenous music theories to actual practice, contextualized in background reading and listening, as they refine their ability to perform orally generated music and sometimes dance traditions. This course is open to non-music majors by audition or consent of instructor.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Barrett Honors Music students who have passed audition
MUP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Barrett Honors Music students who have passed audition

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MUP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	495	Performance	For candidates of a BM degree in which 1/2 recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0		Prerequisite(s): Music major who has passed audition
MUP	496	Performance	For candidates of a BM degree in which a full recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0		Prerequisite(s): Music major who has passed audition
MUP	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Barrett Honors Music students who have passed audition
MUP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7	L	Prerequisite(s): Music major who has passed audition
MUP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		Prerequisite(s): Music major who has passed audition
MUP	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUP	507	Group Piano Practicum	Curricula, materials, and teaching techniques for group teaching at the university and community college levels. Observation/supervised teaching in group piano.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	508	Studio Observation	Weekly observation of studio teaching by various piano faculty. Paper as final requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	509	Jazz Keyboard Harmony	Emphasizes jazz chords and chord progressions, harmonization, voicing, and analysis of transcriptions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	510	Jazz Keyboard Harmony	Continuation of emphasis on jazz chords and chord progressions, harmonization, voicing, and analysis of transcriptions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	511	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Graduate Music major who has passed an audition
MUP	517	Advanced Improvisation	Improvisation techniques within the context of advanced jazz literature. Must be taken in sequence with MUP 518.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	521	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	527	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour per week. May be repeated for credit. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Prerequisite(s): Graduate Music major who has passed an audition
MUP	540	Principles of Integrated Conducting	Score preparation and conducting techniques for instrumental music. Concentration on study of historical styles. Required of DMA students in Instrumental Music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: DMA Conducting major
MUP	541	The Art Song	Seminar on solo song from its beginning to the present day.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre- or corequisite(s): Graduate Music major who has passed audition

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MUP	542	Instrumental Ensembles	Students participate in numerous ensembles and artistic and educational projects that together, comprise a rich assortment of musical experiences. Graduate students especially need opportunities to hone their skills in a great variety of performance opportunities. During the academic year, each student participates in a variety of projects that present a wide range of musical experiences. The curriculum is designed to accommodate the distinctive needs of each student in that artistic-educational experiences are, to a large extent, tailor made to each individual's career aspirations. Consequently, learning outcomes are highly individualized and student driven, rather than institutionally convenient. Each artistic-educational project focuses on specific pedagogical and/or musical learning outcomes that, in various ways, promote the primary course objective: the enhancement of musical diversity and artistic depth in every student. Audition required during the first week of classes.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Pre-requisite: Music students who have passed audition
MUP	543	Choral Ensembles	Active, thoughtful participation in music ensembles can provide for development beyond the possibilities of individual study alone. The ensemble setting is, in part, a forum for the synthesis of component parts of a complete music education. Includes the study and performance of diverse musical expressions that represent a variety of historical and cultural perspectives. These ensembles provide the opportunity to prepare and present varied music composed for the mixed choir from the major stylistic periods with the intent of serving composers, performers and listeners by performing choral music of the highest possible quality.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	548	Classical Style: Performance and Analysis	Integrates historical and theoretical analysis with performance, examining classical period repertoire.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Graduate Music major who has passed audition; Credit is allowed for only MUP 548 or 598 (Classical Style: Perf. & Anlys)
MUP	549	The Unaccompanied Music of JS Bach: Performance and Analysis	Integrates historical and theoretical analysis with performance, examining the unaccompanied works of J.S. Bach.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Graduate Music major who has passed audition; Credit is allowed for only MUP 549 or 598 (Unaccomp Bach Perf & Analysis)
MUP	550	Choral Union	Open to all students in the university and to interested singers in the community by audition. Preparation and performance of the larger choral works. 2 hours per week. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Credit is allowed for only MUP 450 or 550
MUP	551	Repertoire	Literature available for performance in all performing media.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	554	Major Repertoire, Score Study, and Performance Practice	Conducting course comprising a survey of significant repertoire (encompassing, over multiple semesters, literature from choral, musical theater/opera, orchestral, and wind band genres); an introduction to historical performance practice; and a range of score study techniques. Conducting majors are required to enroll each semester (or as advised) and, subsequently: display a comprehensive historical knowledge of the repertoire and development of ensembles over the past 500 years, demonstrate command of standard performance practices with respect to each historical era, and exhibit a clear understanding of varied methods of score study.	Y	SEM	Y	GNA	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: DMA Conducting major
MUP	555	Men's Chorus	Rehearsal and performance of music for mixed voices. 3 hours per week. An audition is required to participate in the ensemble.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Credit is allowed for only MUP 455 or 555
MUP	557	Women's Chorus	2 hours per week. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		
MUP	560	The Visiting Quartet Residency Program	Develops skills as a chamber musician and provides opportunities to work with members of the visiting string quartet in residence.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Pre-requisite: Graduate Music major who has passed audition
MUP	561	Marching and Concert Bands	Staging of formations and drills for football games and other events (fall); masterpieces of symphonic band literature (spring). Meets MWF. An audition may be required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	565	Acting for Singers	Process class with exercises specifically developed to assist the student actor to learn the fundamental techniques of acting with an emphasis on the actor's approach to characterization.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Graduate Music major who has passed an audition; Credit is allowed for only MUP 565 or 598 (Acting for Singers)

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MUP	566	Broadway Dance	Designed for students in the collaborative performance areas of musical theatre (music, theater and dance). Examines the development of landmark styles and theories specifically in musical theater and Broadway dance.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Graduate Music major who has passed an audition; Credit is allowed for only MUP 566 or 598 (Musical Theatre: Dance)
MUP	570	Music Theatre: Techniques	Exercises and improvisations for the singing actor emphasizing body awareness, isolations, and freedom of the vocal and breath mechanisms. Section 1 (Interpretation); Section 2 (Expression); Section 3 (Movement for Singers). Each Section: 3 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	571	Music Theatre: Workshops	Development of specific skills for the musical-dramatic interpretation. Section 1 (Role Preparation); Section 2 (Styles); Section 3 (Opera Scenes); Section 4 (Musical Comedy); Section 5 (Revue Ensembles).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	573	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	574	Music Theatre: Production	Introduces technical music theatre. Classroom study of costumes, sets and lighting (Section 1, Topic: Tech) followed by practical experience on a technical running crew for a Lyric Opera Theatre production (Section 2 Topic: Problems). The two sections should be taken in consecutive semesters.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	576	New Music Ensemble	Rehearsal and performance of music written in the last 20 years. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	579	Chamber Music Ensembles	String, brass, woodwind, percussion, keyboard, vocal, and mixed ensembles. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	581	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	585	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	586	Jazz Band	Rehearsal and performance of new, traditional, and Latin literature for jazz bands. 4 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	587	Ethnomusicology Ensembles	Performance learning experience for the music of various cultures of the world. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	588	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	596	Solo Performance	May be full recital, major operatic role, solo performance with orchestra, ensemble, or lecture recital.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	597	Solo Performance	See MUP 596.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition

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MUP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	727	Studio Instruction	Minimum contact of 1 hour per week. May be repeated for credit. Conducting students register for 2 semester hours; all other students register for 4 semester hours.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Prerequisite(s): Doctoral Music major who has passed audition
MUP	751	Seminar in Piano Literature	In-depth study of selected topics related to the standard piano literature. Requires research paper, bibliography, class presentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition

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MUP	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	796	Solo Performance	May be full recital, major operatic role, solo performance with orchestra, ensemble, or lecture recital.	N	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUS	100	Fundamentals of Music Notation	Provides nonmusic majors with sufficient symbol literacy to begin work in the field of musical learning. Credit not applicable toward any music degree.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUS	131	Bach to Bebop	Develops an understanding of the repertoire for the various musical instruments and ensembles throughout the five eras being studied and discernment through listening different genres of music. For the lectures regarding instruments, introduces students to the respective repertoire for the instrument from c. 1700-present with special emphasis on how the use of the instrument developed throughout history or during each era.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Credit is allowed for only MUS 131 or 194 (Performance: Bach to Bebop)
MUS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MUS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	210	The Arts Around Us	Develops the ability to think and create from an arts-rich perspective. In particular, focuses on the arts in the lives of children and youth, arts experiences for children and youth in the community, and one's personal experiences with the arts.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 210 or 294 (The Arts Around Us)
MUS	211	Dance, Music and Meaning	Explores the fundamental nature of human experience across time and culture through the medium of dance and music using a variety of dance and musical materials including folk dance and music, popular dance and music, and such theatrical forms as ballet and modern dance and the music connected with them.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 211 or 294 (Dance, Music, and Meaning)
MUS	212	Music, Meaning and Imagination	Explores how music provides ways to make meaning of the world around us and music as a medium for creative thinking and doing. Develops understanding by trying on roles ranging from critics to creators in both individual and group projects.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 212 or 294 (Music, Meaning and Imagination)
MUS	213	Critical Thinking in the Arts	Fosters critical thinking abilities in relationship to performing and visual arts. Students learn how to listen to music and view art analytically. Develops and applies knowledge of common elements (within and across art forms) such as form, texture, balance and contrast in order to enhance understanding both of arts processes and products.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	
MUS	214	Art, Music and Learning	Offers an integrated introduction to, and examination of, the core structural and formal elements of visual art and music in the context of contemporary experiences and learning process.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	
MUS	215	Children, Creativity, Arts	Interdisciplinary exploration of children's creative processes through critical analysis, hands-on participation and personal reflection. Specifically focuses on creative processes in the arts.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	
MUS	231	Laughing to Music	Modern-day comedies like Spamalot, Avenue Q, and Glee are part of a comic tradition extending back to the Renaissance. Looks at funny in music from commedia dell'arte to the present. Studies works including the comedies of Mozart, Gilbert and Sullivan, the Marx Brothers, Monty Python, Mel Brooks and many others.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 231 or 294 (Laughing to Music)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUS	240	Listening to Music	Surveys the historical periods of music making in western civilization, the study of which will hopefully create within the student a listener with an appreciation for art music of many periods and provide more enjoyment in the process. Through lectures, presentations, readings, listening examples and video/DVDs, studies music identified as strong examples of the major periods, composers and compositions in the history of music. Students learn and adopt a minimum new language to help express the elements of music they experience and listen to and develop strategies for writing and communicating about what they hear and put words to how they respond to it. Because experiencing music performed live is an integral part of the learning process, students are required to attend concerts outside of class and submit critical reviews of what they hear.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
MUS	254	Blues to Heavy Metal	Covers important musicians and trends from the 1930s through the 1970s. Topics include blues, rhythm and blues, rockabilly, doo wop, teen idols, girl groups, dance craze, surf, novelty, soul, Motown, British invasion, art rock, psychedelic rock, hard rock, heavy metal, and early '70s styles. Emphasizes musical instruments and stylistic traits with historical information provided as background. Features listening examples drawn from selected artists and bands including popular songs and rarities, and demonstrations using various musical instruments and techniques.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 254 or 354 (Blues to Heavy Metal)
MUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MUS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUS	340	Music for the Concert Hall, Stage, and Screen	In-depth study of examples from Western art music. Emphasizes aural analysis and synthesis of historical data with musical phenomena. Critiques the canon and its limits in specific instances.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU & H	Prerequisite(s): minimum 42 hours
MUS	347	Jazz in America	In-depth study, analysis and synthesis of examples from the jazz tradition. Includes the application of advanced aural analytic techniques to exemplary jazz musical works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & C	Pre-requisite: ENG 102, ENG 105 or ENG 108 with C or better
MUS	349	Music in America	Current styles of American music including jazz, popular, and folk music.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	
MUS	354	Popular Music	In-depth study of a specific topic in the history of popular music. Emphasizes aural analysis and synthesis of historical data with musical phenomena to create new perspectives.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Prerequisite(s): minimum 42 hours
MUS		Popular Music	In-depth study of a specific topic in the history of popular music. Emphasizes aural analysis and synthesis of historical data with musical phenomena to create new perspectives.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 42 hours
MUS	355	American Music	In-depth study of current research topics in American music. Engages students in current scholarly debates. Charts the limits of current scholarly methodologies and historical research programs.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & C & H	Prerequisite(s): minimum 42 hours
MUS	356	Broadway and the American Musical	In-depth chronological study of American musical theatre on Broadway, including origin and development, historical references, global and cultural influences. By way of critical analysis, emphasizes comprehensive stylistic understanding of minstrelsy, operetta, revues, book musicals, film musicals, rock musicals, mega-musicals, and Broadway revivals. Engages students in current scholarly debates on American musical theatre.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
MUS		Broadway and the American Musical	In-depth chronological study of American musical theatre on Broadway, including origin and development, historical references, global and cultural influences. By way of critical analysis, emphasizes comprehensive stylistic understanding of minstrelsy, operetta, revues, book musicals, film musicals, rock musicals, mega-musicals, and Broadway revivals. Engages students in current scholarly debates on American musical theatre.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
MUS	362	Rap Music and Hip Hop Culture	Examines the history of rap music and hip hop culture from their origins to about 1995, including most, but not all, of the major artists from this period. Explores connections between rap music and other elements of hip hop culture, and challenges students to think critically about rap music and its place in society. Uses listening exercises, demonstrations, and conversations with artists to examine how rappers create meaning in their musical works. Drawing on secondary articles by rap critics and scholars, considers in detail such controversial subjects as censorship, sexism, obscenity, and race politics in America as they relate to rap music.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU & C	Pre-requisite: Minimum 42 hours; Credit is allowed for only MUS 354 (Hip Hop) or 362

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUS	371	World Music	Provides an introduction to world music, including traditional and popular styles. Examines specific music genres from Africa, Asia, Europe, and the Americas and explores their historical development, cultural contexts, communicative functions, forms, styles, instruments and musical philosophies. Throughout the semester, considers the interrelationships among musical genres and other art forms (dance, theater, visual arts, and literature) and analyzes how these musics have intersected with the issues of race, class, gender, religion, ritual, politics, social movements and cultural identity. Students learn to hear and discuss significant stylistic elements of selected genres through listening assignments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & G	Pre-requisite: Minimum 45 hours; Credit is allowed for only MUS 371 or 394 (World Music)
MUS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MUS	410	History of Women in Music	Surveys musical achievements of women as well as the historical contexts that shaped and defined their artistic development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & C & H	
MUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
MUS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Prerequisite(s): Barrett Honors student
MUS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MUS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7		
MUS		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		
MUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUS		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
MUS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
MUS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

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MUS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS		Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
MUS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS		Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
MUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MUS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		
MUS	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
NAN	505	Nanoscience and Society	Integrates nanoscience and nanotechnology with potential societal issues involved in the students' NAN 593 Applied Projects. Coordinated by the faculty and research staff at the Center for Nanotechnology in Society.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2		

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NAN	506	Innovation and IP Management	Intellectual Property (IP) Management in the context of innovation (research, regulations, manufacture, access to markets, and trade) with emphasis on strategies, public-private interface, licensing, and technology transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2		
NAN	511	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: Degree- or nondegree-seeking graduate; Credit is allowed for only MSE 526, NAN 511, PHY 511, or PHY 481
NAN	512	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 527, NAN 512, PHY 482 or PHY 512
NAN	542	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
NAN	544	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CHM 544, NAN 544, PHY 444 or PHY 544
NAN	546	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 546, NAN 546 or PHY 546
NAN	552	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 552, NAN 552, PHY552 or SEM 552
NAN	560	Nanomaterials in Energy Production and Storage	Emphasizes the relationship among fundamental materials properties, chemical and energy transformation, as well as energy storage. Applications include the role of materials for photovoltaics, nanocatalysts, batteries, and fuel cells. Stresses fundamental principles and charge transfer processes in nanostructured materials in addressing energy needs.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): graduate Chemistry, Engineering or Physics major. Credit is allowed for only MSE 460 or MSE 494 (Nanomaterials In Energy Production and Storage) or MSE 560 or MSE 598 (Nanomaterials In Energy Production and Storage) or NAN 560
NAN	564	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
NAN	571	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples from physics, chemistry and nanoscience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 571, NAN 571 or PHY 571
NAN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
NAV	101	Introduction to Naval Science	Introduces the customs, traditions, missions and regulations of the Department of Defense, United States Navy and United States Marine Corps. Introductory course for the Naval Reserve Officer Training Corps (NROTC) by laying the basic foundation of knowledge about the Navy and Marine Corps required to progress through the NROTC program. Also provides the requisite knowledge to allow follow-on shipboard summer training to be safely and effectively conducted.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		
NAV	102	Sea Power and Maritime Affairs	Informs the participants of the historical evolution of sea power for the U.S. Navy and world history. Also covers the evolution of international terrorism and the effects on U.S. strategies and policies regarding potential adversaries.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Credit is allowed for only NAV 102 or NAV 194 (Sea Power and Maritime Affairs)
NAV	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-3		
NAV	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-4		

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NAV	202	Navigation	Basic principles, procedures and analytic processes of marine navigation.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Credit is allowed for only NAV 202 or NAV 294 (Navigation)
NAV	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-4		
NAV	301	Naval Ship Systems I	Provides detailed knowledge of naval engineering systems and principles of ship construction. Topics covered include ship design, hydrodynamic forces, stability, conventional and nuclear propulsion, electrical theory and systems, hydraulics and ship control. Concepts of the theory and design of steam, gas turbine and diesel propulsion.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 301 or NAV 394 (Naval Ship Systems I - Engineering)
NAV	302	Naval Ship Systems: Weapons	Overview of the theory and concepts underlying modern weapon systems used aboard naval warships.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours. Credit is allowed for only NAV 302 or NAV 394 Naval Ship Systems II: Weapons
NAV	303	Evolution of Warfare	Provides marine option students with a basic understanding of the art, science and concepts of war from the beginning of recorded history to the present day. Addresses the interrelationships among technology, politics, culture and society to better understand warfare today and in the future.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours. Credit is allowed for only NAV 303 or NAV 394 Evolution of Warfare
NAV	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-4		
NAV	401	Naval Operations and Seamanship	In-depth study of numerous aspects relating to the efficient and professional manner of U.S. Navy ships' operations.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 401 or NAV 494 (Naval Operations and Seamanship)
NAV	402	Leadership and Ethics	Applies leadership and ethical theories discussed to an actual leadership or ethical dilemma or issue that Junior Officers in the Fleet or FMF are currently facing or have faced in the recent past.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 402 or NAV 494 (Leadership and Ethics)
NAV	403	Amphibious Warfare	Focuses on the historical aspect of amphibious operations. Emphasizes how the development of this war fighting discipline played a key role throughout much of the early history of the Marine Corps.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 394 (Amphibious Warfare) or NAV 403
NAV	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-4		
NAV	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of Naval Science	1-3		
NEU	555	Advanced Molecular and Cellular Sciences	Study of structural and functional organization of biomolecules and cells, based on current literature.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MCB 555 or NEU 555
NEU	556	Human Systems Neuroscience	Systems-level neuroscience course focusing on human diseases. Classes involve lectures and/or other activities such as observations of clinical procedures and tours of clinical facilities (e.g., the neurosurgical suite, imaging facilities).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisite: Neuroscience PhD major. Credit is allowed for only BIO 598 (Human Sys Neuroscience), BME 556 or NEU 556
NEU	558	Neuroscience Journal Club	Small class emphasizing discussion, presentation by students, and written research papers.	N	SEM	Y	GNA	Liberal Arts and Sciences	School of Life Sciences	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
NEU	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Interdisciplinary Graduate Program in Neuroscience PhD students

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NEU	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GRD	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NEW	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): minimum 45 hours
NEW	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): minimum 45 hours
NLM	160	Voluntary Action and Community Leadership	Introduction to voluntary behavior in American society for students interested in volunteerism, community service, and civic engagement.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	SB	
NLM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
NLM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
NLM	210	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD or NLM or PRM or TDM 210
NLM	220	Introduction to Nonprofit Organizations	Introduces the nonprofit sector and its role in developing the cultural, economic, and social impact in U.S. society.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
NLM	235	Leadership and Ethics	Examines ethical questions faced by emerging leaders. Focuses on helping students develop emotional intelligence, current professional issues, and the refinement of a professional philosophy and comprehensive set of competences that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only CRD 235 or NLM 235
NLM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
NLM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
NLM	300	Fund Raising and Resource Development	Theory and practice of philanthropy, resource acquisition methods through ethical fund raising, and earned income approaches for nonprofit organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		

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NLM	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301
NLM	302	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	C	Pre-requisites: ENG 102; MAT 142 or higher; NLM 160 (or PRM 120) with C or better; Minimum 2.50 GPA; Minimum 45 earned hours; Credit is allowed for only CRD, NLM, PRM or TDM 302
NLM	310	Volunteer Management	Studies volunteer administration practices integral to community organizations providing an introduction to management techniques including program organization, recruitment, interviewing, placement, supervision, recognition and evaluation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only NLM or PRM 310
NLM	320	Professional Development Seminar	Professional seminar featuring nonprofit executives; variable topics on leadership and management concerns. Forum for exchange between students and professionals.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Pre-requisites: Nonprofit Leadership Alliance (formerly American Humanics) certification program student
NLM	380	Financial Management for Nonprofit Organizations	Instructs students about nonprofit financial, management, and social accounting; accounting issues specific to nonprofits; budgeting; reporting; and nonprofit analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Nonprofit Leadership and Management major students or Nonprofit Administration minor students or American Humanics Certificate students; NLM 220 with a C or better
NLM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
NLM	402	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre- or corequisite(s): CSM 401, NLM 410, PRM 401, or TDM 401 with C or better if completed; Credit is allowed for only CSM 402 or NLM 402 or PRM 402 or TDM 402
NLM	403	Leadership and Professional Development	Examines leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: NLM, PRM or TDM 210 and NLM, PRM or TDM 301 with C or better; Senior standing; 2.50 GPA. Credit is allowed for only CRD, NLM, PRM or TDM 403
NLM	410	Social Entrepreneurship	In-depth study of social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or NLM 210; NLM 220. Credit is allowed for only NLM 410 or NLM 562
NLM	420	Nonprofit Leadership Alliance Institute	Nonprofit Leadership Alliance Institute for preparation of nonprofit professionals. Requires out-of-state conference.	Y	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-2		Pre-requisite: Nonprofit Leadership Alliance (formerly American Humanics) certification program students
NLM	430	Managing Nonprofit Organizations	Analyzes administrative structures, decision making, and program delivery within nonprofit organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	L	Prerequisite(s): NLM 220 and 300 with C or better; senior standing
NLM	435	Service Learning for Community Development	Applies youth and adult development theories through community service immersion in collaboration with local nonprofit partners.	N	REC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): Minimum 45 hours. Credit is allowed for only CRD 435 or NLM 435
NLM	451	Grant Writing	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only NLM 451, 565 or PRM 451

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NLM	463	Senior Internship	Supervised guided experience in selected agencies.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	6-12		Prerequisite(s) with C or better: CRD 403 or PRM 413; CSM 402 or NLM 402 or PRM 402 or TDM 402. Credit is allowed for only CSM 463 or NLM 463 or PRM 463 or TDM 463
NLM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; Minimum 72 hours; Minimum 2.50 GPA; Non-SCRD majors
NLM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
NLM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6	L	Prerequisite(s): Barrett Honors student
NLM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
NLM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
NLM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-7	L	
NLM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
NLM	510	The Nonprofit Sector	Provides grounding in scope, function and philosophical foundations of the nonprofit sector in American society, including civic engagement, service delivery, reproduction of values and entrepreneurship.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	520	Financial and Resource Management	Baseline understanding of key and critical financial management issues and practices for nonprofit organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	525	Fundraising and Resource Development	Examines fundraising and resource development in philanthropy from the perspective of the nonprofit practitioner. Also examines issues confronting nonprofit organizations related to fundraising and philanthropic purposes in society. Increases students' knowledge and understanding of charitable giving and fundraising--who gives to what, why, and how to raise funds for a cause. Examines a wide range of fundraising methods and tools. Focuses on critical thinking, reflection on practice, collaboration, discussion and writing.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	530	Program Evaluation and Information Management	Develops skills in several areas, including evaluation, needs assessment, information and data collection, data management and analysis, computer applications, and report writing.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	540	Strategic Human Resources Management	Managing human resources in nonprofit organizations; practices and theories.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	545	Volunteer Resource Management	Core topics in effective management of volunteers in carrying out the mission of organizations and ensuring volunteers have good experience with community organizations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking). Credit is allowed for only NLM 545 or 598 (Volunteer Resource Management)
NLM	550	Philanthropy	Examines the role of philanthropy and charitable giving in contemporary American society from perspectives of the nonprofit practitioner, the philanthropist and the general public.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	560	Leadership and Ethics in the Nonprofit Sector	Examines leadership and ethical questions encountered by managers and leaders in the nonprofit organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	562	Social Entrepreneurship	Introduces social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only NLM 410 or 562

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NLM	565	Grant Writing Nonprofit Organizations	Provides practical, experiential instruction identifying grant makers, writing proposals, developing budgets, and evaluating grant proposals for the nonprofit sector. Students develop proposals based on actual, identified needs of their partner nonprofit organization.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: Graduate (degree or non-degree) student; Credit is allowed for only NLM 451, 565 or PRM 451
NLM	570	International Non-Governmental Organizations	Increases knowledge and understanding of international non-governmental organizations by examining what these organizations do and how they operate in a cross-cultural context.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	572	Community and Social Innovations	Considers community innovation and development from the perspective of achieving balance among economic, environmental, social, physical and political realms as a framework of sustainability.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CRD, NLM 572 or NLM 598 (Community & Social Innovations)
NLM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
NLM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	605	Nonprofits, Law and Society	Enhances the legal sensibilities of nonprofit leaders and engaged stakeholders. This necessitates critical in-depth understanding of: (1) legal needs common to all nonprofit organizations, regardless of mission or area of focus such as nonprofit corporation law, tax-exempt status, fiduciary duties and fundraising and lobbying ethics and parameters; (2) commonalities among nonprofit, for-profit and governmental enterprises operating within similar spheres of society, especially the importance of nonprofit organizations' compliance with laws generally applicable to specific subsectors such as contracts, labor and employment, volunteer and premises liability, and intellectual property; and (3) the overall importance and impact of legal structures on nonprofit organizations' abilities to successfully pursue their missions for the benefit of society.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	610	Executive Leadership and Governance	Examines the multiplicity of roles for executives and board of directors in providing strategic leadership for nonprofits.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	620	Capstone: Integrative Seminar	Improves understanding of trends emerging within nonprofits such as leadership, resource development, and social responsibility.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite: Master of Nonprofit Studies major
NTR	100	Introductory Nutrition	Basic concepts of human nutrition. Recent controversies in nutrition and how food choices affect personal health.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 100 or 241

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NTR	142	Applied Food Principles	Applied scientific principles of food preparation and production.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): Nutrition (Dietetics or Food and Nutrition Management or Food and Tourism Management or Human Nutrition or Nutrition Communication) major OR Food and Nutrition Management minor OR Child Nutrition certificate
NTR	150	Introduction to the Professions in Nutrition and Dietetics	Introduces the professions of nutrition and dietetics; their history, practice, and future; credentials, ethics, and standards of practice.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		
NTR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
NTR	241	Human Nutrition	Principles of human nutrition. Emphasizes nutrient metabolism and the relationships between diet and disease.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: CHM 101 or 113
NTR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
NTR	300	Computer Applications in Nutrition	Introduces nutrition and food software, including dietary assessment and analysis, food inventory and control, and telecommunications.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	CS	Pre-requisites: NTR 100 or 241
NTR	320	History of Human Nutrition	Origins of human nutrition; evolving theories of nutrition and disease; historical role of nutrition in social, military, cultural events.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 or 241
NTR	340	Principles of Evidence-Based Nutrition	Investigates methods of inquiry in human nutrition and techniques for critiquing and interpreting research within the context of evidence-based practice; utilizes evidence-based practice methods to explore current controversies in the nutrition field.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): BIO 201; NTR 241
NTR	341	Medical Nutrition Therapy I	First in a three-course sequence in medical nutrition therapy. Introduces the study of nutritional therapy of disease and evidence-based practice in prevention and nutritional management of diseases. Nutrition care planning for chronic diseases is taught via a variety of methods including case studies.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 or 241
NTR	343	Food Service Purchasing	Introduces purchasing systems, bid processes, receiving and storage procedures, and regulatory agencies involved in the food service industry.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: NTR 100 or 241
NTR	344	Nutrition Management and Leadership	Organization, administration, management and leadership in the nutrition field within healthcare, food service and other institutions.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Prerequisite(s): NTR 100 or NTR 241
NTR	345	Development of Healthy Cuisines	Principles and applications of nutrition, food selection, food preparation and mindful eating in the development of healthy cuisine for wellness, prevention and disease states.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 or 241
NTR	348	Cultural Aspects of Food	Origins, development, and diversity of food preferences and dietary habits; food patterns and attitudes of global populations and U.S. immigrants.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB & C & G	Pre-requisites: NTR 100 or 241
NTR	350	Nutrition Counseling	Counseling techniques in nutrition; interpersonal and communication skills in clinical and community sites; nutrition education for individuals and populations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 341 with C or better or NTR 345
NTR	351	Nutrition and Health Communications	Approaches of nutrition and health communications; development of nutrition and health communication materials for selected target audiences.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Prerequisite(s): ENG 101, 105, or 107 with C or better; NTR 100 or 241
NTR	353	Perspectives on the Western Diet: Food, Health and Sustainability	Hybrid course covering political, ethical, social and cultural issues inherent in the U.S. food system. Topics include examination of U.S. food guidance; the food system and food environment; the history of food and farm policy; food security and aspects of sustainability in relation to food system impacts on the health of humans, society and the environment.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only NTR 353 or NTR 394 (The Western Diet: Food, Health, & Sustainability) or SOS 353
NTR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
NTR	400	Preprofessional Preparation in Dietetics	Applies academic knowledge in field practicum; aspects of professional development.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisites: Nutrition/Dietetics students; Senior status; NTR 341 with C or better; NTR 440, 441 or 444 with C or better

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NTR	401	Field Experience in Food and Nutrition	Applies academic knowledge in food service management to field practicum; develops practical skills in planning, purchasing, production, management.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: Food and Nutrition management, Nutrition Communication, or Human Nutrition students; Senior standing; Pre/Co-requisites: NTR 351, 343 or 444
NTR	440	Advanced Human Nutrition I	Metabolic reactions and interrelationships of vitamins, minerals, and water.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 202 with C or better; NTR 241 with C or better; NTR 340 with C or better; Credit is allowed for only NTR 440 or 540
NTR	441	Advanced Human Nutrition II	Metabolic reactions and interrelationships of carbohydrate, lipid, and protein.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BCH 361 with C or better; BIO 202; NTR 241; Credit is allowed for only NTR 441 or 541
NTR	442	Experimental Functional Foods	Food product development techniques, food evaluation and testing, and investigation of current research into food composition.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: CHM 101 or CHM 113; NTR 142; NTR 100 or NTR 241
NTR	444	Medical Nutrition Therapy II	Second in a three-course sequence in medical nutrition therapy. Covers the principles of medical nutrition therapy for prevention and treatment of disease and promotion of health.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): BIO 202; NTR 341 with C or better; Credit is allowed for only NTR 444 or NTR 544
NTR	445	Management of Food Service Systems	Standardized methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: NTR 100 or NTR 241; NTR 142; NTR 343; Credit is allowed for only NTR 445 or 545
NTR	446	Medical Nutrition Therapy III	Third in a three-course sequence in medical nutrition therapy. Content includes hands-on assessment techniques, evaluation and interpretation of laboratory data, and nutrition support with relation to disease process and progression. Nutrition assessment is taught via a variety of methods including case studies.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 444 with C or better; Pre/Co-requisites: BCH 361; Credit is allowed for only NTR 446 or 546
NTR	448	Community Nutrition	Food-related behaviors; organization and delivery of nutrition services; program design, implementation, and evaluation strategies; nutrition assessment of populations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 448 or 548
NTR	450	Nutrition in the Life Cycle	Nutritional needs and problems in pregnancy and lactation, infancy, childhood, adolescence, adults and older adults. Analysis of cultural, environmental, behavioral, psychosocial, physical and socio-economic factors affecting nutritional status through the life span.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 450 or 550
NTR	453	Nutrition and the Media	Examines the promotion of nutrition ideas and concepts through media.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: Minimum 45 hours; Credit is allowed for only NTR 453 or 494 (Nutrition and the Media)
NTR	455	Retail Food Service Operations	Development, evaluation and management of retail food service operations; legal and ethical issues in food and beverage management. Capstone course for food management degrees.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 (or 241); Junior standing
NTR	457	Sports Nutrition	Nutritional needs of recreational and elite athletes; energy balance; nutrient metabolism during activity; fluid-electrolyte regulation; evaluation of ergogenic supplements.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 201; NTR 241
NTR	460	Nutrition Entrepreneurship	Exploration of entrepreneurial opportunities in nutrition, food service, wellness and health communications.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: Minimum 45 hours; Credit is allowed for only NTR 460 or 494 (Nutrition Entrepreneurship)
NTR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6		Prerequisite(s): Barrett Honors student
NTR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6	L	Prerequisite(s): Barrett Honors student
NTR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		

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NTR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-7	L	
NTR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
NTR	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	501	Research Methods in Nutrition II	Reviews survey, focus group, and epidemiologic research; develops questionnaires; analyzes large data sets.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	503	Designing Health Behavior Change Interventions	Project-based course focuses on the process of health behavior change interventions using design process and behavioral science.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only NTR 503 or 598 (Designing Health Behavior Change Interventions)
NTR	523	Vegetarian Nutrition	Health benefits, nutritional characteristics, potential risks of vegetarian diets.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	525	Complementary Nutrition	Critical review of functional foods, phytochemicals, nutrient supplements in health promotion.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	527	Policies, Environment, and Obesity Prevention	Enhances students' understanding of the role policies and environments play in health promotion and disease prevention with a special focus on obesity prevention. Looks at a variety of examples to see how policies and environments related to food, nutrition and physical activity affect individual and community health. Also explores how "non-health" policies can be used as an effective tool to promote healthy behaviors.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	529	Pediatric Nutrition	Critical review of pediatric disease states and current nutritional therapies.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	530	Techniques of Health Coaching	Health coaching techniques and skills for medical, allied health and health promotion professionals. The content illustrates the theory, principles and practices of evidence-based coaching psychology. Aligns with the training programs affiliated with Wellcoaches® (endorsed by the American College of Sports Medicine). Designed in three parts: (1) building of core coaching skills; (2) establishing generative moments with clients; and (3) developing coaching presence and positive psychology.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HSC 440 or NTR 530
NTR	532	Endocrine Pathophysiology and Nutrition	Explores the etiology of various endocrine pathophysiological conditions. Throughout the course, students learn the etiology of common conditions and are responsible for finding and presenting evidence for nutrition-based treatments for these conditions. At the conclusion of the course, students gain an appreciation and understanding of current research in nutrition-based approaches to treat endocrine disorders.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	533	Ethics and Policy of American Diets	Political and ethical issues inherent in the U.S. food system. Topics include food and agricultural policy, government dietary recommendations and regulations, food environment, current issues in food politics, ethical questions of food choice, issues of obesity and food security, sustainability, and investigation of how and why Americans eat the way they do.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	535	Nutrigenomics	Provides a sound foundation for promoting personalized nutrition by integrating and applying molecular nutrition and nutritional biochemistry to clinical settings.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: BCH 361; BCH 367; NTR 440 or 441
NTR	537	Evidenced-Based Nutrition	Reviews current evidence of the role of diet on disease prevention, development, and management.	N	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	539	Global nutrition	Provides an overview of global nutrition issues, including the epidemiology, etiology, sociocultural and economic context, and program and policy responses to nutrition-related topics. Areas to be covered include childhood malnutrition, growth stunting, micronutrient deficiencies, parasites and nutrition, sanitation, and obesity and chronic disease incidence in developing countries. Course is participatory; students engage in a series of class activities, discussions, and presentations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		
NTR	540	Advanced Micronutrient Metabolism	Metabolism of vitamins and minerals, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 440 or 540

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NTR	541	Advanced Macronutrient Metabolism	Metabolism of protein, fat, and carbohydrate, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 441 or 541
NTR	544	Therapeutic Nutrition	Current theories of the nutritional prevention or treatment of various diseases.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 444 or 544
NTR	545	Management of Institutional Food Service Systems	Standardizes methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences. May require field trips.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 445 or 545
NTR	546	Assessment Techniques in Nutrition	Clinical and biochemical evaluation of nutritional status.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 446 or 546
NTR	548	Advanced Community Nutrition	Planning, development, implementation, and evaluation of community nutrition programs, including the process of grant applications.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 448 or 548
NTR	550	Advanced Nutrition in the Life Cycle	In-depth review of metabolic characteristics and nutritional needs during pregnancy and lactation, infancy, childhood, adolescence, adults and older adults. Analysis of cultural, environmental, behavioral, psychosocial, physical and socio-economic factors affecting nutritional status through the life span.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking). Credit is allowed for only NTR 450 or NTR 550
NTR	551	Geriatric Nutrition	Explores the impact of nutrition on the aging process and how the aging process influences nutritional needs. Examines the physiology, demographics and economics of aging as well as issues such as end-of-life care. Addresses health promotion, disease prevention and disease management within the context of geriatric nutrition.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	553	Nutrition and Cardiovascular Disease	Reviews current evidence of the role of diet on cardiovascular disease prevention, development and management.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): NTR 541. Credit is allowed for only NTR 553 or NTR 598 (Nutrition and Cardiovascular Disease) or NTR 537 (Cardiovascular Nutrition)
NTR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		
NTR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		
NTR	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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NTR	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NUR	310	Nursing Concepts	Theoretical concepts related to health integrity focusing on the individual client across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: BSN Nursing major in clinical program
NUR	311	Pharmacology	Applications of pharmacologic interventions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing major in clinical program OR postbaccalaureate Clinical Nursing Program major
NUR	312	Psychomotor Skills for Professional Nursing Practice	Theoretical foundation for application of psychomotor nursing skills to professional nursing practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): Nursing major in clinical program. Credit is allowed for only NUR 312 or NUR 394 (Psychomotor Skills For Professional Nursing Prac)
NUR	313	Nursing Concepts for Adult Health	Nursing concepts related to selected alterations in health with focus on adult populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 310 and NUR 311 and NUR 330 all with C or better if completed; NUR 320 with Y passing grade; Corequisite(s): NUR 323; Credit is allowed for only NUR 313 or NUR 394 (Nursing Concepts for Adult Health)
NUR	315	Nursing Research and Application to Practice	Provides scientific and clinical inquiry and research methodology along with concepts needed for integration of evidence into practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	L	Prerequisite(s): Traditional BSN or Post Baccalaureate BSN: NUR 330 with C or better. RN/BSN: TWC 361 with C or better; NUR 391 with C or better
NUR	316	Nursing Concepts for Psychiatric/Mental Health	Theoretical concepts related to select psychiatric/neurobiological disorders as they affect nursing practice, with focus on individuals, families, and groups.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 310 with C or better if completed; NUR 311 with C or better if completed; NUR 330 with C or better if completed
NUR	317	Nursing Concepts for Psychiatric/Mental Health Nursing	Theoretical concepts related to select and/or prevalent psychiatric/neurobiological disorders as they affect nursing practice, with focus on individuals, families and groups.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): NUR 311; NUR 330; NUR 356; NUR 366; Corequisite(s): NUR 367; Credit is allowed for only NUR 317 or NUR 494 (Nursing Theory for Psychiatric Mental Health)
NUR	320	Nursing Practice	Integrates knowledge and attitudes from theory into the nursing care of adults in a variety of health care settings.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): Nursing major in clinical program; Corequisite(s): NUR 310; NUR 311; NUR 312; NUR 330

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NUR	323	Nursing Practice Adult Health	Applies nursing process with selected alterations in health with focus on adult populations in the acute care setting.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 310 and NUR 311 and NUR 330 all with C or better if completed; NUR 320 or NUR 484 (Nursing Practice) with Y passing grade if completed; Corequisite(s): NUR 313 or NUR 394 (Nursing Concepts Adult Health)
NUR	324	Nursing Practice: Psychiatric/Mental Health	Application of nursing process, critical thinking, clinical decision making with individuals, families, and groups experiencing acute/chronic alterations in mental health and/or psychiatric disorders.	N	SEM	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 310 and NUR 311 and NUR 330 all with C or better if completed; Corequisite(s): NUR 316; Credit is allowed for only NUR 324 or NUR 484 (Nursing Practice: Psychiatric/Mental Health)
NUR	330	Professional Nurse Attributes	Professional nursing roles and responsibilities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	HU	Pre-requisites: Nursing major in clinical program OR postbaccalaureate Clinical Nursing Program major
NUR	356	Nursing Theory I	Focuses on the knowledge and skills essential to maintaining the health and wellness of clients across the lifespan and the concepts related to selected alterations in health in the adult population.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	5		Prerequisite(s): Nursing major in clinical program or postbaccalaureate Clinical Nursing Program major; Pre- or corequisite(s): NUR 311
NUR	366	Nursing Practice I Post Baccalaureate	Applies knowledge and skills essential to maintaining health and wellness in clients across the lifespan.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	6		Pre-requisite: Nursing major in clinical program OR postbaccalaureate Clinical Nursing Program major. Pre- or corequisite(s): NUR 356
NUR	367	Nursing Practice: Psychiatric/Mental Health	Applies nursing process, critical thinking, clinical decision-making with individuals, families, and groups experiencing acute and/or chronic alterations in mental health and/or psychiatric disorders.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 with Y passing grade if completed
NUR	384	Gerontological Nursing	Focuses on optimizing the health of older adults and the management geriatric syndromes and chronic conditions.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Pre- or corequisite(s): NUR 330 with C or better if completed
NUR	391	Professional Nursing Theory	Analyzes the multiple dimensions of contemporary professional nursing.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4	L	Prerequisite(s): ENG 101 with C or better; ENG 102 with C or better; Corequisite(s): TWC 361
NUR	392	Health Promotion Across the Life Span	Examines concepts and theories involved in health promotion across the lifespan and their application for nurses.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: NUR 315; NUR 391; TWC 361
NUR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students

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NUR	410	Nursing Concepts for Community and Public Health	Examines concepts related to health promotion, disease prevention, and health maintenance within the global community.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 313 and 315 and 316 all with C or better if completed; NUR 323 and 324 with Y grade if completed; Corequisite(s): NUR 420 or 484 (Nur Pract: Comm/Pub Hlth); Credit allowed for only NUR 410 or 494 (Nur Concepts Comm & Pub Hlth)
NUR	411	Nursing Concepts for Child bearing and Pediatric Clients	Concepts related to care of individuals and families within the childbearing and pedtric populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 313 and 315 and 316 all with C or better if completed; NUR 323 and 324 with Y passing grade if completed; Corequisite(s): NUR 421; Credit is allowed for only NUR 411 or 494 (Nursing Concepts Childbearing Individ & Families)
NUR	412	Nursing Concepts for Pediatric Patients and their Families	Examines essential concepts related to the nursing care of pediatric patients and their families. Provides a nursing care approach for the pediatric patient and family across the healthcare continuum.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 313 and NUR 315 and NUR 316 all with C or better if completed; NUR 323 and NUR 324 with Y passing grade if completed; Corequisite(s): NUR 422; Credit is allowed for only NUR 412 or NUR 394 (Nursing Concepts: Pediatrics)
NUR	413	Nursing for Complex Care	Advanced theoretical knowledge and interprofessional collaborative care required for the delivery of safe and competent care of the adult client experiencing acute and complex alterations in health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre- or corequisite(s): NUR 410 and NUR 411 and NUR 412 all with C or better if completed; NUR 420 and NUR 421 and NUR 422 all with Y passing grade if completed; Corequisite(s): NUR 423
NUR	415	Nursing Concepts for Childbearing Family	Examines the care of childbearing clients and their families. Embedded content focuses on providing care to clients along the healthcare continuum.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 with Y passing grade if completed
NUR	416	Nursing Concepts: Community/Public Health	Examines selected concepts, theories, and applications of epidemiology, community assessment, and population-centered health education for community and public health nursing locally and globally.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 315 and NUR 415 and NUR 417 all with C or better if completed; NUR 475 and NUR 477 with Y grade if completed; Corequisite(s): NUR 476
NUR	417	Nursing Concepts: Pediatric Clients	Concepts related to care of individuals and families within pediatric populations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 with Y passing grade if completed; Corequisite(s): NUR 477

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NUR	418	Nursing Concepts: Complex Care	Advanced theoretical knowledge and interprofessional collaborative care required for the delivery of safe and competent care of the adult client experiencing acute and complex alterations in health.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 with Y passing grade if completed; Credit is allowed for only NUR 418 or NUR 478
NUR	419	Leading & Managing Nursing in Organizational Systems	Analyzes selected concepts and theories related to leading and managing nursing in organizational systems.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 315 and NUR 415 and NUR 417 all with C or better if completed; NUR 475 and NUR 477 with Y passing grade if completed; Corequisite(s): NUR 479
NUR	420	Nursing Practice: Community/Public Health	Applies community/public health nursing concepts in the delivery of primary, secondary, and tertiary care in a variety of community settings.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 313 and NUR 315 and NUR 316 all with C or better if completed; Corequisite(s): NUR 410; Credit is allowed for only NUR 420 or NUR 484 (Nursing Practice: Community and Public Health)
NUR	421	Nursing Practice: Child Bearing/Family Nursing	Applies nursing care concepts related to the child-bearing woman and family.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 313 and NUR 315 and NUR 316 all with C or better if completed; NUR 323 and NUR 324 with Y grade if completed; Corequisite(s): NUR 411; Credit is allowed for only NUR 421 or NUR 484 (Nursing Practice: Childbearing Clients)
NUR	422	Nursing Practice: Pediatrics	Focuses on clinical care of the pediatric client and family.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 313 and NUR 315 and NUR 316 all with C or better if completed; NUR 323 and NUR 324 with Y passing grade if completed; Corequisite(s): NUR 412; Credit is allowed for only NUR 422 or NUR 484 (Nursing Practice: Pediatrics)
NUR	423	Nursing Practice: Complex Care & Clinical Immersion	Students perform nursing practice in a variety of clinical settings, laboratory and simulated patient care environments. Students provide nursing care to patients who are physiologically unstable in advanced medical-surgical, and critical care clinical environments. Students perform advanced psychomotor skills in the clinical, laboratory and simulation environments. Students also complete a clinical immersion experience in a selected clinical setting. During the clinical immersion experience, students have the opportunity to apply leadership and management principles, and work in interprofessional healthcare teams to provide nursing care to clients experiencing health alterations across the lifespan.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	5		Pre- or corequisite(s): NUR 410 and NUR 411 and NUR 412 all with C or better if completed; NUR 420 and NUR 421 and NUR 422 all with Y passing grade if completed; Corequisite(s): NUR 413
NUR	430	Professional Nurse Attributes: Leadership and Management	Applications of theories and concepts of organizations, management, and leadership with focus on nursing management and leadership in healthcare organizations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 410 and NUR 411 and NUR 412 all with C or better if completed; NUR 420 and NUR 421 and NUR 422 all with Y passing grade if completed; Corequisite(s): NUR 431

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NUR	431	Professional Nurse Attributes Innovative Professional	Focuses on the process of transition to the professional nursing role, and the gathering, interpretation, and evaluation of evidence that serves as a basis for improving client outcomes and professional satisfaction.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	L	Pre- or corequisite(s): NUR 315 with C or better if completed; NUR 330 with C or better if completed
NUR	440	Community and Public Health Nursing in the United States	Examines selected concepts, theories and applications of epidemiology, community assessment, and population-centered health education for community and public health nursing in the United States.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: NUR 391; NUR 315; TWC 361 with C or better
NUR	444	Innovation in Nursing	Examines the role and behaviors of an innovator in the nursing profession.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: NUR 315; NUR 391; TWC 361 with C or better
NUR	445	Nursing Management in Health Care	Examines selected theories and concepts of organizational behavior and the management of people and resources. Focuses on the application of selected management theories and concepts to nursing practice and healthcare systems.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: NUR 315, NUR 391, TWC 361 with C or better
NUR	460	The Art of Nursing	Explores the aesthetic, ethical, and personal patterns of knowing in nursing for the practicing RN.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4	HU	Pre-requisites: NUR 391; NUR315; TWC 361 with C or better
NUR	464	Capstone: The Synthesis of Professional Nursing	Synthesizes theories and concepts for professional nursing practice with a focus on role transition.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: BIO 202; CHM 101; MAT 142; MIC 205; NUR 392; NUR 440; NUR 444; NUR 445; NUR 460; NUR 495; PGS 101 (or CDE 232) with C or better
NUR	475	Nursing Practicum: Care of the Childbearing Family	Applies nursing care concepts related to the childbearing woman and family.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 and NUR 367 with Y passing grade if completed; Corequisite(s): NUR 315; NUR 415
NUR	476	Nursing Practice: Community and Public Health	Applies community and public health nursing concepts in the delivery of primary, secondary, and tertiary prevention from a population-centered perspective.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 415 and NUR 417 with C or better if completed; NUR 475 and NUR 477 with Y grade if completed; Corequisite(s): NUR 416
NUR	477	Nursing Practice: Pediatrics	Focuses on clinical care of the pediatric client and family.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 and NUR 367 with Y passing grade if completed; Corequisite(s): NUR 315; NUR 417
NUR	478	Nursing Practice: Complex Care	Applies advanced psychomotor and leadership skills, nursing care delivery management, and interprofessional referral and collaboration for clients experiencing health alterations across the lifespan in advanced care settings.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 415 and NUR 417 with C or better if completed; NUR 475 and NUR 477 with Y passing grade if completed; Corequisite(s): NUR 418
NUR	479	Nursing Practice: Clinical Immersion	Builds on the knowledge and skills obtained in the nursing curriculum and integrates the curriculum concepts in varied and diverse practice settings. Supports the student's transition into the role of the professional registered nurse.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 415 and NUR 417 with C or better if completed; NUR 475 and NUR 477 with Y passing grade if completed; Corequisite(s): NUR 419
NUR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Upper Division Nursing Program students

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NUR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-6		Prerequisite(s): Barrett Honors student
NUR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-6	L	Prerequisite(s): Barrett Honors student
NUR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students
NUR	495	Public and Global Health in Nursing	Analyzes public health concepts, theories, and practice with a focus on the health of all clients in a global environment. Includes core public health functions, domestic and international health care delivery systems, public health and health policy, conceptual and scientific frameworks for community/public health nursing practice, epidemiology, and global health issues.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: NUR 315, 391, and TWC 361 with C or better
NUR	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-6		Prerequisite(s): Barrett Honors student
NUR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-7	L	Pre-requisites: Upper Division Nursing Program students
NUR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-3		
NUR	501	Individual and Innovation Leadership in Advanced Nursing Practice	Examines the role and behaviors of an innovator in an advanced nursing practice role. Explores the skills required to create a compelling vision to influence others through innovation and ethical leadership. Examines and correlates different situational challenges utilizing principles of complexity and emotional intelligence to advance innovation in advanced nursing practice roles.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Nursing (Care Coordination) MS or Nursing Education MS or Nursing (Patient Safety and Health Care Quality) MS
NUR	502	Advanced Health Assessment, Pathophysiology and Pharmacotherapeutics for Health Promotion I	Uses a lifespan developmental framework to present, integrate and interrelate advanced concepts, practices and principles applied to the biological, cognitive and psychosocial domains of health assessment, pathophysiology, and pharmacotherapeutics for health promotion appropriate to master's level nursing practice and roles.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to a Nursing MS program
NUR	503	Advanced Health Assessment, Pathophysiology and Pharmacotherapeutics for Health Promotion II	Uses an at-risk population framework to present, integrate and interrelate advanced concepts, practices and principles applied to the biological, cognitive and psychosocial domains of pathophysiology, pharmacotherapeutics and health assessment for health promotion among vulnerable populations appropriate to master's level nursing practice and roles.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 502 with B- or higher
NUR	509	Clinical Prevention and Population Health Practicum	Preceptored practicum appropriate to master's level nursing practice and roles within the context of team-based interprofessional clinical prevention and population healthcare and/or services.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s) with B- or better: DNP 604; 605; 608; 633
NUR	510	Foundations of Care Coordination Practice	Focuses on the theoretical concepts of care coordination and case management, including current models, intervention components, evaluation methods and financing. Provides the foundation for understanding care coordination and the roles nurses have played in the evolution and implementation of the care coordination models.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Nursing (Care Coordination) MS degree or certificate program
NUR	511	Concepts of Care Coordination and the Nurse's Role	Focuses on how nurses make care coordination visible in nursing practice and make a difference in cost-efficiency, quality and safety outcomes. Prepares nurses to advance care coordination at the unit, organizational or systems levels.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 510 with B- or better if completed
NUR	512	Improving Quality and Safety Outcomes Through Effective Care Coordination	Focuses on the nurse's role in care coordination, and how care coordination programs are used to provide cost-effective and patient-centered care, improve quality and safety outcomes for patients and families, and use health information technology to advance the goals of care coordination.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Nursing (Care Coordination) MS degree or certificate program
NUR	513	Interprofessional Collaborative Practice and Transforming Health Care Policy	Examines the nurse's role in communicating, collaborating and leading interprofessional teams to advance innovative care coordination models. Prepares nurses to influencing health policy through care coordination research and leadership.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s) with B- or better: NUR 510; 511

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NUR	519	Role-Focused Practicum: Care Coordination	This mentored practicum provides the learner with opportunities to apply care coordination (CC) concepts and principles in a practice environment at the unit, organization or systems levels. Tailored to the prior experiences and level of the learner and may include working in intra- and interprofessional teams to address care coordination initiatives at the unit, organizational or systems levels.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 510 with B- or better; NUR 511 with B- or better; NUR 512 with B- or better; NUR 513 with B- or better
NUR	520	Patient Safety and Health Care Quality Principles, Assessment and Methods	Focuses on the application of core principles of patient safety and health care quality to patients. Explores current and historical factors that contribute to quality health care outcomes. Examines the influence of financial, legal and regulatory factors on patient safety and health care quality. Applies various theories, concepts and tools to promote patient safety and health care quality. Describes the principles of just culture and the relationship to analyzing errors. Discusses the nurse's role in advancing patient safety and health care quality. Infuses the Quality Safety Education in Nursing (QSEN) competencies into course activities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing (Patient Safety and Health Care Quality) MS major
NUR	521	Health Care Evidence, Informatics and Analysis	Focuses on applying information technology and research methodology to safety and quality initiatives. Students learn the role of technology related to select human factors engineering concepts and related clinical application (e.g., medication administration, clinical decision making). Focuses on determination of outcome measures related to evidence-based practice (EBP) and quality improvement (QI). Discusses survey methods including construction, data collection methods, and data analysis.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 520 with B- or better
NUR	522	Designing Systems for Patient Safety and Health Care Quality	Focuses on the design, implementation, evaluation and sustainability of patient safety and health care quality initiatives. Uses innovation and change theories, as well as high reliability and just culture principles, to support data collection, analysis and reporting within complex health care systems.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 520 with B- or better; NUR 521 with B- or better
NUR	523	Interprofessional Collaboration for Improving Patient Safety and Health Care Quality Outcomes	Focuses on developing skills and strategies for interprofessional collaboration, team leadership, communication, and project management to improve patient safety and health care quality outcomes in an interprofessional health-related setting. Theory and evidence-based strategy for team building, maintenance and conflict resolution for improved team-based practice and performance.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 520 with B- or better
NUR	529	Role-Focused Practicum: Patient Safety and Health Care Quality	Mentored practicum provides opportunities to apply patient safety and health care quality (PSHQ) concepts and principles in a practice environment at the unit, organization or systems levels. Tailored to the prior experiences and level of the learner.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 520 with B- or better; NUR 521 with B- or better; NUR 522 with B- or better; NUR 523 with B- or better
NUR	530	Foundational Concepts for Nursing Informatics	Focuses on the foundational concepts of nursing informatics. Analyzes the scope and standards of practice; ethical and privacy principles; relationships amongst biomedical, health and nursing informatics; and models, concepts and theories that support nursing informatics practice. Appraises accreditation and legal and regulatory requirements for health and nursing informatics practice.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NUR	531	Advanced Concepts in Nursing Informatics	Focuses on advanced concepts in nursing and health informatics practice. Analyzes the health informatics metastructures, relationships between nursing and multidisciplinary standardized terminologies, trends in nursing and health informatics, ethical, privacy and legal issues, and the emerging role for the nurse informaticist.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 530
NUR	539	Role-Focused Practicum: Nursing Informatics	Learners complete 135 hours of mentored clinical practice during this practicum applying nursing informatics (NI) concepts and principles in a practice environment at the unit, organization or systems levels. Tailored to the prior experiences and level of the learner and may include working in intra- and interprofessional teams to address informatics initiatives at the unit, organizational or systems levels.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 530 with B- or better; NUR 531 with B- or better
NUR	579	Role-Focused Practicum: Nurse Educator	Mentored teaching practicum includes application of teaching/learning principles in a specialized area of interest. Tailored to the teaching experience and level of the student. May include classroom, online or clinical teaching, attendance at approved conferences, relevant meetings or other activities that provide opportunity for the learner to gain expertise in the selected area of interest.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 670; NUR 671; Credit is allowed for only NUR 579 or NUR 580 (Teaching Practicum)
NUR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Nursing student
NUR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Nursing Graduate student

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NUR	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
NUR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
NUR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Pre-requisites: Nursing Graduate student
NUR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Pre-requisites: Nursing Graduate student
NUR	601	Scientific Role Development I: Engaging and Committing	First in a series that focuses on the development of a scientific role identity in nursing and health care innovation, including the areas of education, policy and research. Analyzes current trends in the development of innovative scientists and leadership characteristics needed for future roles.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): Nursing and Health Care Innovation PhD student
NUR	602	State of the Science in Nursing and Healthcare Innovation	Focuses on research synthesis and critiques of the scientific literature as a basis for knowledge generation related to a focal area of research interest.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing & Healthcare Innovation PhD student; Corequisite(s): NUR 605
NUR	603	Social and Contextual Issues in Nursing and Healthcare	Analyzes nursing practice and the healthcare system for an identified population using social-ecological approaches.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	604	Philosophy of Science Perspectives in Nursing and Healthcare Innovation	Analyzes the history and philosophy of science as a basis for knowledge and academic scholarship in nursing and healthcare innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	605	Theory Analysis	Examines theoretical perspectives and approaches guiding research in nursing and healthcare innovation across the lifespan. Includes the historical evaluation, social contextual factors, implicit assumptions, and bias that influence nursing and healthcare innovation knowledge generation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): PhD Nursing and Healthcare Innovation major
NUR	606	Scientific Role Development II: Validating and Demonstrating	Second in a series that focuses on the development of a scientific role identity in nursing and health care innovation, including the areas of education, policy and research. Posits the knowledge, skills and resources needed to expand one's career as an educator and scientist in a health-related leadership role in the context of a future health care environment. Explores strategies for progressive and creative approaches in preparing leaders for innovative change in education, research and health care policy affecting healthcare delivery.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): Nursing and Health Care Innovation PhD student
NUR	607	Scientific Role Development III: Bridging	Focuses on the development of a scientific role identity in nursing and health care innovation, including the areas of education, policy and research. Students study the career trajectories of key leaders in nursing and health care innovation as a basis for development of their own personal plans for success, including research trajectories and marketing.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): NUR 606
NUR	608	Qualitative Research Design and Methods	Explores and critiques selected qualitative research approaches. Includes fieldwork exercises as an integral part of course expectations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	609	Quantitative Research Design and Methods	Examines multiple research approaches in clinical and health policy research from a quantitative perspective.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	612	Advanced Analysis of Variance: Design and Analysis of Experiment	Introduces theory, methods, and practice of analysis of variance.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	613	Principles of Regression and Correlation	Introduces theory, methods, and practice of regression analysis.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	614	Design and Implementation of Theory-Based Interventions	Focuses on the knowledge related to advanced methods for intervention research. Examines methodological, ethical, and practical issues in the design and implementation of theory-based intervention studies.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	615	Qualitative Data Management Seminar	Qualitative research methods applied to thesis, dissertation or qualitative research reports, focusing on data reduction, analysis, interpretation, credibility, ethics and dissemination.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): COE 503 or CRJ 613 or EDP 503 or NUR 608 or PAF 610
NUR	616	Community-Based Participatory Research	Overview of Community-Based Participatory Research (CBPR). Familiarizes participants with key historical underpinnings of CBPR, principles of CBPR practice, as well as methodological CBPR considerations in building community partnerships, issue analysis, research planning, data gathering and data sharing.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only NUR 616 or NUR 691 (Community-Based Research)

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NUR	617	Foundational Concepts in Science and Statistics	Provides basic skills necessary for health-related research specifically geared toward (1) understanding concepts of widely used statistical methods with examples from health care; (2) ethical knowledge of human subjects research; and (3) processes of research including research design, interpretation and presentation of results and critiquing research articles.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): COE 502 or EDP 502 or EXW 501; Credit is allowed for only NUR 617 or NUR 691 (Foundational Concepts in Science and Statistics)
NUR	618	Advancing Research-Based Health Policy Through Leadership and Innovation Science	Integrative synthesis course in which students apply values and knowledge from previous PhD core courses in philosophy of science, theory analysis, state of the science, quantitative and qualitative methods, and the art and science of teaching. Examines the role of scholars and scientists in health policy reform. Using tools from leadership and innovation science, advances strategies to accelerate the use of interprofessional research in policy decisions and advances the national agenda for improving health and the quality and affordability of health care.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 602, 603, 604, 605, and 609
NUR	628	Research, Theory and Principles for Palliative Care in the Older Adult	Focuses on theory and research underlying end of life and palliative care for the older adult utilizing current practice guidelines and research.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): PhD Nursing and Healthcare Innovation major
NUR	629	Research for Geriatric Practice	Gaining knowledge and skills in critical appraisal and synthesis of evidence to guide best practice in gerontology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only DNP 629 or NUR 629
NUR	630	Mechanisms of Disparities	Analyzes and applies the complex issues underpinning culture and health disparities related to a specific health outcome to research with a selected cultural group.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Nursing and Healthcare Innovation PhD student; Credit is allowed for only NUR 598 (Mechanisms of Culture), 598 (Mechanisms of Disparities) or 630
NUR	631	Leveraging Culture in Intervention Development	Analyzes the complex issues underpinning the development of evidence-based interventions among various cultural groups. Also analyzes methods of leveraging culture to optimize the development, delivery, effect and evaluation of health interventions for various cultural groups.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: NUR 630 (or NUR 598 Mechanisms of Disparities); Nursing and Healthcare Innovation PhD student; Credit is allowed for only NUR 598 (Leveraging Culture in Intervention Development) or 631
NUR	640	Integrative Theories of Innovation in Healthcare	Analyzes cross-disciplinary theories of innovation for improving health and quality of healthcare.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: NUR 605; Credit is allowed for only NUR 691 (Integrative Theories of Innov) or NUR 640
NUR	641	Theories of Emergent Leadership in Healthcare Innovation	Analyzes cross-disciplinary theories of leadership. Emphasizes leadership frameworks that describe, explain and predict the relationships among leadership and healthcare innovation and outcomes.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 640. Credit is allowed for only NUR 641 or 691 (Theories of Emergent Leadership in Healthcare Innovation)
NUR	650	Human Lactation in the Post-Modern World	In-depth exploration of the complex and multifaceted social, cultural and environmental contexts that affect the public health goal of improving successful breastfeeding during the first years of life.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only NUR 650 or 691 (Human Lactation in the Post Modern World)
NUR	670	Curriculum Development in Academic and Practice Settings	Includes analyses of historical, philosophical, societal, environmental, cultural, technological, and educational factors of curriculum development in academic and practice settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing (Nursing Education) MS or Graduate Certificate in Nursing Education; Pre- or corequisite(s): NUR 671 with B or better
NUR	671	Teaching in Academic and Practice Settings	Analyzes theories, issues, research related to teaching in nursing and educational leadership. Focuses on the process of teaching and learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Nursing Graduate student or Certificate program.

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NUR	672	Design and Delivery of Mediated Instruction	Addresses instructional design issues, theory, and practices related to online and electronically mediated learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	673	Producing and Evaluating Programs for Academic and Practice Settings	Critical examination of standards, regulatory environment, administrative systems, leadership requirements, technological infrastructure, human factors, future trends regarding mediated education planning, production, and evaluation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
NUR	688	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
NUR	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	692	Research		N	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
NUR	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NUR	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing and Health Innovation	1-15		
OBS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	501	Obesity Prevention and Management: An Introduction	Helps students understand the complex etiology of obesity and enhances their ability to work with individuals and populations at risk of obesity to develop effective behavior change-based strategies for prevention and management of the condition across the lifespan.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): Obesity Prevention and Management MS major; Credit is allowed for only OBS 501 or OBS 598 (Obesity Prevention and Management)
OBS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		
OBS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
OBS	598	Special Topics	Topical courses not offered in regular course rotation (e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand).	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OGL	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-3		
OGL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
OGL	200	Introduction to Organizational Leadership	Presents a broad survey of leadership theory and research as currently practiced in formal organizations. Includes examination of leadership models, power and influence, team leadership, cross-cultural leadership, strategic styles of interaction, ethics, leadership skill development, decision-making techniques and effective goal implementation.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better
OGL	220	Behavioral Dynamics in Organizations	Explores the different theories, strategies and skills that managers and subordinates need to develop to improve interpersonal relations. Primarily emphasizes skill areas in leadership, motivation, communication, group dynamics, organizational development, conflict resolution, political strategy, cross-cultural relations, ethical behavior, stress management and time management. Develops effective strategies for becoming effective managers, subordinates, peers and students.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	L or SB	Prerequisite(s): ENG 102, 105, or 108 with C or better
OGL	240	Introduction to Project Management	Offers insights into each step of the project management process through an examination of various theoretical approaches.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
OGL	260	Resource Allocation in Organizations	Introduces the decision-making framework of resource allocation within the broader context of basic business finance. Students learn that resource allocation decisions are regularly guided by fundamental principles in finance. Primarily focuses on business resources, resource management and allocation, accounting statements, profit and loss drivers, cash and profit statements, balance sheets, budgets and forecasts, management accounts and capital investment.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; MAT 117 (or any course with General Studies MA designation)
OGL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
OGL	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1-6		Prerequisite(s): Barrett Honors student
OGL	300	Theory and Practice of Leadership	Presents an in-depth study of leadership theory and its practical application in formal organizations. Includes examination of the trait approach, situational approach, contingency theory, path-goal theory, leader-member exchange theory, transformational leadership, psychodynamic approach, and women and leadership. Emphasizes application of these theories in real-world case studies.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): OGL 200; minimum 56 hours
OGL	320	Foundations of Project Management	Covers project management terminology, tools, best practices, theoretical approaches, the phases of project management and how they are applied developing a project plan and schedule, and other competencies needed to effectively manage projects.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 56 hours; Credit is allowed for only OGL 240 or OGL 320
OGL	321	Project Leadership, Strategy and Scope	Explores how executive management is responsible for conceiving, designing, implementing and managing the organization's overall objectives, culture, environment and processes as part of the project management process. Within this context, primarily focuses on understanding project management, aligning project management with the organization, project management oversight, projects as capital investments, globalization and resources optimization.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): OGL 240 or OGL 320; minimum 56 hours
OGL	322	Project Time Management	Explores project scheduling and time management within the broader context of the planning effort. Students learn how important the determination of the timing and sequence of project activities is to the planning process--and ultimate project success. Primarily focuses on understanding bar charts, basic networks, the critical path network, precedence networks, resource allocation, schedule updating, schedule compression, scheduling and schedule risk management.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: OGL 240; Minimum 55 earned hours
OGL	323	Project Cost Management	Concepts and complex processes of effective project cost management. Primarily focuses on project needs assessment, cost estimation, project cost control, project budgeting, cash flow management, financial management, value management, configuration management and supply chain management. Students also learn to appreciate the importance of integrating cost and value management processes.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: OGL 240; Minimum 55 hours

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OGL	324	Resources in Project Management	Major elements of project resource management as well as the broader context of this critical planning function. Students learn that sound resource management is an important part of developing a sustainable competitive advantage in the emerging global marketplace. Primarily focuses on operations and productivity, resources in project management, product design, process strategy, layout strategy, human resources and job design, supply chain, inventory management and scheduling.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: OGL 240; Minimum 55 hours
OGL	326	Project Procurement Management	Concepts and processes of procurement management. Primarily focuses on sourcing management, supplier selection, contracts and legal requirements, risk management, negotiation, project management, quality, supplier management and financial decisions. Effective procurement requires the use of good business practices capable of maximizing value to the organization through the acquisition of goods and services. Students learn that procurement professionals control the entire sourcing and acquisition process.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: OGL 240; Minimum 55 hours
OGL	350	Diversity and Organizations	Critical interdisciplinary analysis of individual, cultural, and organizational diversity.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	L & C	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 56 hours. Credit is allowed for only BIS 350 or OGL 350
OGL	355	Leading Organizational Innovation and Change	Process and theory of strategic management with primary emphasis on situation analysis, strategy formulation, strategy implementation and strategy evaluation. Covers the strategic management context, external analysis, internal analysis, functional and competitive strategies, international strategies, strategic entrepreneurship and nonprofit strategy. Students understand the process of analyzing situations, developing appropriate strategies, putting those strategies into action, and evaluating and changing those strategies as needed.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 56 hours
OGL	360	Assessment of Leadership Effectiveness	Empirical analysis of leadership, a conceptual model of effective leadership, and a practical guide for developing the competencies and attributes most likely to produce effective leaders. Primarily focuses on leadership competencies, organizational fit, leadership strengths, fatal flaws, leadership teams, leadership development, improvement measurement and leadership follow through. Students learn to distinguish between leadership success and leadership effectiveness.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): MAT 117 (or any course with General Studies MA designation); OGL 200; minimum 56 hours
OGL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
OGL	421	Project Risk Management	Philosophy, principles, practices and techniques for managing risk in projects. Covers risk identification, qualitative risk management, risk treatment, monitoring and review, project processes, risk allocation, environmental risk and quantification of project risk. Students learn that risk management assists project managers in setting priorities, allocating resources and implementing actions and processes that reduce the risk of the project not achieving its objectives.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: OGL 321; Minimum 55 hours
OGL	422	Project Quality Management	Process and theory of total quality management with primary emphasis on the total quality approach, ethics and corporate responsibility, strategic alliances, quality culture, employee empowerment, leadership and change, team building, effective communication, and tools and techniques. Students understand how continual improvement of people, processes, products/services, and environments can enhance the process and outcomes of project management. Students have the opportunity to develop practical total quality management skills as they apply theory and practice to real-world cases.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: OGL 321; Minimum 55 hours
OGL	481	Organizational Leadership Pro-Seminar I	Students draw on their experiences in previous organizational leadership courses, employing key concepts, theories and skills learned throughout the program toward the strategic analysis of organizations. Using Bolman and Deal's organizational frames concept, students synthesize key learnings across their education and explore organizations through four unique perspectives.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		
OGL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		
OGL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6		Prerequisite(s): Barrett Honors student
OGL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6	L	
OGL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		

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OGL	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-6		Prerequisite(s): Barrett Honors student
OGL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-7	L	Prerequisite(s): Organizational Leadership major; minimum 90 hours; BIS 343 and 345; ENG 102 or 105 or 108 with C or better; OGL 200, 220, 240, 260, 300, 321, and 350
OGL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		
OMT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
OMT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
OMT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
OMT	343	Occupational Safety and Ergonomics	Health and safety movement, accident theories and effects, OSHA standards and liability, safeguarding, hazards, workers' compensation, ergonomics, and safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		
OMT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
OMT	402	Legal Issues for Technologists	American legal system and impact on technology management issues: contracts, torts, intellectual property, white collar crime, antitrust, environmental, and employment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite: Minimum Junior standing
OMT	405	Forecasting and Evolution of Technology	History and evolutionary nature of selected technologies, issues in the management of emerging technologies, and methods of technological forecasting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite: Minimum Junior standing
OMT	430	Ethical Issues in Technology	Topics in social responsibility for industrial technology and engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): Fulton Polytechnic School undergraduate or graduate student
OMT	440	Introduction to International Business	International business principles and operations, including partnerships, trade agreements, currency issues, international sales, and cultural differences between countries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3	G	Prerequisite(s): Prerequisite(s): Fulton Polytechnic School undergraduate or graduate student; MGT 301, TMC 330 (TMC 346)
OMT	445	Industrial Internship	Work experience assignment in industry commensurate with student's program. Specialized instruction by industry with university supervision. Pass/fail.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-10		Prerequisites: Fulton Polytechnic School undergraduate student; Minimum 2.25 GPA; minimum Junior standing
OMT	452	Industrial Human Resource Management	Concepts and practices of human resource management in a global industrial environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre requisite(s): Fulton Polytechnic School student
OMT	480	Organizational Effectiveness	Human aspects of supervisory behavior in the industrial setting and how they influence efficiency, morale, and organizational practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): MGT 301 or TMC 330 (TMC 346)
OMT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		
OMT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		Pre-requisites: Minimum Junior standing; Minimum 2.25 GPA
OMT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
OMT	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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OMT	502	Financial Management	Examines corporate financial and managerial accounting systems, budgeting, and financial policy, using microcomputers to analyze, forecast, and report information.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	503	Marketing Management	Modern methods and industrial case studies of planning, pricing, promoting, and distributing goods and services in the global marketplace.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	504	Law and Ethics for Technical Professionals	Analyzes legal and ethical framework for making managerial decisions in the corporate environment of engineering- and technology-related industries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	520	Strategic Management of Technology	Analyzes entrepreneurial dynamics and technology development, methods of research and development management, new technology implementation, and start-up organization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	540	International Management	Practices and procedures for effective management of multinational business organizations, including partnerships, joint ownerships, and global subsidiaries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	548	Statistical Methods for Research	Multivariate statistical techniques to analyze research data. Uses statistical software and applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	549	Research Techniques and Applications	Selection of research problems, analysis of literature, individual investigations, preparing reports, and proposal writing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	560	Managerial Decision Making	Analyzes common decision-making biases and techniques to overcome them. Uses both subjective quantitative decision tools and computerized decision aids.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	570	Advanced Project Management	Planning, organizing, coordinating, and controlling staff and project groups to accomplish the project objective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only OMT 570 or TMC 470
OMT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	592	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		
OMT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	OP4	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OPM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
OPM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
PAF	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
PAF	200	Public Service and Policy in the 21st Century	Provides a broad introduction to the field of public service and leadership. Topics include an overview of management, policy, urban studies, and leadership in the public sector. Covers the history and development of the public sector, as well as how it serves contemporary society.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	201	Economics and Public Policy	Introduces the terminology and methods of analysis in microeconomics. In particular, examines the behavior of individual consumers and firms, with a focus on market failures and the role of government policy in correcting those failures. Applies microeconomic principles to the distribution of income, policies for eliminating poverty and discrimination, the problems of environmental pollution, and the impact of different market structures on economic activity.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PAF	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
PAF	300	Public Management and Administration	Examines the context and role of the public manager and the development of the field of public administration.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	301	Applied Statistics	Focuses on statistical techniques used in social science research. Applies concepts such as measures of central tendency and dispersion as well as statistical techniques, including the following: one-sample z and t tests, two-sample t tests, chi-square, and correlation. Goals include helping students understand the mathematical and statistical concepts presented and assisting them in using these concepts in everyday life and in the study of social sciences.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	CS	Pre-requisites: MAT 142 or higher
PAF	302	Public Service Research Methods	The philosophy, scope, and methods of public sector research. Examines quantitative and qualitative research methods and research design.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 301 with C or better
PAF	311	Leadership and Change	The leader's role in bringing about significant organizational and societal change with special attention to group and organizational behavior dynamics, establishing a vision, mobilizing and empowering individuals and groups, and assessing outcomes of the change process in a variety of settings.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	SB	Pre-requisites: Minimum 30 hours
PAF	340	Contemporary Policy Challenges	Develops conceptual, critical, and practical understanding of public policy, the policy process, and policy analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: Minimum 30 hours
PAF	350	Introduction to Science & Technology Policy	Explores the variety of ways in which governments make policies, how the policies shape the development of science and technology and their applications, and how policy may be shaped to create better futures.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 30 hours
PAF	360	Introduction to Emergency Management	Emergency management theories. Comprehensive emergency management. Mitigation, preparedness, response, and recovery. Post-disasters and policy formation. Current FEMA all-hazards approach.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 45 hours
PAF	363	Computer Applications in Emergency Management	Explores specific computer programs that are currently in use for contingency planning, tracking chemical inventories, and response resources.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: MAT 142
PAF	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
PAF	400	Senior Capstone Project	Teaches students to solve problems related to the public sector by applying theory, knowledge, and methods from previous courses to a hands-on project in the community. Seminars include guest speakers and discussions on professional development. Students work as individuals and as a team to prepare research papers and a professional report that is presented to the community.	N	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: PAF 200, 201, 301 (or 401), 302, 311 (or 411), 340, and 460 with C or better
PAF	410	Building Leadership Skills	Introduces understanding and developing leadership skills, including an examination of leadership theories and models from multidisciplinary and crosscultural points of view, an assessment of the student's leadership capabilities, and practical applications to improve individual leadership capabilities.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	SB	Pre-requisites: Minimum 30 hours; Credit is allowed for only PAF 410 or URB 410
PAF	420	Public Leadership	Examines key concepts, models, and strategies for leading public and nonprofit organizations, emphasizing self-knowledge, skills, and abilities for effective leadership.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	421	Leadership Capstone	Builds upon leadership courses in the Leadership and Ethics certificate program by applying concepts and examples from the readings as well as individual experiences.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 311 and 410; Credit is allowed for only PAF 421 or 494 (Leadership Capstone)
PAF	424	Comprehensive Emergency Management	Addresses theory and management techniques for emergency preparedness, including mitigation, preparedness, response, and recovery.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 45 hours
PAF	425	National Incident Management System (NIMS)	Covers concepts, terminology, players, compliance requirements, including doctrine of National Incident Management System per HSPD-5. Discussion of National Response Plan.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 45 hours
PAF	460	Public Service Ethics	Role, values, and issues of public management in democratic governance, citizen participation, power structures, and professional codes of conduct.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	461	Homeland Security	In-depth analysis of policies, procedures, and organizational structure for effective homeland security program. Covers all hazard/all risk philosophy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: minimum 45 hours. Credit is allowed for only PAF 461 or 561
PAF	468	Simulation and Exercising	Requirements, planning, conduct, and critique of exercises related to emergency planning. Emphasizes realism using moulage and props.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PAF	469	Terrorism Defense	Explores the background and evolution of terrorism. Presents specific tactics for preparation for and response to acts of terrorism.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ABS 598 (Terrorism Defense) or PAF 469
PAF	470	Topics in Public Economics and Financial Management	Provides an analysis of public economic practices and problems in a federal system. Presents detailed descriptions, where appropriate, of significant institutions and applies modern economic theory to the ways that these institutions finance and deliver services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: ECN 212 or PAF 201 with C or better
PAF	471	Public Policy Analysis	Provides further study in the concepts, models, and operational methods used in public policy decisions and analysis. Enables students to develop higher skills needed for defining policy issues, identifying alternative solutions, and predicting the potential impact of policy alternatives.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: PAF 301 and 340 with C or better
PAF	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-6		Prerequisite(s): Barrett Honors student
PAF	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-6	L	Prerequisite(s): Barrett Honors student
PAF	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
PAF	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-3		
PAF	501	Public Service Research I	Philosophy, scope, and methods; public service research design, values, and ethics.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: Must have earned B or better or currently enrolled in PAF 401, POS 401, PSY 230 QBA 221, or SOC 390 AND course must be completed within 4 previous terms
PAF	502	Public Service Research II	Quantitative techniques including multivariate analysis, data analysis, decision making, and computer applications in public affairs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 501 with C or better
PAF	503	Public Affairs	Development and context of American public administration and policy, role of administration in governance, and values and ethics in administration.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	504	Microeconomics of Public Policy I	Provides key principles of microeconomics. Places particular emphasis on developing the analytic tools of economic reasoning and using these tools to examine policy interventions of interest to public managers.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	505	Public Policy Analysis	Institutional and formal analysis of policy processes, decision making, and problem solving; values, ethics, and the uses of policy analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 504 with C or better
PAF	506	Public Budgeting and Finance	Legal, social, economic, political, institutional, and ethical foundations of governmental finance, budgets, and budgeting.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 504 with C or better
PAF	507	Public Human Resource Management	Personnel systems, behavior and management of people in public organizations, collective behavior, unionism, conflict management, motivation, productivity, and ethics.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	508	Organization Behavior	Theory and application in the management of organizational behavior with emphasis on leadership and the public service.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	509	Public Affairs Capstone	Capstone application of core course knowledge, skills, and abilities required for public service.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: PAF 501, 502, 503, 504, 505, 506, 507 and 508 with C or better
PAF	520	Public Management	Management process in government and public agencies, with emphasis on the executive leadership within the public sector.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	523	The City and County Manager	Manager's role and resources in the differing forms of administrative, legislative, and community sectors.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	525	Public Entrepreneurship	Explores entrepreneurship in the public sector from various angles, including small and large communities and nonprofits.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	529	Organization Change and Development	Explores the nature and management of change and development as a tool to achieve organizational goals; effecting planned change.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		

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PAF	530	Management of Urban Government	Administrative practices and behavior within the urban political administrative environment. Functional areas such as citizen participation, urban planning, urban transportation, and the conflicts between urban politics and administrative efficiency.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	531	Community Conflict Resolution	Interdisciplinary approach to understanding the dynamics of community conflict. Strategic considerations in policy design and advocacy; potential reaction to conflict. Relevant models and research findings generated by both case studies and comparative methods.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	534	Urban Services Infrastructure	Provides an overview of the network of services being provided in the urban environment by a variety of governmental and nongovernmental agencies. Discusses coordination, cooperation and overlap of services by local, special district, county, regional and state levels, alternate delivery methods including nonprofits, and the evolving relationship of these services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	540	Adv Policy Analysis	Emphasizes the structure of policy problems, forecasting policy alternatives, optimizing resources, and reducing uncertainty in policy making.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 505 with C or better
PAF	541	Program Evaluation	Various methodologies available for the evaluation of public policies and programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 501 with C or better
PAF	545	Organizations, Sustainability & Public Policy	Sustainability concerns are fast becoming a strategic issue for organizations in all sectors. In the last ten years, numerous organizations have completely redefined their business strategies in line with principles of sustainability by balancing the requirements for economic development, environmental quality and social justice, and governments worldwide are developing programs and policies that encourage these activities. Explores the connections between organization strategy--especially within the private sector, sustainability and public policy. Through a combination of practical cases, readings and lectures, class sessions engage students in discussions aimed at developing sustainability assessment models. Additionally, students apply new strategy tools that incorporate principles of proactive environmental management and social responsibility designed to enhance the public good.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only PAF or SOS 545
PAF	546	Environmental Policy and Management	Analyzes environmental policy and planning issues and principles related to the analysis and management of natural and urban/regional resources.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	547	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 515 or GLG 547 or HSD 515 or PAF 547 or SOS 516
PAF	548	Women/Politics/Public Policy	Explores how political philosophy, politics, and public policy affect and are affected by women.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	549	Diversity Issues and Public Policy	Examines public policy issues concerning or affecting women, black, Latino, Asian, and American Indian communities, as well as those groups' impact on the policy process.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	550	Governing Emerging Technologies	Examines the governance of science and technology through a focus on emerging technologies whose potential consequences in society are apparent only in anticipation and whose manifestations are still being shaped by local, domestic, and international institutions. These emerging technologies include nanotechnologies, synthetic biology, and other technologies associated with genetic modification, and information and cognitive science and neuro-technologies.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PAF 550, HSD 503 or POS 573
PAF	552	Integrated Emergency Management	Theory and practice of comprehensive emergency management. Explores scope and function of Department of Homeland Security.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	555	Information Technology in Emergency Management	Provides theory and application of computer-based programs in emergency management and the use of various emergency modeling programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	560	Community Resilience	Examines community resilience from a systems perspective, embracing governments, private, nonprofit and civic roles. Presents research, case studies, and strategies for policy planning and implementation. Provides an understanding of how community members respond to the need to prepare for, endure and recover from disasters and the ability to utilize multiple communication methods to help community members before, during and after these emergencies.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	561	Interoperability for Emergency Managers	Enables understanding of the multiple technologies and skills utilized by emergency managers to enhance successful coordination and communication between all levels of emergency managers and responders during emergency mitigation, prevention, preparedness, response and recovery operations.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 554

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PAF	564	Political Economy	Classical and contemporary literature and historical development of governmental and economic arrangements, with special emphasis on the role of the state.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	565	Theories and Practices of Democracy	Critically explores the wide range of ideas, issues, challenges, and promises related to democracy in theory and practice. Intended for all students interested in democratic leadership, public service, civic engagement, and participatory governance.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	566	Participatory Governance & Civic Engagement	Examines classic and current theoretical debates on participatory governance and civic engagement, discusses theoretical and practical implications, and analyzes different models of participatory governance.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	570	Microeconomics of Public Policy II	Provides the policy tools to solve economic problems such as market concentrations, market failures and externalities, and asymmetric information. Increasingly, government interventions are moving away from a command-and-control-style of direct provision of goods and services and toward a large menu of indirect approaches implemented through a complex system of third-party actors. Government intervention in private markets now entails loans and loan guarantees, grants-in-aid, contracts, vouchers, social and economic regulation, and many other policy tools. Each of these instruments involves vastly different behavioral distortions, policy technologies, political considerations and technical sophistication. Analyzes the economics of four policy interventions: grants, tax expenditures, social regulation and vouchers. Provides an overview of each tool (including its key design features) and combines economic theory with background information on how public policies actually operate.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 504 with C or better
PAF	571	Geographic Information Systems (GIS) and Analysis	Provides foundational information related to application of GIS technology to meet various needs within governmental operations, administration, and public policy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	573	Applied Econometrics	Applied treatment of the most important modern econometric methods used to evaluate public policies. Help students become savvy consumers of econometric methodology and develops the methodological skills necessary for implementing quantitative evaluations of public policies. Accordingly, course stresses critical thinking and creativity.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 502 with C or better
PAF	574	Diversity, Ethics, and Leading Public Change	Focuses on leadership, ethics, and benefits and tensions of the multicultural city to develop leadership and multicultural competence.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	579	Public Policy Capstone	Integrative, client-based project course.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	L	
PAF	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Public Affairs	1		
PAF	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Pre-requisite: Doctoral student
PAF	601	Seminar: Pol Analysis & Eval	Normative and conceptual issues of policy formulation, implementation, and evaluation; methods of policy analysis and evaluation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	602	Seminar: Foundations of Public Administration	Philosophy of science (including conduct of inquiry-epistemological and ontological foundations), historical development, and theoretical foundations of the field.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: Doctoral PAF student
PAF	603	Advanced Economics for Public Administration and Public Policy	Theory of utility and demand, theory of the producer, organization, operation of product and factor markets, market equilibrium, regulation, risk and uncertainty, general equilibrium and welfare policy, market failure, public goods and taxation, and game theory.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 504 with C or better; doctoral major

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PAF	604	Foundations of Public Administration II	Philosophy of science (including research design issues and alternative approaches) and contemporary public administration, including political, social, technological, and economic institutions involved in governance, exposure to research being conducted within department.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: Doctoral PAF student; PAF 602
PAF	610	Advanced Qualitative Methods for Public Affairs Research	Explores a number of qualitative research approaches and methods, including ethnography, ethnomethodology, participant observation, interviews, focus groups, content analysis, discourse analysis, and some comparative/historical methods. Also exploreS the important theoretical and ethical issues that bear on these approaches.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: PhD student
PAF	620	Public Administration Professional Development Workshop	Prepares doctoral students to become productive and effective public administration scholars, teachers, and researchers.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: Doctoral PAF student
PAF	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-15		
PAF	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Public Affairs	1		
PAF	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-15		
PBH	100	Introduction to Public Health	Introduces public health in the United States. Familiarize students with the broad discipline of public health and how it influences community and individual health status. Discusses the role of various agencies in public health, methods of measurement and evaluation, major public health issues in the United States, and factors that contribute to individual and community health. Solidifies concepts through the use of in-class discussion, group work and individual analysis.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Credit is allowed for only HCD 101 or PBH 100
PBH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
PBH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
PBH	300	Biostatistics	Biostatistics and its use in health and health services research. Familiarize students with statistical concepts and methods to analyze and interpret data and conceptually addresses statistical theory. Introduces SPSS software to analyze large data sets.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3	CS	Prerequisite(s): completion of General Studies MA requirement with C or better; minimum 45 hours. Credit is allowed for only HCD 300 or PBH 300
PBH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
PBH	422	Health Disparities and Access to Health	Racial and ethnic health disparities in the United States. Explores disparities in healthcare seen at the provider and system level and their effects on health in the community. Also considers the historical context of racial and ethnic health disparities and the demographic and conceptual issues surrounding health disparities research. Reflects on the effects of behavior, socioeconomic status and group-specific disparities on community health status.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): HCD 101 (or PBH 100) or BS Medical Studies major. Credit is allowed for only HCD 422 or PBH 422
PBH	444	Public Health Field Experience	Provides opportunity to gain experience working in community and public health settings. Course meetings provide guidance during the field experience and an opportunity for students to share their projects.	N	RSC	N	GNA	College of Health Solutions	College of Health Solutions	4		Prerequisite(s): EXW 450; HCD 101 or PBH 100
PBH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		
PBH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PGM	100	PGA/PGM Introduction	Introduces the golf professional training program. Career enhancement, rules of golf, tournament operations, and playing professional development programs.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	110	Player Development I	Introductory instruction on golf game improvement to assist PGM students in preparation for Players Ability Test.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	111	Player Development II	Instruction to assist PGM students in preparation for Players Ability Test with emphasis on full swing mechanics and practice plan development.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	112	Player Development III	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	113	Player Development IV	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	114	Player Development V	Introductory instruction on golf game improvement to assist PGM students in preparation for Player Ability Test.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	120	Golf for Business and Life	Introduces nongolfing students to the game of golf. For beginners.	N	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	130	PGA/PGM Level 1	Focuses on golf professional training program and the completion of the PGA Level One experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		
PGM	150	Teaching Golf I	Introduces golf instruction. Focus on fundamentals of golf swing and teaching techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		
PGM	166	Turf Equipment Management	Introduces turf equipment used on golf courses. Instruction in maintenance, adjustment, and safety issues.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
PGM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
PGM	200	PGA/PGM Level 2	Focuses on golf professional training program and the completion of the PGA Level Two experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		
PGM	250	Teaching Golf II	Communicating with student golfers, swing evaluation, key factors club fitting, developing a successful teaching practice.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
PGM	300	PGA/PGM Level 3	Business planning and operations, business communications related to business of golf. Completion of the PGA Level Three experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	350	Teaching Golf III	Teaching swing concepts. Developing a teaching philosophy, analyzing flawed swing mechanics through video and swing analysis software.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	367	Landscape Plants and Design	Identification, design, and use of plants in urban landscapes.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	4		Prerequisite(s): minimum 45 hours
PGM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
PGM	400	GPTP IV	Food and beverage control, supervision and delegation of golf facilities. Completion of the PGA Level Three experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	463	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
PGM	466	Integrated Pest Control	Management of pests affecting golf turf and landscape plants. Structural Pest Control Board sprayer certification preparation offered during the semester.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		
PGM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		
PGM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
PHI		Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	
PHI	101	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI		Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI		Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Pre-requisites: ENG 101, 105 or 107 with C or better
PHI	103	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Pre-requisites: ENG 101, 105 or 107 with C or better
PHI		Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 101, 105 or 107 with C or better
PHI		Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	
PHI	105	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI		Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI		Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	
PHI	120	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI		Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	205	Philosophy and Film	Introduces philosophical themes via the medium of film. Students read classical and contemporary literature in philosophy, view films that portray philosophical concepts, and demonstrate their understanding through writing assignments and class presentations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Credit is allowed for only PHI 205 or PHI 294 (Philosophy and Film)
PHI		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
PHI	300	Philosophical Argument and Exposition	Develops techniques of philosophical argument and exposition. Frequent written exercises. Course content may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Prerequisite(s): Philosophy majors; minimum 25 hours; ENG 102 with C or better
PHI	303	The Future of Religions	Critical theorists of modern religious and secular beliefs argued that both theism and atheism have had their martyrs and tyrants. Nietzsche proclaimed "God" of the West dead, Marx unmasked religion as opium for the oppressed masses, and Freud analyzed religious future as an unconscious illusion. The future of secular progress has become equally suspect in the wake of the Holocaust, Hiroshima, the gulags, the killing fields of Cambodia, Rwanda. Globally motivated terror revealed itself as capable of religious as much secular justifications. The future of faith and reason has become a doubly open theoretical and practical question in philosophy, religious studies, literary study, critical theory, cultural and gender studies, and all sciences. Applies theoretical and methodological tools to critically exam beliefs, practices, and communities and their role in both generating and transforming the ethical and spiritual discontents of the global age.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only HON 394 (The Future of Religions), PHI 303 or REL 300
PHI		Existentialism	Covers such topics as absurdity, authenticity, the meaning of life and death, responsibility, and subjectivity. May include readings in phenomenology.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI	304	Existentialism	Covers such topics as absurdity, authenticity, the meaning of life and death, responsibility, and subjectivity. May include readings in phenomenology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI		Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	
PHI	306	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI		Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI		Philosophy of Law	Nature and source of law and its relation to morality. Legal rights, legal enforcement of morals, civil disobedience, liability and responsibility, punishment, judicial reasoning, justice, property, and differences between theories of natural and positive law.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours
PHI	307	Philosophy of Law	Nature and source of law and its relation to morality. Legal rights, legal enforcement of morals, civil disobedience, liability and responsibility, punishment, judicial reasoning, justice, property, and differences between theories of natural and positive law.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 hours
PHI	310	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Credit is allowed for only BIO 324 or PHI 310

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI		Philosophy and Literature	In-depth study of selected literary and philosophic texts. Addresses philosophical problems such as the nature of moral goodness and human relations; the purpose of life; or the relations among beauty, truth and justice. Also addresses whether literary aspects of philosophical texts such as myth, image, metaphor or rhetorical devices contribute to meaning or promote ethical insight as well as interdisciplinary tensions and bridges between rhetoric and philosophy.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	Prerequisite(s): minimum 45 hours
PHI	311	Philosophy and Literature	In-depth study of selected literary and philosophic texts. Addresses philosophical problems such as the nature of moral goodness and human relations; the purpose of life; or the relations among beauty, truth and justice. Also addresses whether literary aspects of philosophical texts such as myth, image, metaphor or rhetorical devices contribute to meaning or promote ethical insight as well as interdisciplinary tensions and bridges between rhetoric and philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours
PHI		Philosophy and Literature	In-depth study of selected literary and philosophic texts. Addresses philosophical problems such as the nature of moral goodness and human relations; the purpose of life; or the relations among beauty, truth and justice. Also addresses whether literary aspects of philosophical texts such as myth, image, metaphor or rhetorical devices contribute to meaning or promote ethical insight as well as interdisciplinary tensions and bridges between rhetoric and philosophy.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 hours
PHI	313	Probability, Evidence, and Decision	Philosophical topics in epistemology and practical reasoning; probability and its use in representing and reasoning about belief, evidence, and rational choice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: MAT 119 (or higher); Minimum 30 hours. Credit is allowed for only HPS 313 or PHI 313
PHI	314	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI		Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI	318	Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI		Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI		Philosophy, Computing and Artificial Intelligence	Philosophical problems surrounding artificial intelligence (AI). Thinking as computation and AI; the ethics, epistemology and metaphysics of computing.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	CS	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 25 hours
PHI	319	Philosophy, Computing and Artificial Intelligence	Philosophical problems surrounding artificial intelligence (AI). Thinking as computation and AI; the ethics, epistemology and metaphysics of computing.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	CS	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 25 hours
PHI		Philosophy, Computing and Artificial Intelligence	Philosophical problems surrounding artificial intelligence (AI). Thinking as computation and AI; the ethics, epistemology and metaphysics of computing.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	CS	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 25 hours
PHI	320	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only BIO 312 or IAS 340 or PHI 320
PHI		Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	322	History and Philosophy of Sustainability	Examines sustainability issues in a broadly interdisciplinary way, but with a special emphasis on humanities perspectives, focusing on human ideas, values and institutions as they have evolved over time.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours; Credit is allowed for only HST 308 or PHI 322 or SOS 309 or BIO/HST/PHI/SOS 394 (History & Philosophy of Sustainability)
PHI	324	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	325	Philosophy of Social Science	Philosophical problems surrounding the aims, structure, and methods of the social sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU or SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	326	Philosophy of Happiness	Examines ancient and contemporary philosophical models of happiness and consideration of criteria for living a life of human flourishing.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better
PHI	328	History of Ancient Philosophy	History of Western philosophy from its beginnings through the Hellenistic period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 25 hours
PHI	329	History of Modern Philosophy	History of Western philosophy from the Renaissance through Kant.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	330	Theory of Knowledge	Nature, sources, and limits of human knowledge. Topics may include truth, a priori knowledge, empirical knowledge, perception, induction, and skepticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	331	Philosophy of Language	Problems pertaining to the nature of language, including meaning, reference, truth, definition, analyticity, translatability, synonymy, and contributions of contemporary linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	332	Metaphysics	Problems pertaining to the nature of reality. Topics may include nature of person, minds, substance, universals, space, time, causation, and modality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	333	Symbolic Logic	Studies symbolic techniques to represent knowledge, deductive arguments, refutation by counter-example, and model-theoretic representation. Covers propositional and first-order predicate logic and provides a deeper understanding of theories about the world and of reasoning in life generally. Students gain a valuable tool for any field or discipline in which rigorous thinking is necessary such as science, medicine, business and the legal profession.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102 or 105 or 108 with a C or better; Minimum 25 hours
PHI	334	Philosophy of Mind	Nature of consciousness. Common sense view of mind, behaviorism, materialism, dualism, functionalism, self-knowledge, and knowledge of other minds.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	335	History of Ethics	Major works of moral philosophy, both ancient and modern, such as those by Plato, Aristotle, Hobbes, Hume, Kant, and Mill.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI		History of Ethics	Major works of moral philosophy, both ancient and modern, such as those by Plato, Aristotle, Hobbes, Hume, Kant, and Mill.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	336	Social and Political Philosophy	Alternative principles and methods relevant to problems of human association and conflict; discusses justice and power, freedom and equality, and autonomy and order.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI		Social and Political Philosophy	Alternative principles and methods relevant to problems of human association and conflict; discusses justice and power, freedom and equality, and autonomy and order.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	337	Ethical Theory	Theories in normative ethics about the nature of what is right and wrong, good and bad, virtuous and vicious. May include issues in metaethics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	338	Metaethics	Concerns questions about the nature of value, morality, and normativity in general, such as "Is morality objective, subjective, or relative?"	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 25 hours. Credit is allowed for only PHI 338 or PHI 420 (Metaethics)
PHI	339	Philosophy of Art	Central problems in philosophy of art, e.g., the nature of a work of art, modern and traditional theories of art, aesthetic perception and experience, and objectivity and relativity in art criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours
PHI		Philosophy of Art	Central problems in philosophy of art, e.g., the nature of a work of art, modern and traditional theories of art, aesthetic perception and experience, and objectivity and relativity in art criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 hours
PHI	347	Philosophical Theories of Constitutional Interpretation	In-depth study of the philosophical theories surrounding constitutional rights and interpretation.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	348	Business and Professional Ethics	Examines moral theories applied to cases of corporate responsibility, property rights, environment, fairness, profit, employee rights, and responsibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours

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PHI	300	Business and Professional Ethics	Examines moral theories applied to cases of corporate responsibility, property rights, environment, fairness, profit, employee rights, and responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 hours
PHI	390	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
PHI	390	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
PHI	391	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357, PHI 391 or REL 391
PHI	391	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357, PHI 391 or REL 391
PHI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
PHI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
PHI	401	Rationalism	Examines classical philosophical rationalism, as in Descartes, Spinoza, Malebranche, or Leibniz. Contemporary rationalist thought may also be examined.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Undergraduate Philosophy student; Minimum 56 hours
PHI	402	Empiricism	Examines representatives of either classical or contemporary philosophical empiricism, e.g., Bacon, Hobbes, Locke, Butler, Berkeley, Reid, Hume, Mill, Carnap, and Ayer.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Undergraduate Philosophy student; Minimum 56 hours
PHI	403	Contemporary Analytic Philosophy	Aims and methods of such 20th-century philosophers as Frege, Moore, Russell, Wittgenstein, Carnap, Ayer, Wisdom, Ryle, Austin, Strawson, Quine, and Sellars, with application to metaphysics and epistemology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Undergraduate Philosophy student; Minimum 56 hours
PHI	405	Moral Psychology	Advanced study of key, contemporary authors and issues in moral psychology as a subfield of philosophy.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy undergraduate major; minimum 56 hours; Credit is allowed for only PHI 405 or PHI 420 (Moral Psychology) or PHI 530
PHI	406	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 101 or 105 or 107 with C or better. Credit is allowed for only FOR 406 or IAS 406 or PHI 406
PHI	407	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHI	407	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHI	408	Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 earned hours. Credit is allowed for only IAS 408 or PHI 408

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PHI		Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 earned hours. Credit is allowed for only IAS 408 or PHI 408
PHI	409	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Credit is allowed for only IAS 409 or PHI 409
PHI	411	Continental Philosophy	Contemporary European thought emerges out of a crisis of the Enlightenment that unfolds throughout the 19th and 20th centuries. Kant's critique of the theoretical, practical, aesthetic and religious foundations articulates this crisis in Western philosophy, society and culture. Explores Continental thinkers and schools of thought in light of Kant's understanding of this crisis. Figures might be Nietzsche, Marx, Freud, Kierkegaard, Husserl, Heidegger, Benjamin, Adorno, Marcuse, Sartre, de Beauvoir, Irigaray, Kristeva, Spivak, Habermas, Lévinas, Marion, Derrida and others. Schools of thought considered may include existentialism, phenomenology, hermeneutics, critical theory, poststructuralism, deconstruction, feminist theory, critical race theory, postcolonial theory, and comparative philosophy. Continental philosophy dovetails with other fields like communication, cultural studies, law, political science, religious studies, literature and various social sciences.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours. Credit is allowed for only PHI 411 or PHI 494 (Continental Philosophy & Religion) or PHI 494 (Studies in Continental Philosophy)
PHI	412	Philosophy and Literary Criticism	Explores dynamic tensions between philosophical and literary critical approaches to texts. Aims to identify distinct ways that literature and critical practices "philosophize" about truth, moral dilemmas or existential struggles. Probes the challenges that each form of inquiry, philosophical and critical, poses for the other. Seeks to enhance understanding of the philosophical underpinnings of key literary works. May address poetry, novels and other media.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 101 or 105 or 107 with C or better; minimum 30 hours. Credit is allowed for only PHI 412 or PHI 494 (Philosophy and Literature) or ENG 401 (Philosophy and Literary Criticism)
PHI	413	Advanced Symbolic Logic	Properties of formal systems axiomatizing propositional and 1st-order predicate logic. May also include modal logic, number theory, and limits of logicism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): undergraduate Philosophy student; minimum 56 hours; Credit is allowed for only PHI 413 or PHI 556
PHI	420	Topics in Philosophy	Course descriptions on file in department.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): undergraduate Philosophy major; minimum 56 hours
PHI	421	Philosophical Topics	Focuses on important issues within the discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
PHI	428	Immunophilosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: MIC 420, PHI 317, HPS314, or PHI 428 with C or better. Credit is allowed for only MIC 428 or PHI 428
PHI	439	Philosophy of Love and Sex	Advanced introduction to historical and contemporary philosophical writings and sociological case studies on the philosophy of sex and love.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only PHI 439 or PHI 494 (Philosophy of Love and Sex)
PHI	448	Justice and Reparations	Advanced study of the moral basis of reparations and reparative justice.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy undergraduate major; minimum 56 hours; Credit is allowed for only PHI 420 (Jus/Reparations) or PHI 448 or PHI 527
PHI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
PHI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
PHI	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
PHI	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7	L	
PHI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
PHI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
PHI	501	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
PHI	520	Topics in Applied Philosophy	Selected topics in applied philosophy.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	521	Bioethics	Addresses current controversies and major topics in bioethics and biosciences.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Found-Bioethics) or PHI 521
PHI	522	Ethics of Sustainability	Explores the normative framework of sustainability.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Topics in the Ethics of Sustainability) or PHI 522
PHI	524	Disaster Ethics	Investigates moral and political questions connected to disasters and emergencies such as obligations of aid workers, responsibilities for preparedness and rebuilding, and related social justice questions.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Ethics and Disaster) or PHI 524
PHI	525	Rational Choice	Recent philosophical work on rational decision making.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Rational Choice) or PHI 525
PHI	526	Evolution and Strategic Interaction	Recent work on the philosophical significance of evolutionary models of social interactions and social structures.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	527	Justice and Reparations	Explores the moral, legal and political aspects of reparative justice after episodes of mass violence, massive human rights violations and intergenerational harms to specific groups (for example, African-Americans and Indigenous peoples). Explores what normative moral conceptions of reparative and restorative justice support obligations to repair historical injustice, as well as contemporary forms of systemic or structural injustice for affected groups.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Jus/Reparations) or PHI 448 or PHI 527
PHI	529	Feminist Philosophy	Examines contemporary feminist work in some of the subfields of philosophy, such as ethics, political philosophy, epistemology.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Feminist Philosophy) or PHI 529

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PHI	530	Moral Psychology	Central issues and texts in moral psychology including the impact of psychological research on philosophical theorizing.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 405 or PHI 420 (Moral Psychology) or PHI 530
PHI	531	Philosophy of Emotion	Theories of what an emotion is and the relevance of emotion to work in various subfields of philosophy such as ethics and philosophy of fiction.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	532	Experimental Philosophy	Examines experimental work taken to directly bear on important philosophical theories.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Experimental Philosophy) or PHI 532
PHI	533	Philosophy and Art	Recent philosophical work in the philosophy of fiction, visual art and/or music. Also discusses the fittingness of art works to address philosophical topics, especially in ethics.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Philosophy of Art) or PHI 533
PHI	540	Topics in Value Theory	Selected topics in value theory.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	541	Normative Ethics	Explores one or more leading normative ethical theories that inform the contemporary discussions in ethics, applied ethics, issues of justice and human rights, and public policy.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Normative Ethics) or PHI 541
PHI	544	Studies in Meta-Ethics	Selected topics in meta-ethics.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	545	Studies in Philosophy of Law	Selected topics in the philosophy of law.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	546	Studies in Political Philosophy	Selected topics or figures in political philosophy.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	555	Topics in Formal Methods	Selected topics in formal methods.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	556	Advanced Symbolic Logic	Advanced topics in logic relevant to philosophical theorizing such as modal, deontic and temporal logic.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	557	Philosophy of Mathematics	Examines selected topics and theories in the philosophy of mathematics.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Philosophy of Mathematics) or PHI 557
PHI	560	Topics in Epistemology	Selected topics in epistemology	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	562	Perception	Recent work on the nature and content of perception.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Perception) or PHI 562
PHI	565	Probabilism	Recent work on rational belief, evidence and belief change.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	566	Studies in Philosophy of Science	Selected topics in philosophy of science.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	570	Topics in Metaphysics	Selected topics in metaphysics	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	571	Studies in Philosophy of Mind	Selected recent philosophical work in philosophy of mind such as the nature of sensation and perception, theories of consciousness, and the unity of the self	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	572	Studies in Philosophy of Language	Selected recent philosophical work in philosophy of mind language as theories of meanings, direct reference and vagueness.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): MA or PhD Philosophy major. Credit is allowed for only PHI 420 (Philosophy of Language) or PHI 572

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PHI	576	Realism	Recent work on realism and anti-realism, starting with Michael Dummett, and including philosophers such as Hilary Putnam, Donald Davidson, John McDowell and Kit Fine. Global realism and anti-realism and more specific realisms/antirealisms about the past, the mind, theoretical entities, mathematics and ethics.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	581	Studies in Ancient Greek Philosophy	Selected topics in ancient philosophy from 585 BC to 529 AD.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	582	Studies in Modern Philosophy	Selected topics and significant figures in the modern period.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	586	20th and 21st C. Philosophers	Examines the work of one or more philosophers prominent in the 20th or 21st century.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	587	Topics in the History of Philosophy	Selected topics in the history of philosophy.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Masters or Doctoral Philosophy student.
PHI	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		
PHI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PHI	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PHI	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHI	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		
PHI	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHL	385	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		

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PHL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
PHL	480	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		
PHS	110	Fundamentals of Physical Science	One-semester survey of the principles of physics and chemistry. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	
PHS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHS	208	Patterns in Nature	Examines topics from optics to analytical techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	Credit is allowed for only MSE 208 or PHS 208
PHS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
PHS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Prerequisite(s): Barrett Honors student
PHS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		
PHS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		
PHS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	505	Energy and the Environment	Current problems in energy resources, production, consumption, and conservation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	530	Methods of Physics Teaching I	Inquiry approach to high school physics teaching.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	531	Methods of Physics Teaching II	Extension of modeling techniques introduced in PHY 580.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	534	Methods of Teaching Physical Science I, II, III	Design of curriculum and conduct of instruction for physical science courses.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	540	Integrated Physics and Chemistry	Collaborative inquiry methods for teaching and coordinating physics and chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CHM 540 or PHS 540
PHS	542	Integrated Mathematics and Physics	Mathematical models and modeling as an integrating theme for secondary mathematics and physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	556	Astrophysics	Structure and evolution of stars, galaxies, and the universe. For secondary school teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	560	Matter and Light	Interactions of light with matter. Lasers and spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	570	Spacetime Physics	Special and general theories of relativity with implications for space and time travel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	581	Structure of Matter and its Properties	Models of matter and its properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CHM 581 or PHS 581

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1		
PHS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1		
PHS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	101	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	SQ	
PHY		Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	
PHY		Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	
PHY		General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SQ	Prerequisite(s): MAT 170 or higher with C or better, or minimum score of 56% on the Mathematics Placement Test, or Corequisite(s): MAT 210 or higher

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	111	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3	SQ	Prerequisite(s): MAT 170 or higher with C or better, or minimum score of 56% on the Mathematics Placement Test, or Corequisite(s): MAT 210 or higher
PHY		General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	Prerequisite(s): MAT 170 or higher with C or better, or minimum score of 56% on the Mathematics Placement Test, or Corequisite(s): MAT 210 or higher
PHY		General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SQ	Pre-requisites: PHY 111 with C or better
PHY	112	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3	SQ	Pre-requisites: PHY 111 with C or better
PHY		General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 111 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	Pre-requisites: PHY 111 with C or better
PHY		General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	113	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY		General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY		General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	114	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY		General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	118	Explorations in Science Teaching	Examines the field of physical science education via in-class meetings and classroom settings. Discusses the theory, pedagogy and practice of teaching physical science. Reviews various curricula available for the teaching of physical science with a focus on state and national standards. Students work with course instructor(s) to design three lessons that work toward some of the objectives of each cooperating teachers' class. Students are aided in developing materials, guided in planning to teach the lesson, and given time to prepare and practice the lesson.	N	SEM	N	GNA	Liberal Arts and Sciences	Department of Physics	1		Pre-requisite: Mathematics or Physics or other science major
PHY		University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisite: MAT 266 or MAT 271 with C or better if completed
PHY	121	University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisite: MAT 266 or MAT 271 with C or better if completed
PHY		University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1	SQ	Pre/Co-requisite: PHY 121 with C or better if completed
PHY	122	University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1	SQ	Pre/Co-requisite: PHY 121 with C or better if completed

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PHY	131	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SQ	Pre-requisites: MAT 266 or MAT 271 with C or better; PHY 121 with C or better; Pre/Co-requisite: MAT 267 or MAT 272 with C or better if completed
PHY		University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3	SQ	Pre-requisites: MAT 266 or MAT 271 with C or better; PHY 121 with C or better; Pre/Co-requisite: MAT 267 or MAT 272 with C or better if completed
PHY	132	University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	College of Letters & Sciences	College of Letters and Sciences	1	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY		University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY	150	Physics I	Introductory physics for majors. Kinematics, Newton's Laws, basic forces, energy, momentum, special relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisites: MAT 266 or MAT 271 with C or better if completed
PHY	151	Physics II	Continuation of PHY 150. Electromagnetic fields; Ampere's and Faraday's Laws; Maxwell's equations; basic circuit elements.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	Pre-requisites: MAT 266 or MAT 271 with C or better; PHY 150 (or PHY 121 and PHY 122) with C or better; Pre/Co-requisite: MAT 267 or MAT 272 with C or better if completed
PHY	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHY	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	201	Mathematical Methods in Physics I	Differential equations, linear equations, vectors, matrices, Fourier series, and numerical methods.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Physics	3	CS	Prerequisite(s): MAT 267 or 272 with C or better; PHY 151 or PHY 131 and 132 with C or better
PHY	241	University Physics III	Thermodynamics, kinetic theory, physical and wave optics, relativity, photons, matter waves, atomic physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 131
PHY	252	Physics III	Continuation of PHY 151. Wave physics, oscillations, harmonic systems, physical optics, thermodynamics, kinetic theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	Prerequisite(s): MAT 267 or 272 with C or better; PHY 151 or PHY 131 and 132 with C or better
PHY	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHY	302	Mathematical Methods in Physics II	Continuation of PHY 201. Vector calculus, complex variables, partial differential equations, special functions, numerical methods.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY201 with C or better
PHY	310	Classical Particles, Fields, and Matter I	Particle kinematics, mechanics, conservation laws, particle motion in force fields, dynamics of two-body systems, reference frames, rigid body motion, relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 201 with C or better; PHY 252 with C or better. Co-requisite: PHY 302
PHY	311	Classical Particles, Fields, and Matter II	Electrostatic and gravitational fields, Poisson and Laplace equations, dielectric materials, magnetic fields and materials, magnetic induction, Faraday's Law.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 302 with C or better; PHY 310 with C or better
PHY	312	Mechanics and Electromagnetism	Covers two major topics in physics, both dealing with forms of energy and momentum and how they are transmitted in space. Covers mechanics and dynamics, describing how bodies with mass move under various types of forces. Also covers electromagnetism, which describes how electric charges and magnets, and their motions, generate fields of force. Also describes how time-varying electric and magnetic fields are associated with electromagnetic waves, which include light.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 150, 151, and 252 (or PHY 121, 122, 131 and 132) with C or better

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PHY	314	Quantum Physics I	Photons, models of the atom, wave properties of matter, introduction to wave mechanics, 1-D systems in quantum mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisites: PHY 201 with C or better; PHY 252 with C or better
PHY	315	Quantum Physics II	General principles of quantum mechanics, 3-D problems, approximation methods, spin, introduction to many-particle systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 302 with C or better; PHY 314 with C or better
PHY	321	Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		
PHY		Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	331	Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		
PHY		Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	333	Electronic Circuits and Measurements	Basic principles of electronic circuit analysis and measurement techniques using modern instrumentation and computer-aided analysis of data.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 (or PHY 131 and PHY 132) with C or better
PHY	334	Advanced Laboratory I	Selected experiments from contemporary physics. Emphasizes modern instrumentation, computer-assisted acquisition and analysis of data, and report form writing.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Physics	3	L	Prerequisite(s): MAT 267 or 272 with C or better; PHY 151 (or PHY 131 and 132) with C or better; Pre- or Corequisite(s): PHY 314, 361, CHM 345 or EEE 434
PHY	361	Introductory Modern Physics	Special relativity and introductory quantum theory with applications drawn from atomic, nuclear, and solid-state physics.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		PHY 131 or PHY 151 with C or better; MAT 272 or MAT 267 with C or better
PHY		Introductory Modern Physics	Special relativity and introductory quantum theory with applications drawn from atomic, nuclear, and solid-state physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		PHY 131 or PHY 151 with C or better; MAT 272 or MAT 267 with C or better
PHY	371	Driving Forces in Biology	What are the stable states of biomolecules? How do molecules interact? What forces drive molecules to bond and associate, to adsorb, to permeate through membranes, to undergo chemical reactions, to undergo conformational changes? Why are some changes gradual, as in the weakening of a ligand interaction with temperature, and others sudden (cooperative) such as protein folding or the insolubility of oil in water? Addresses these questions by statistical thermodynamics, a collection of principles and models that when combined with thermodynamics, aim to explain molecular forces and flows.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: PHY 252
PHY	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
PHY	412	Classical Particles, Fields, and Matter III	Electromagnetic fields of moving charges, Maxwell's equations, harmonic phenomena, oscillations, waves, electromagnetic radiation, covariant electromagnetism, introduction to general relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: PHY 311 with C or better
PHY	416	Quantum Physics III	Introduces the quantum theory of atoms, molecules, solids and nuclei, Dirac's equation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: PHY 315 with C or better
PHY	441	Statistical and Thermal Physics	Statistical and experimental basis of heat, temperature, and entropy. Mechanical and statistical basis of the laws of thermodynamics. Applies macroscopic thermodynamics. Phase equilibrium.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	444	Fundamentals of Nanoscience	For senior science majors and beginning graduate students teaching the cross-disciplinary subject of nanoscience. There is a strong emphasis on basics, so the course starts with a fairly rigorous introduction to quantum mechanics, statistical mechanics and chemical kinetics, though enough material is provided to allow nonphysics majors to come up to speed in these areas. This is followed by a survey of experimental techniques in nanoscience: microscopy, optical spectroscopy and scanning probe methods, and nanofabrication methods including "top down" and self assembly. Finally we survey applications: electrons in nanostructures, molecular electronics, nanomaterials and bio-nanoscience.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: Junior or Senior standing; Credit is allowed for only PHY 444 or 494 (Intro to Nanoscience)
PHY	452	Physical Optics	Principles of reflection, refraction, diffraction. Additional topics from contemporary optics may include Fourier transform spectroscopy, linear systems theory, holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 302 with C or better; PHY 311 with C or better

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PHY	456	Laser Optics	Theoretical and experimental aspects of applied optics including basic concepts of lasers, properties of optical beams, resonators and interferometry. Course consists of two parts: preparatory labs and applied projects. Preparatory labs provide theoretical and technical background for understanding of general features of electromagnetic wave propagation and technical features of optical lasers including high-power laser systems. Applied projects give students the opportunity to use laser optical systems to solve real-world problems.	N	LEL	N	GNA	College of Letters & Sciences	College of Letters and Sciences	4		Prerequisite(s): PHY 361; Credit is allowed for only ABS 494 (Advanced Laser Laboratory), ABS 494 (Laser Optics) or PHY 456
PHY	462	Particle and Nuclear Physics	Nuclear properties, models, decays and reactions; fundamental forces, field theories, symmetry principles; hadrons, quarks, and leptons; the Standard Model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	465	Advanced Laboratory II	Continuation of PHY 334. Students may substitute a short laboratory research project for one of the elective experiments of the course, in consultation with a faculty sponsor and the course instructor.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 334 with C or better
PHY	472	Advanced Biophysics Lab	Offers selected experiments from contemporary biophysics. Emphasizes modern instrumentation, computer-assisted acquisition and analysis of data, and report writing. Emphasizes the importance of good notebook keeping.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): PHY 371
PHY	473	From Molecules to Cells	Offers selected subjects from biological physics covering the length scales from biomolecules to cells. Builds on knowledge acquired from thermodynamics and statistical mechanics to formulate basic principles behind the working of life systems. Free energy, entropic forces, chemical potentials and electrostatic interactions rule the "nanometer soup" of a living cell. Proton gradients across cell membranes are behind all the energy consumed by life. Random walks, dissipative dynamics, and hydrodynamic fluxes rule time-dependent phenomena. Covers systems including biomolecules, membranes, cells and nerves.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: PHY 371 with C or better; Pre/Co-requisite: PHY 472 with C or better if completed
PHY	480	Methods of Teaching Physics	Evaluates various approaches to the teaching of high school physics. Preparation of demonstrations and experiments. Organization of a lab. Designed for secondary school physics teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	481	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better; Credit is allowed for only MSE 526, NAN 511, PHY 481 or 511
PHY	482	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 481 with C or better; Credit is allowed for only MSE 527, NAN 512, PHY 482 or 512
PHY	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHY	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Prerequisite(s): Barrett Honors student
PHY	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		Prerequisite(s): minimum 45 hours
PHY		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		Prerequisite(s): minimum 45 hours
PHY	495	Project Research	Supervised project in physics or astrophysics. May be repeated for credit.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		
PHY	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHY	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		
PHY		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		Prerequisite(s): minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		Prerequisite(s): minimum 45 hours
PHY	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	511	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: Degree- or nondegree-seeking graduate; Credit is allowed for only MSE 526, NAN 511, PHY 511
PHY	512	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 511; Credit is allowed for only MSE 527, NAN 512, PHY 482 or PHY 512
PHY	521	Classical and Continuum Mechanics	Variational principles, Lagrange's and Hamilton's equations, canonical transformations, Hamilton-Jacobi theory, introduction to chaos and nonlinear dynamics, fundamentals of elasticity theory and fluid mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	523	General Relativity	Special and general theories of relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	531	Electrodynamics	Special theory of relativity, covariant formulation of electromagnetic interactions, Maxwell's equations, electrostatics and magnetostatics, dielectric media, inhomogeneous wave equations, Lienard-Wiechert potentials, interactions of charged particles and electromagnetic waves, scattering and diffraction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	541	Statistical Physics	Postulates of statistical mechanics, equilibrium ensembles, Bose and Fermi statistics, density matrix, modern theory of phase transitions, fluctuations, and linear response theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	542	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	544	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CHM 544, NAN 544, PHY 444 or PHY 544
PHY	546	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 546, NAN 546 or PHY 546
PHY	552	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 552, NAN 552, SEM 552, or PHY 552
PHY	553	Electron Microscopy Laboratory I	Lab support for PHY 552.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Corequisite(s): MSE 552 or PHY 552; Credit is allowed for only MSE 553 or PHY 553
PHY	554	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent beam diffraction, and electron holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE or PHY 554
PHY	555	Electron Microscopy Laboratory II	Lab support for PHY 554.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	571	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples from physics, chemistry and nanoscience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 571, NAN 571 or PHY 571
PHY	576	Quantum Theory	Operator methods in quantum mechanics, time-independent perturbation theory, variational methods, angular momentum and group representation theory, identical particles; quantum dynamics, including time-ordered operators, time-dependent perturbation theory, and Fermi's golden rule.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		

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PHY	577	Introduction to Quantum Field Theory	Explains necessity of generalizing quantum mechanics to a field theory viewpoint. Studies properties of scalar, spinor, and gauge fields; incorporates interactions; and learns to compute amplitudes, cross sections, and decay rates using formalism of Feynman diagrams.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PHY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	581	Quantum Theory of Solids I	Band structure models; pseudopotentials, density functional theory; optical and magnetic response; elementary excitations; transport theory, electron-photon interactions and superconductivity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	582	Quantum Theory of Solids II	Continuation of PHY 581: broken symmetry; phase transitions; disorder, topological defects; nano-structures topics; soft condensed matter and current research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1		
PHY	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PLA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
PLA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		

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PLA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
PLA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
PLA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
PLA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
PLA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
PLA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7		
PLA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
PLA	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
PLA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
PLA	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		

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PLA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
PLA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
PLB	108	Concepts in Plant Biology	Introduces concepts of plant biology that are of human relevance using commercially important, edible, and medicinal plants as examples. Not for majors in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SQ	
PLB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	300	Plant Diversity and Evolution	An examination of the major groups of land plants, emphasizing evolutionary history, comparative data, and phylogenetic methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	L or SG	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200) with C or better or BIO 281 and BIO 282 with C or better; Credit is allowed for only LSC 307 or PLB 300
PLB	300	Plant Diversity and Evolution	An examination of the major groups of land plants, emphasizing evolutionary history, comparative data, and phylogenetic methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	L or SG	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200) with C or better or BIO 281 and BIO 282 with C or better; Credit is allowed for only LSC 307 or PLB 300
PLB	302	Plants and Civilization	Plants and plant products used by people throughout the world. Cultivation, processing, and uses in modern life (beverages, fibers, foods, medicinals, and perfumes).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	302	Plants and Civilization	Plants and plant products used by people throughout the world. Cultivation, processing, and uses in modern life (beverages, fibers, foods, medicinals, and perfumes).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	305	Cacti and Succulents	Adaptive biology of desert annuals, cacti, and succulents, analyzing diverse traits that permit survival in deserts: reproduction, structure, and physiology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 with C or better
PLB	306	Plant Anatomy	Development and mature structure of tissues of vascular plants; patterns and modifications of the leaf, stem, root, and flower.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better

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PLB	308	Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 with C or better
PLB		Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 with C or better
PLB	310	The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) OR BIO 281 and 282 with C or better
PLB		The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) OR BIO 281 and 282 with C or better
PLB	350	Applied Genetics	Introduces molecular genetics with emphasis on application of genetics to solve biological questions and to engineer organisms for biotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 340 or MBB 247 or MBB 347 with C or better; Credit is allowed for only MBB 350 or PLB 350
PLB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): minimum 45 hours
PLB		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): minimum 45 hours
PLB	401	Mycology	Fungal morphology and systematics with an introduction to fungal cell biology, ecology, economic significance, and growth and development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	407	Plant Fossils and Evolution	Broad survey of plant life of the past, including the structure of plant fossils, their geologic ranges, geographic distribution, and paleoenvironment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	414	Plant Pathology	Identification and control of biotic and abiotic factors that cause common disease problems to plants.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB		Plant Pathology	Identification and control of biotic and abiotic factors that cause common disease problems to plants.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	419	Physiological Plant Ecology	Physiological and morphological responses and adaptations of plants to their environment, emphasizing mechanisms that influence carbon and water balance, growth, and population distributions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 320 or PLB 308 with C or better; Credit is allowed for only BIO 419, PLB 519, BIO 519 or PLB 419
PLB	420	Plant Ecology: Organisms and Populations	Factors and controls on the physiological ecology and organization of plants and plant populations using empirical and theoretical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 320 with C or better

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PLB	422	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 181,GPH 111 or PLB 200 with C or better; Credit is allowed for only GPH or PLB 422
PLB	432	Computer Applications in Biology	Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	CS	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 406 or PLB 432
PLB	440	Photobiology	Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 464 or PLB 440
PLB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
PLB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
PLB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
PLB	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Junior or senior standing; Credit is allowed for only MBB 496, BIO 496, MIC 496 or PLB 496
PLB	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
PLB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
PLB	502	Perspectives in Plant Biology	Introduces major areas of research within the department with the goal of broadening knowledge to enable multidisciplinary research and communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
PLB	519	Physiological Plant Ecology	Physiological and morphological responses and adaptations of plants to their environment, emphasizing mechanisms that influence carbon and water balance, growth, and population distributions	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student; Credit is allowed for only PLB 419, BIO 419, BIO 519 or PLB 519
PLB	525	Microclimate Methods	Techniques to measure and quantify microclimate and mass transfer. Supporting principles.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
PLB	558	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
PLB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		
PLB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLB	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		
PLB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLC	101	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
PLC	102	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
PLC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
PLC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	201	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
PLC	202	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Pre-requisites: PLC 201 with D
PLC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	311	Advanced Polish I	Develops writing ability and oral expression.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: PLC 202 with C or better; Credit is allowed for only PLC 311 or 394, Polish Comp and Conversation
PLC	312	Advanced Polish II	Develops writing ability and oral expression.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: PLC 311 with C or better
PLC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	11-12		
PLC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
PLC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student

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PLC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	101	Elementary Portuguese	Basic grammar with intensive drills in class and lab directed toward conversational fluency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
POR	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
POR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	201	Intermediate Portuguese	Continuation of POR 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: POR 101 with C or better
POR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	313	Portuguese Composition and Conversation	Develops skill in written Portuguese and corrected oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: POR 201 with C or better
POR	314	Portuguese Composition and Conversation	Continuation of POR 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: POR 313 with C or better
POR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	472	Luso-Brazilian Civilization	Lectures, readings, and discussion of important aspects of Luso-Brazilian civilization. Topics from music, art, folklore, literature, history, and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisites: POR 313 with C or better; Credit is allowed for only POR 472 or 598 (Luso-Brazilian Civilization)
POR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12	G	Pre-requisite: Junior standing; Credit is allowed for only GCU 485, GPH 485, LAP 485, POR 485, PUP 485 or 585
POR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
POR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
POR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
POR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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POR	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POS		Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	110	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS		Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS		Foundations of Democracy	Introduces an interdisciplinary study of democracy with special attention to its historical development as a form of government.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Credit is allowed for only HST 112 or POS 112 or HST 194 (Foundations of Democracy)
POS	112	Foundations of Democracy	Introduces an interdisciplinary study of democracy with special attention to its historical development as a form of government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Credit is allowed for only HST 112 or POS 112 or HST 194 (Foundations of Democracy)
POS		Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	
POS	150	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS		Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS		Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	Credit is allowed for only POL 160, POS 360 or POL 360
POS	160	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Credit is allowed for only POL 160, POS 360 or POL 360
POS		Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only POL 160, POS 360 or POL 360
POS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		Pre-requisites: Freshman status; Maximum 25 hours
POS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		Prerequisite(s): maximum 25 hours
POS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		Prerequisite(s): maximum 25 hours
POS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): maximum 25 hours
POS		Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
POS	210	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS		Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS		Arizona Constitution and Government	Constitution and government of the State of Arizona. Meets the Arizona constitution requirement for teacher certification. May not be counted for the major or a teaching major or minor in Political Science.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	2		Credit is allowed for only POS 211 or POS 216 or POS 417
POS	211	Arizona Constitution and Government	Constitution and government of the State of Arizona. Meets the Arizona constitution requirement for teacher certification. May not be counted for the major or a teaching major or minor in Political Science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	2		Credit is allowed for only POS 211 or POS 216 or POS 417
POS		State and Local Government	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Credit is allowed for only POS 211 or POS 216 or POS 417
POS	216	State and Local Government	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only POS 211 or POS 216 or POS 417
POS		Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or SB	
POS	230	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	L or SB	

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POS		Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L or SB	
POS	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
POS	247	Introduction to Latin American Politics	General introduction to the politics and socioeconomic structures of Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS		Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or SB) & G	
POS	260	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	(L or SB) & G	
POS		Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(L or SB) & G	
POS	270	American Legal System	Concepts, institutions, classifications, and functions of law. Role of the courts and impact of judicial decision making on social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
POS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
POS	300	Contemporary Global Controversies	Explores key controversies in global politics including security, economic stability, poverty, gender, race, and the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS		Empirical Political Inquiry	Logic of political inquiry, including research problems, concepts, hypotheses, theories, measurement, data collection, and analysis.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
POS	301	Empirical Political Inquiry	Logic of political inquiry, including research problems, concepts, hypotheses, theories, measurement, data collection, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	305	Politics and Film	Examines portrayal of political events, ethnic groups, and sociopolitical situations in film, a major medium addressing questions of human values. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS		American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	310	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS		American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS		The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only POL 313 or POS 313
POS	313	The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only POL 313 or POS 313
POS		The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	314	The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS	315	The Supreme Court	Role of the Supreme Court in American society and politics; examines decision-making process and impact of decisions; restraint versus activism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	317	History of Postwar U.S. Conservatism	Traces the origins of U.S. conservatism as it developed in the work of U.S. and European thinkers, intellectuals and authors after WWII	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only HST 294 (American Conservatism), 317 or POS 317
POS		Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
POS	325	Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS		Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	331	Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS	332	American Political Parties	Development of the American party system. Party organization and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	

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POS	333	Interest Groups	Examines how minority, corporate, labor, farm, consumer, environmental, health, education and public interest groups, and single-issue movements influence government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS		Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
POS	336	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS		Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS		Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
POS	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
POS	340	History of Political Philosophy I	Western political philosophers and their theories to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H	
POS	341	History of Political Philosophy II	Western political philosophers and their theories from the 17th to the 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H	
POS	342	Political Theory	Surveys ancient, modern, and contemporary political theorists and ideas in European and American contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU or SB	
POS		Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	
POS	346	Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU	
POS		Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	
POS	350	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS		Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS		Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	
POS	351	Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	352	European Democracies	Addresses questions such as, How has the relationship between European citizens and the democratic process changed in the post-WWII period? How do domestic political institutions influence this process? Explores different approaches to some of the most important questions facing the study of comparative and European politics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: Minimum 25 hours. Credit is allowed for only POS 394 (European Pol Democracies), 498 (European Democracies), or POS 352
POS		Comparative Politics of the Middle East	Examines the historical, social, and economic context of contemporary Middle East politics; explores political dynamics of selected Middle Eastern regimes; and offers a comparative examination of key political trends and themes.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: POS 150; Credit is allowed for only POS 360 (Politics of the Middle East) or POS 353
POS	353	Comparative Politics of the Middle East	Examines the historical, social, and economic context of contemporary Middle East politics; explores political dynamics of selected Middle Eastern regimes; and offers a comparative examination of key political trends and themes.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: POS 150; Credit is allowed for only POS 360 (Politics of the Middle East) or POS 353
POS	354	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356
POS	356	European Union	History and workings of EU member states, including single market, Euro, legal system, ethnonationalism, immigration, expansion, trade wars, and defense.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	357	South Asia Politics	Political culture and systems of South Asia examined through study of political writings, novels, and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Prerequisite(s): minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	357	South Asia Politics	Political culture and systems of South Asia examined through study of political writings, novels, and poetry.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours
POS	358	Southeast Asia	Political background, governmental institutions, political dynamics, and developmental problems of Southeast Asian nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	359	African Politics and Society	Comparative analysis of socioeconomic forces, political processes, government institutions, and political novels in Sub-Sahara Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS		World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras. Emphasis may vary with instructor, but cannot be repeated for credit.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	Pre-requisites: Minimum 25 hours; Credit is allowed for only POS 160 or POS 360
POS	360	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras. Emphasis may vary with instructor, but cannot be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Pre-requisites: Minimum 25 hours; Credit is allowed for only POS 160 or POS 360
POS		World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras. Emphasis may vary with instructor, but cannot be repeated for credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Pre-requisites: Minimum 25 hours; Credit is allowed for only POS 160 or POS 360
POS		American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	Prerequisite(s): minimum 45 hours
POS	361	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Prerequisite(s): minimum 45 hours
POS		American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours
POS	362	World Politics Theory	Theoretical examination of one or more aspects of international politics, e.g., foreign policy, negotiations, alliances, crises, wars, and international systems.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only POL 360, POS 160 or POL 160.
POS	364	National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
POS		National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	367	World Politics and Global Inequalities	Examines the topic of global inequality and the numerous challenges that arise from it, including perspectives and theories pertaining to third world development, the historical background to the political and economic relations between the wealthy countries of the world and the poorer countries, and policies and strategies designed to promote development and alleviate poverty. Studies some contemporary issues that are related to global inequality including ethics and third-world development, sweatshop labor, corporate responsibility, and the tension between globalization and the movement of people across sovereign borders.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3	G	Pre-requisite: Minimum 25 hours; Credit is allowed for only POS 360 (Current Issues International Politics), (International Security), (Organizational Studies) or POS 367
POS	368	Ethics and Human Rights	Explores issues of ethics, morality, and human rights in the global community.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	370	Law and Society	Analyzes debates among social scientists and legal theorists concerning the relationship between law and society.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Prerequisite(s): minimum 45 hours
POS		Law and Society	Analyzes debates among social scientists and legal theorists concerning the relationship between law and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	374	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only ASB 374, POS 374, SBS 374 or SOC 374
POS	378	Religion, War and Peace	In-depth study of the religious, political and ethical dimensions of violence and war. Compares perspectives of Christian, Jewish and Islamic traditions as well as secular viewpoints.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only POS 378, REL 378 or 394 (Religion, War and Peace)
POS	388	Religion, Ethics, and International Politics	Religious and ethical dimensions of international politics. Addresses historical and contemporary ideas, movements, issues and events.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only POS or REL 388
POS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
POS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
POS	401	Political Statistics	Basic concepts in statistics as they facilitate the description, explanation, and prediction of social and political phenomena.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	CS	Prerequisite(s): POS 301 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	401	Political Statistics	Basic concepts in statistics as they facilitate the description, explanation, and prediction of social and political phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	CS	Prerequisite(s): POS 301 with C or better
POS	410	Governing American Cities	Reviews modern urban problems, their sources, and potential solutions, including structural and policy alternatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	414	Political Thought and Leadership	Research seminar in political values and leadership. Combines lecture, readings and guest lectures by leaders in business, public affairs and the media. Culminates in a substantial written research effort.	N	SEM	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; HST 112 with C or better; minimum 55 hours; Credit is allowed for only HST 414 or POS 414
POS	414	Political Thought and Leadership	Research seminar in political values and leadership. Combines lecture, readings and guest lectures by leaders in business, public affairs and the media. Culminates in a substantial written research effort.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; HST 112 with C or better; minimum 55 hours; Credit is allowed for only HST 414 or POS 414
POS	417	Arizona Politics	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Pre-requisite: Minimum 25 hours; Credit is allowed for only POS 211, 216 or 417
POS	417	Arizona Politics	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Pre-requisite: Minimum 25 hours; Credit is allowed for only POS 211, 216 or 417
POS	417	Arizona Politics	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: Minimum 25 hours; Credit is allowed for only POS 211, 216 or 417
POS	426	Elements of Public Policy	Each section may cover one of the following topics: consumer protection, natural resources, criminal justice, environmental protection, science and technology, or theories of public policy. May be repeated for credit when topics vary.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Prerequisite(s): minimum 45 hours
POS	426	Elements of Public Policy	Each section may cover one of the following topics: consumer protection, natural resources, criminal justice, environmental protection, science and technology, or theories of public policy. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	431	Campaigns and Elections	Examines campaigns from a multitude of perspectives including the politician, reporter, campaign strategist, and voter.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
POS	431	Campaigns and Elections	Examines campaigns from a multitude of perspectives including the politician, reporter, campaign strategist, and voter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	434	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
POS	434	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	434	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS	435	Women and Politics	Focuses on the uniqueness of women in modern political systems and political thought. Emphasis may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & C	
POS	436	Gender, Sexuality, Nation-States	Issues and problems related to the interface of gender, sexualities, nationalisms, and states in various world contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
POS	437	Women, Power, and Politics	The roles and treatment of women within various political contexts. Specific focus may vary with instructor.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	
POS	438	Latino Politics	Examines contemporary political issues in the diverse Latino community.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	
POS	439	Minority Group Politics in America	Role of minority groups in American politics.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & C	Prerequisite(s): minimum 45 hours
POS	439	Minority Group Politics in America	Role of minority groups in American politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & C	Prerequisite(s): minimum 45 hours
POS	442	American Political Thought	Political theories and movements from the colonial period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU	
POS	442	American Political Thought	Political theories and movements from the colonial period to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU	Prerequisite(s): minimum 45 hours
POS	443	Topics in Contemporary Political Theory	Major problems and theories in contemporary political thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU	
POS	446	Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU	
POS	447	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB 447, POS 447, or SBS 447
POS	451	China, Japan, and the Koreas	Comparative analysis of the political modernization experiences of China, Japan, and the two Koreas, focusing on their differing reactions to the West.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	

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POS	452	China	Background of the Communist revolution, political processes, and developmental problems in China from a comparative perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	453	Latin America	Political institutions, process, and developmental problems of South American states examined through comparative analysis, novels and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Prerequisite(s): minimum 25 hours
POS	454	Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS		Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	456	Latin American Cities	Urban studies of Latin American world cities, e.g., Mexico City, Santiago, emphasizing integration with U.S. cities, including Los Angeles, Phoenix.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	464	Border Cities: Action Research on Globalization	Examines the effects of globalization on U.S.-Mexico border cities and towns with particular emphasis on Mexican border cities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	465	International Organization and Law	History, practical political significance, and future of international institutions, transnational regimes, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	467	International Security	Examines issues affecting the international security of states and peoples, e.g., military, economic, technological, environmental, and demographic.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	Prerequisite(s): minimum 45 hours
POS		International Security	Examines issues affecting the international security of states and peoples, e.g., military, economic, technological, environmental, and demographic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Prerequisite(s): minimum 45 hours
POS	468	Comparative Asian foreign Policies	Foreign policies of the Asian states, emphasizing their security relations and movements toward regionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	470	Law and the Political Order	Investigates concepts of justice, political rights, adjudication and legislation, legal ordering, constitutional law, law as an instrument of change.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only POS 470, CMN 598 (Law and the Political Order), JHR 598 (Law and the Political Order) or MAS 598 (Law and the Political Order)
POS	471	Constitutional Law I	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; jurisdiction and organization of the federal courts; judicial review; separation of powers; federalism; the commerce clause; national taxing and spending power; state police power.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Prerequisite(s): minimum 45 hours
POS		Constitutional Law I	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; jurisdiction and organization of the federal courts; judicial review; separation of powers; federalism; the commerce clause; national taxing and spending power; state police power.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	472	Constitutional Law II	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; due process; equal protection of laws; individual rights; civil liberties.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Prerequisite(s): minimum 45 hours
POS		Constitutional Law II	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; due process; equal protection of laws; individual rights; civil liberties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	473	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	GRD	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only REL 482, JUS 473 or POS 473
POS	475	Morality and Politics	Should morality play a role in politics? Machiavelli gives us one sort of answer, urging politicians to be dishonest, deceptive and even cruel. Kant disagrees, arguing instead that politicians should adhere to their personal morality over political calculations. Explores this question in two ways. First, looks more at the disagreement between great thinkers in the Western political tradition. Second, investigates contemporary political actors who bring moral concerns to the fore, including dirty politicians and extremist citizens (for example, radical animal rights activists, militant environmentalists or global poverty zealots). Seminar course that incorporates in-class discussion and writing, options-based grading and creative assignments.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only POS 394 (Morality and Politics) or POS 475

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POS	475	Morality and Politics	Should morality play a role in politics? Machiavelli gives us one sort of answer, urging politicians to be dishonest, deceptive and even cruel. Kant disagrees, arguing instead that politicians should adhere to their personal morality over political calculations. Explores this question in two ways. First, looks more at the disagreement between great thinkers in the Western political tradition. Second, investigates contemporary political actors who bring moral concerns to the fore, including dirty politicians and extremist citizens (for example, radical animal rights activists, militant environmentalists or global poverty zealots). Seminar course that incorporates in-class discussion and writing, options-based grading and creative assignments.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only POS 394 (Morality and Politics) or POS 475
POS	480	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	Credit is allowed for only POS 480, SBS 480, CMN 598 (Global Justice), JHR 598 (Global Justice) or MAS 598 (Global Justice)
POS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		
POS		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
POS	485	Political Economy	Problems, policies, and possibilities of various political-economic systems and the interrelationship of capitalism, socialism, and democracy.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Prerequisite(s): minimum 45 hours
POS		Political Economy	Problems, policies, and possibilities of various political-economic systems and the interrelationship of capitalism, socialism, and democracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	486	International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS		International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Prerequisite(s): Barrett Honors student
POS		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
POS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Prerequisite(s): Barrett Honors student
POS		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
POS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
POS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
POS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Prerequisite(s): Barrett Honors student
POS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-7	L	
POS		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7	L	
POS		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
POS		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
POS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	503	Empirical Political Inquiry	Research methods and techniques of the discipline, emphasizing empirical foundations and analytic methods employed in subfields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: Political Science student
POS	527	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
POS	530	American Politics	Examines major debates in the study of American political processes and institutions. Covers parties, media, elections, public opinion, interest groups, and the three branches of government.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	540	Ancient Political Theory	Surveys the historical and philosophical developments in political thinking from the ancient Greeks up to the Renaissance. The world studied predominantly is one of profound political conflict and change. Moves from the Greek cities to the edge of modern political developments. The movement encompasses the political transformation from city-states to empires to the establishment of an overarching Christian world order that balances secular and sacred power, only to be challenged if not foundationally shaken by Machiavelli and realism.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: Graduate Political Science major
POS	541	Modern Political Theory	Surveys the development of modern political thought from Machiavelli--through Hobbes, Locke, Hume, Rousseau, Burke, Kant, Montesquieu, Constant, Bentham, Mill, and Hegel--to Marx. Focuses on the primary writings of these thinkers as well as reading secondary literature. In addition to focusing on the distinctive contribution and relevance of individual thinkers, further explores certain recurring themes among which are the following: Are freedom and equality foes or friends? What allegiance do we owe the state and why? Do we have rights against the state? What is a just state? Is private property essential to individual liberty? Do laws enhance or threaten liberty? Is self-interest an adequate basis for political allegiance? Why should we pursue the common good, if at all? Are self-interest and the common good reconcilable?	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: MA or PhD major; Credit is allowed for only POS 541 or 591 (Modern Political Thought)
POS	545	Themes in Political Thought	Examines a particular theme or problem in political thought from both a historical and contemporary perspective. May be repeated with approval of the director of graduate studies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	550	Comparative Politics	Surveys major approaches across topical areas such as revolutions, authoritarianism, policy processes, interest groups, and electoral politics. Focus varies with instructor.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	552	Women and Politics	Serve as an introduction to the comparative study of women and politics. Not a course on feminist theory, instead focuses on questions such as: Does the descriptive representation of women guarantee their substantive representation? Which electoral rules favor the election of women? Do the negative effects of gender quotas outweigh their impressive ability to increase the number of women in office? Have the news media helped or harmed female candidacies? Once in power do women govern differently than men? Focuses on the obstacles that women face in obtaining positions of power.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only POS 552 or 598 (Women and Politics)
POS	560	International Relations	Surveys major theoretical approaches and debates in international relations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	563	Comparative Asian Security Policies	Analyzes domestic and international constraints, belief systems, and economic components in security decisions by major powers and Asian nations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	570	The Politics of Public Policy	Examines the political dimensions of public policymaking. Emphasizes major theoretical explanations of the policy process--particularly elements such as agenda setting, implementation, and policy change--rather than on the substance of particular policies. Focuses primarily on U.S. domestic policy, with some comparative reference to other developed democracies.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only POS 570 or 598 (Politics of Public Policy)
POS	571	Science and Technology Policy	Provides an in-depth introduction to theoretical perspectives on the role and place of science in democratic societies and democratic governance. Emphasizes how the ideas, ideologies, and practices of science are integrated into the design and implementation of government decision making, as well as how science both shapes and is shaped by the political organization and ordering of society. Pursues such questions in the context of U.S. politics, comparatively between the U.S. and Europe, and in emerging regimes of international governance.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HSD 501 or POS 571
POS	572	Advanced Science and Technology Policy	Focuses on the role of knowledge and expertise in political and policy decision making. Particular emphasis is placed on the analysis of knowledge systems (formalized institutional approaches to the production, validation, and use of knowledge and expertise in policy decision making), their modes of failure, and the design of approaches that may be able to prevent, avoid, or reduce the frequency of such failures.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: HSD 501 or POS 571 with B or better. Credit is allowed for only HSD 502 or POS 572
POS	573	Governing Emerging Technologies	Examines the governance of science and technology through a focus on emerging technologies whose potential consequences in society are apparent only in anticipation and whose manifestations are still being shaped by local, domestic, and international institutions. These emerging technologies include nanotechnologies, synthetic biology, and other technologies associated with genetic modification, and information and cognitive science and neuro-technologies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PAF 550, HSD 503 or POS 573
POS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	586	International Political Economy	International political economy (IPE) focuses on the relationship between the pursuit of wealth and power during the development and evolution of the global political economy. Assigned readings take an analytical approach to the subject, drawing on methods and theories developed in political science, economics, history and sociology. In addition to an overview of the methods and theories employed in the study of IPE, also examines a variety of current empirical research programs in the subfield. This seminar should enable students to read the academic literature, conduct independent research in the subfield, and understand contemporary problems in the global political economy.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
POS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1		
POS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	601	Advanced Experimental Research	Introduces experimental and quasi-experimental research designs in political research, including lab techniques and topics in the analysis of variance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	603	Polimetrics I	Introduces theory and practice of linear regression analysis. Provides skills to read, understand, and evaluate professional literature using regression analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	604	Polimetrics II	Applies quantitative techniques to research topics producing publishable papers through exposure to time-series, logit and probit, and simultaneous equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	606	Qualitative and Textual Analysis	Method and theory for the analysis of qualitative materials, systematic approaches for case studies, content analysis, critical analysis of texts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	636	Electoral Behavior	Introduces fundamental concepts of electoral behavior. Emphasizes presidential elections and examines why people vote and how their votes are determined.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	638	Law and Politics	Emphasizes research into such topics as constitutional law, women and the law, American legal system, judicial process, and judicial selection.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	652	Religion and Politics	Analyzes the complicated and often conflictual relationship among major religious faiths, religious activists, and the state in the 20th and 21st centuries. Cover topics: secularization theory and its problems; religion as a cultural or attitudinal variable in politics; the rationality of religion, organized religions and their activists; the bases for conflicts between religion and the state; religion's role in conflict; the terms of reconciliation and collaboration; the conditions under which religion is politicized and becomes the basis of a political movement or party; and the means by which organized religions and/or their adherents seek to maintain an influence in 20th- and 21st-century politics and society. Does not provide a survey of religion and politics for all major world religions, or other religions.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: MA or PhD student. Credit is allowed for only POS 652 or 598 (Religion and Politics)
POS	664	War, Peace, and Conflict Processes	Systematic analysis of the causes of war, the preconditions for peace, and approaches to the resolution of conflict.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	671	HSD I: Human Dimensions of Science and Technology	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HSD 601 or POS 671
POS	672	HSD II: Science, Power and Politics	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HSD 602 or POS 672
POS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1		
POS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		
POS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1		
POS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		

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PPE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
PPE	210	Teaching Fitness Activities for K-12 Students	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
PPE	215	Teaching Team Sports	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
PPE	220	Teaching Lifetime Activity K-12	Participating in and teaching sequenced activities K-12.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
PPE	225	Teaching Cooperative and Initiative Games	Participating in and teaching sequenced adventure-based activities.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
PPE	230	Teaching Group Exercise	Introduces instructional strategies appropriate for the teaching of group exercise classes in secondary school settings.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Credit is allowed for only PPE 230 or 294 (Teaching Group Exercise)
PPE	235	Teaching Strength and Conditioning for Health	Fundamental principles, strategies and assessments of strength training and conditioning methodologies that are necessary to effectively operate in a school-based setting. Most secondary schools offer some form of strength training in a physical education setting, either as a stand-alone course or as part of a traditional class structure. Therefore, new physical education teachers should be well informed on the scientific rationale for the use of strength and conditioning programs in schools, and be able to design and implement these programs safely. Provides prospective physical education teachers with the knowledge and skills needed to safely and effectively operate in a school-based strength training setting, whether it is for physical education or sport performance.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Credit is allowed for only PPE 235 or PPE 294 (Teaching Strength Conditioning for Health)
PPE	240	Physical Activity	Recognizing individual interests and abilities, the program provides courses covering a wide variety of physical activities. We make an effort to address contemporary trends and student, faculty and staff interests. Offerings may include but are not limited to classes in the areas of: aquatics, artistic and social dance, fitness development, martial arts, mind/body, outdoor recreation, resistance training, sports and games.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		
PPE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
PPE	300	Introduction to Physical Education, Fitness and Sport	Introduces the fields of physical education, exercise science, sports medicine, and related fields. Discusses the history and trends of physical education as well as key concepts, programs, problems, and issues related to teaching physical education. Teaches essential background knowledge, better preparing for career success. The online (blackboard) component of this class provides practical experiential learning and assesses knowledge and comprehension of the key concepts presented in the course.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Minimum 60 hours; Junior or senior standing; Credit is allowed for only PPE 300 or 394 (Intro to Physical Education, Fitness & Sport)
PPE	310	Health Literacy: Creating Healthy and Active Schools	Signature course for elementary educators and special education educators in order to prepare future teachers with the knowledge, skills, and dispositions to teach healthy and active content knowledge and to create healthy and active school environments.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Co-requisites: One of the following: ECD/EED/SED/SPE /BLE 396/397/478/496, PPE 474/484 or TEL 484. Credit is allowed for only PPE 310 or HSC 310
PPE	315	Pediatric Movement Sciences for Physical Educators	Provides a general overview of the functional anatomy of the human body as it relates to movement and the biomechanical principles underlying the execution of a given motor skill. Also examines the influence of physical growth and maturation on the development of motor skills.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: BIO 201; BIO 202; Credit is allowed for only PPE 315 or 394 (Apld Pediatric Functional Anat)
PPE	320	Exercise Physiology Concepts for Physical Educators	Provides an introductory-level understanding of how the body responds prior to, during, and after participation in dynamic and static exercise. Examines the physiological basis of human movement, with emphasis on reviewing what exercise physiologists have learned about the diversity of physical activity, specifically in children. Although many physiological responses to activity are predictable, the magnitude and pattern of responses are unique depending on the age, gender, and previous experience of the individual. Also examines the role an active lifestyle plays in the overall health and well-being of school-aged children and adolescents.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: BIO 201; BIO 202; Credit is allowed for only PPE 320 or 394 (Pediatric Exercise Physical)

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PPE	335	Movement and Physiology Principles of Children and Youth in Physical Activity Environments	Provides an introductory-level understanding of mechanical principles underlying human movement, the developmental patterns reflected in human movement birth through childhood and adolescence, basic principles of motor learning and the physiological basis of human movement. Covers how these principles directly affect the development of physical activity opportunities in community-based sport and recreation settings with a specific eye toward the role an active lifestyle plays in the overall health and well-being of children and youth between the ages of 6 and 18.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
PPE	340	Understanding Children in Physical Activity Environments	Teaches students an understanding of elementary-aged children and how to implement a curriculum in a physical activity environment. Students learn effective teaching techniques, how to effectively manage students, and ways to improve the physical skill and activity level of students. Prospective facilitators use authentic assessment techniques to assess and prescribe activities for improving motor skills in kindergarten through 6th grade youngsters. Prospective facilitators leave with requisite knowledge to implement a comprehensive physical activity program and the physical skills necessary for successful instruction.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
PPE	345	Adolescents in Physical Activity Environments: Understanding and Practices	Gives an understanding of the changing scope of physical education in an era of education reform. Students learn about and teach a variety of curricular models and styles. Uses technology and assessments in authentic settings. Focuses on increasing the physical activity levels of secondary students during physical education and also promotes physical activity outside of the school setting. Covers strategies for advocating the importance of quality physical education to school and district personnel during a time when local administrators are pressured to allocate more time to core subject areas.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
PPE	351	Coaching of Children and Adolescents in Physical Activity Environments	Provide introductory-level understanding of the skills and knowledge needed to deliver positive sport experiences in various nonschool settings that lead to positive youth development. Effective use of these skills enhances the chance that children and youth come to programs that are fun, engaging, safe and positive challenges; while having clear rules, requiring personal responsibility and demanding respect for self and others.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
PPE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
PPE	396	Clinical Experience in Physical Education: Elementary	Analyzes course content in an elementary/secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Pre-requisite: Admission to the Professional Program
PPE	397	Clinical Experience in Physical Education: Secondary	Analyzes course content in a secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Pre-requisite: Admission to the Professional Teacher Preparation Program
PPE	430	Analysis of Skill and Game Performance	Develops analytic skills for informal and formal assessment of student learning in physical activity settings.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Junior or senior standing; Credit is allowed for only PPE 494, 598 (Analysis of Skill and Game Play Performance) or PPE 430
PPE	450	Physical Education for the Elementary School	Scope and values of physical education in elementary schools. Methods, materials, and practices in teaching for primary through upper grades.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Admission to the professional program; Credit is allowed for only PPE 450 or PPE 550
PPE	451	Innovative Programming in Elementary Physical Education	Provides students with an understanding of current trends and issues in elementary school physical education curriculum and how to implement the curriculum in a school environment. Students also become familiar with a variety of best practices in curriculum and instruction specific to elementary children in physical activity settings. Emphasizes incorporating methods of effective teaching and activity organization, enhancing student learning, and effectively managing student behavior and the learning environment.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Junior or senior standing; Credit is allowed for only PPE 451 or 551
PPE	455	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Admission to Professional Program; Credit is allowed for only PPE 455 or PPE 555

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PPE	460	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Admission to Professional Program; Credit is allowed for only PPE 460 or PPE 560
PPE	465	Teaching Physical Activity Concepts	Focuses on teaching physical activity concepts in physical education settings and other settings such as fitness clubs or community health organizations. Analyzes and critiques state physical activity standards and national guidelines for promoting physical activity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Prerequisite(s): minimum 45 hours. Credit is allowed for only PPE 465 or PPE 565
PPE	477	Student Teaching in Physical Education Elementary K-6	Provides an understanding of elementary school physical education curriculum and how to implement the curriculum in a school environment. Effective teaching techniques, how to effectively manage students, and ways to improve the physical skill and activity level of students. Prospective teachers use authentic assessment techniques to assess and prescribe activities for improving motor skills in kindergarten through 6th-grade youngsters. Prospective teachers leave with requisite knowledge to implement a comprehensive physical education program and the physical skills necessary for successful instruction.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	6		Prerequisite(s): Admission to Professional Teacher Preparation Program
PPE	478	Student Teaching in Physical Education Secondary	Provides an understanding of secondary school physical education curriculum and how to implement the curriculum in a school environment. Effective teaching techniques, how to effectively manage students, and ways to improve the physical skill and activity level of students. Prospective teachers use authentic assessment techniques to assess and prescribe activities for improving motor skills in 7th- through 12th-grade youngsters. Prospective teachers leave with requisite knowledge to implement a comprehensive physical education program and the physical skills necessary for successful instruction.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	6		Prerequisite(s): Admission to Professional Teacher Preparation Program
PPE	480	Professional Seminar for Physical Education	Methods of instruction, organization, and presentation of appropriate content in elementary and secondary physical education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Admission to Professional Program
PPE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Pre-requisite: Admission to Professional Program
PPE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
PPE	495	Research on Teaching in Physical Education	Contemporary research and theory on teaching across fields with an emphasis on physical education pedagogy; provides a practical research experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
PPE	501	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
PPE	535	Introduction to Sport Education	Introduces a grade 5-12 school physical education curriculum that focuses on providing more complete and more authentic sport experiences.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate (Degree or non-degree) students; Credit is allowed for only PPE 494, 598 (Sport Education) or PPE 535
PPE	550	Physical Education for the Elementary School	Scope and values of physical education in elementary schools. Methods, materials, and practices in teaching for primary through upper grades.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Students who have credit for PPE 450 may not enroll in PPE 550
PPE	551	Innovative Programming in Elementary Physical Education	Provides an understanding of current trends and issues in elementary school physical education curriculum and how to implement the curriculum in a school environment. Students become familiar with a variety of best practices in curriculum and instruction specific to elementary children in physical activity settings. Emphasizes incorporating methods of effective teaching and activity organization, enhancing student learning, and effectively managing student behavior and the learning environment.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate (degree or non-degree) students; Credit is allowed for only PPE 451 or 551

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PPE	555	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate students (Degree and non-degree); Credit is allowed for only PPE 455 or PPE 555
PPE	560	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate students (Degree and Non-degree); Credit is allowed for only PPE 460 or PPE 560
PPE	565	Teaching Physical Activity Concepts	Teaching physical activity concepts in PE settings. Analyzes and critiques state and national physical education standards.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate (degree or non-degree) student; Credit is allowed for only PPE 465 or 565
PPE	570	Research on Teacher Education in Physical Education	Discusses current research on teacher education across fields, with an emphasis on physical education pedagogy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate (degree or non-degree) student; Credit is allowed for only PPE 370 or 570
PPE	576	Research on Curriculum in Physical Education	Discusses and applies research findings on curricular models for physical education and physical activity in school settings and beyond.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	593	Applied Project		Y	LEC	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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PPE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
PRM	120	Leisure and the Quality of Life	Conceptual foundations for understanding the role of leisure in the quality of life. Social, historical, psychological, cultural, economic, and political foundations of play, recreation, and leisure.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	SB	
PRM	150	Outdoor Pursuits	Theories and practical applications related to outdoor recreation pursuits. Interdisciplinary approach to wilderness issues and philosophies, culminating in an outdoor experience.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
PRM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		Pre-requisite: Maximum 25 hours; Credit is allowed for only CRD, PRM or TDM 191
PRM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
PRM	201	Introduction to Community Sports	Examines the role of community sports at the local, national and international levels.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only CSM 201 or PRM 201
PRM	210	Community Services and Professions.	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD or NLM or PRM or TDM 210
PRM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
PRM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
PRM	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301
PRM	302	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	C	Pre-requisites: ENG 102; MAT 142; NLM 160 (or PRM 120) with C or better; minimum 2.50 GPA; minimum 45 hours. Credit is allowed for only CRD, NLM, PRM or TDM 302
PRM	303	Program Planning	Effective program planning in varied leisure delivery systems.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only CSM or PRM 303

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PRM	304	Recreation Planning and Facility Development	Surveys development and management of public, private, and commercial recreation areas and facilities with a focus on meeting program needs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	L	Prerequisite(s): CRD 210(or NLM 210,PRM 210 or TDM 210) with C or better; MAT 142, C or better; Nonprofit Leadership & Management (or Parks & Recreation Management or Recreation & Tourism Management) major; minimum 2.50 cumulative GPA; minimum 45 hours
PRM	310	Volunteer Management	Studies volunteer administration practices integral to community organizations providing an introduction to management techniques including program organization, recruitment, interviewing, placement, supervision, recognition and evaluation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only NLM or PRM 310
PRM	315	Community Recreation Systems	Explores and assesses community recreation delivery systems in the United States.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: PRM120 (REC120) with C or better
PRM	335	Sports and Recreation for Youth Development	Provides an overview of definitions, statistics, theories and models, and types of programs surrounding youth development in relation to sports, recreation and leisure services. Addresses current trends related to youth development and collaborative partnerships in sports, recreation and leisure services at various levels within local, state, national and/or international systems.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 45 hours. Credit is allowed for only CSM 335 or PRM 335
PRM	340	Outdoor Survival	Interdisciplinary approach to outdoor survival, including attitudes, psychological stress, physiological stress, preparation, hypothermia, navigation, flora, and wildlife.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
PRM	350	Tourism, Recreation and Sports Marketing	Critical examination of marketing principles in leisure and related industries in diverse settings, including local, national, and international.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or CSM 201 or TDM 205; minimum 45 hours. Credit is allowed for only CSM 350 or PRM 350 or TDM 350
PRM	364	Foundations of Recreation Therapy	Overview of therapeutic recreation and its concepts, practices, service models, and settings. Explores the provision of recreation and treatment services for individuals with disabilities.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	SB	Prerequisite(s): minimum 45 hours
PRM	370	Public Lands Management	Introduces outdoor recreation resource delivery systems; history of wilderness and outdoor recreation resources; the role of outdoor recreation in society; outdoor recreation agencies; related environmental issues.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): minimum 45 hours
PRM	380	Wilderness and Parks in America	Examines the American Conservation Movement and the relationships between the environment and recreation behavior.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	SB & H	
PRM	384	Child Life Practicum	Combines clinical field exposure with classroom instruction to maximize understanding and skill mastery.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3-12		Pre-requisite: PRM 364 with C or better; Admission to Child Life Certificate program
PRM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
PRM	400	Intervention Techniques in Recreation Therapy	In-depth analysis of theoretical and philosophical approaches to therapeutic recreation practice with emphasis on various facilitation techniques used in therapy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 364
PRM	401	Management of Parks and Recreation Services	Analyzes administrative function, structure, and policies. Successful application in administrative situations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CSM 305 (or PRM 304) with C or better; ENG 102 with C or better; MAT 142 or higher; CSM or PRM major; minimum 2.50 cumulative GPA; minimum 45 hours. Credit is allowed for only CSM 401 or PRM 401
PRM	402	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre- or corequisite(s): CSM 401, NLM 410, PRM 401, or TDM 401 with C or better if completed; Credit is allowed for only CSM 402 or NLM 402 or PRM 402 or TDM 402

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PRM	403	Leadership and Professional Development	Examines leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: NLM, PRM or TDM 210 and NLM, PRM or TDM 301 with C or better; Senior standing ; 2.50 GPA. Credit is allowed for only CRD, NLM, PRM or TDM 403
PRM	406	Program Design & Administration in Recreation Therapy	In-depth analysis of assessment, treatment planning, program implementation, documentation, and evaluation strategies employed in therapeutic recreation practice.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s) with C or better: PRM 364, 400 (or PRM 455)
PRM	413	Leadership and Professional Development in Recreation Therapy	Examines therapeutic recreation leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 301, NLM 301, PRM 301, or TDM 301 with C or better; Pre- or corequisite(s): PRM 303 with C or better if completed
PRM	422	Entertainment, Protocol, and Programming for Special Events	In-depth analysis of the theoretical and philosophical aspects of special event management relative to talent and entertainment, protocol, etiquette, ethics, and programming. Requires some field work in event management.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: PRM 486 with C or better
PRM	423	Special Event On-Site Operations	Expands on the concepts of event programming with in-depth examination of the theoretical and philosophical aspects of event operations, festival site design, and working with subcontractors and vendors.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: PRM 486 with C or better
PRM	427	Revenue Generation for Special Event Management	Examines theoretical and philosophical aspects of revenue generation relative to special events through in-depth exploration of budgeting, accounting, and sponsorship opportunities. Requires field work at an event.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: PRM 486 with C or better
PRM	450	Leisure and Aging	Examines the factors influencing leisure among older adults, including policy issues and program service implications. Involves fieldwork.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
PRM	451	Grant Writing	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only NLM 451, 565 or PRM 451
PRM	454	Human Services for At-Risk Youth	Overview of policy and programs affecting at-risk youth; examines risk factors and programmatic solutions to them.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
PRM	455	Play in Child Life	In depth study of the techniques, principles and theories of play applied in clinical practice to enhance healing, growth and development with children and families.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CDE 232 with C or better. Pre- or corequisite(s): PRM 364 with C or better if completed
PRM	460	Assessment & Documentation in Recreation Therapy	In-depth study of the therapeutic recreation assessment process, including examination of interview techniques, assessment instruments, treatment planning, outcomes, evaluation, research, and documentation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: PRM 364 with C or better
PRM	463	Senior Internship	Supervised guided experience in selected agencies.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	6-12		Prerequisite(s) with C or better: CRD 403 or PRM 413; CSM 402 or NLM 402 or PRM 402 or TDM 402. Credit is allowed for only CSM 463 or NLM 463 or PRM 463 or TDM 463
PRM	470	Environmental Communication	Park interpretation and environmental education that includes theories, principles and techniques.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 60 hours
PRM	475	Entrepreneurial Recreation and Tourism	Explores basic business principles and innovative processes involved in starting a small business in the commercial recreation and tourism industry.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 60 hours; Credit is allowed for only PRM or TDM 475
PRM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; Minimum 72 hours; Minimum 2.50 GPA; Non-SCRD majors
PRM	485	Sports Events	Expands the basic concepts of recreation, leisure or tourism program planning and leadership as they are specifically related to sport events management.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only CSM 485 or PRM 485
PRM	486	Special Events Management	Principles of programming and managing special events for diverse populations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		

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PRM	487	Advanced Special Events Management	Advanced principles of special event sponsorship, public relations, marketing, contracting, risk management, and financial management.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: PRM 486 with C or better. Credit is allowed for only PRM 487 or RTM 487
PRM	488	Event Marketing and Promotion	In-depth look at the influence and role of print and social media in special event management. Studies theory, strategies, and planning relative to experience marketing, including the use of promotions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: PRM 486 with C or better
PRM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
PRM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6	L	Prerequisite(s): Barrett Honors student
PRM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
PRM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
PRM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-7		
PRM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
PSB	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSB	501	Basic Principles of Applied Behavior Analysis	Fundamental principles of behavior including the history, theory, definitions, processes, concepts and characteristics of applied behavior analysis.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		
PSB	510	Basic Principles of Experimental Analysis of Behavior	Practical applications of research methodology to examine the effects and evaluate the efficacy of behavioral interventions. Provides an empirical science approach to designing, conducting and critically evaluating research involving applications of the experimental analysis of behavior in the use of graphic displays, single-case, ABAB, multiple baselines, changing criterion and alternating treatment designs.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	2		
PSB	511	Advanced Research Methods	Focuses on research techniques such as time-series methods for single-case assessment, behavior measurement and the effectiveness of treatment interventions on behavior. Topics include conducting component and parametric analyses and use of experimental designs such as withdrawal, reversal, criterion and multiple baselines.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	2		Pre-requisite: PSB 501; PSB 510
PSB	520	Ethical Issues and Professional Standards in Applied Behavior Analysis	Ethical standards and legal responsibilities including regulatory requirements and Arizona licensing statutes for ABA professionals who provide services to individuals with special needs and their families.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		
PSB	530	Behavioral Observation and Functional Assessment	Focuses on how to conduct behavioral observations and functional analyses using various methods for assessment and for data collection, organization and interpretation.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Pre-requisite: PSB 501; PSB 510
PSB	540	Development of Applied Behavioral Intervention Programs	Techniques for conducting task analyses; developing target intervention outcomes; determining alternative behaviors and environmental changes; use of behavior change procedures such as reinforcement, extinction, punishment, shaping, modeling, training and teaching.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSB 501, 510. Corequisite(s): PSB 530
PSB	563	Basic Principles of Organizational Behavior Management	Overview and the use of Behavioral Systems Analysis (BSA) and Performance Management (PM) as they relate to the identification and modification of environmental variables that can affect and improve individual and organizational performance as a system. Basic techniques include analysis of antecedents, behavior and consequences and development of interventions to support the desired performance improvements and increase system productivity.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	2		
PSB	573	Advanced Principles of Learning and Analysis of Behavior	Provides an in-depth review of the philosophy and theory of behaviorism and its scientific application. Includes Skinner's conceptual framework plus fundamental elements of behavior change and procedures.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		

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PSB	578	Applied Behavior Analysis in Developmental Disorders	Provides an overview of the major theories and research related to the development of psychological disorders of childhood and adolescence including autism, attention deficit disorder, behavior disorders and intellectual disabilities.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): MS Applied Behavior Analysis major
PSB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1		
PSB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSB	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSB	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSB	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1		
PSY		Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
PSY		Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	

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PSY	101	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	
PSY		Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
PSY		First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-3		Prerequisite(s): Freshman; maximum 25 earned hours
PSY	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		Prerequisite(s): Freshman; maximum 25 earned hours
PSY	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY		Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	222	Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY		Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	CS	Prerequisite(s): PSY 101 (PGS 101) with C or better; MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291 with C or better
PSY	230	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	CS	Prerequisite(s): PSY 101 (PGS 101) with C or better; MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291 with C or better
PSY		Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	CS	Prerequisite(s): PSY 101 (PGS 101) with C or better; MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291 with C or better
PSY	231	Honors Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology for honors students. Lab includes learning to use statistical software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4	CS	Prerequisite(s): Barrett Honors student; MAT 119, 170, 242, 251 or higher with C or better; PSY 101 (PGS 101) with C or better
PSY	244	Introduction to Directed Child Study	Developmental theories and methods of social interaction with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		
PSY		Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	4	L or SG	Prerequisite(s): ENG 102, 105 or 108 with C or better; PSY 101 (PGS 101) with C or better; ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390 or STP 226 with C or better
PSY	290	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4	L or SG	Prerequisite(s): ENG 102, 105 or 108 with C or better; PSY 101 (PGS 101) with C or better; ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390 or STP 226 with C or better
PSY		Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	4	L or SG	Prerequisite(s): ENG 102, 105 or 108 with C or better; PSY 101 (PGS 101) with C or better; ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390 or STP 226 with C or better

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PSY	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
PSY	304	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	L	Prerequisite(s): MAT 119, 170 or higher or PSY 230 with C or better
PSY		Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): MAT 119, 170 or higher or PSY 230 with C or better
PSY		Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Prerequisite(s): MAT 119, 170 or higher or PSY 230 with C or better
PSY	306	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY		Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	315	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY		Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY		Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	320	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 290 with C or better
PSY		Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY		Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	323	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Integrates theory, research, and application.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 290 with C or better
PSY		Sensation and Perception	Underlying processes of vision, audition, and the other senses. Integrates theory, research, and application.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY		Sensation and Perception	Underlying processes of vision, audition, and the other senses. Integrates theory, research, and application.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	324	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 290 with C or better
PSY		Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY		Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	325	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY		Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202

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PSY		Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY		Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	CS	Prerequisite(s): ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390, 395 or STP 226 with C or better
PSY	330	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	CS	Prerequisite(s): ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390, 395 or STP 226 with C or better
PSY		Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	CS	Prerequisite(s): ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390, 395 or STP 226 with C or better
PSY		Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	341	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY		Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY		Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): CDE 232, ECD 211 or PSY 341 (PGS 341) with C or better
PSY	344	Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): CDE 232, ECD 211 or PSY 341 (PGS 341) with C or better
PSY		Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Credit is allowed for only PSY 351 (PGS 351) or PSY 350 (PGS 350)
PSY		Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Credit is allowed for only PSY 351 (PGS 351) or PSY 350 (PGS 350)
PSY	350	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Credit is allowed for only PSY 351 (PGS 351) or PSY 350 (PGS 350)
PSY		Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Credit is allowed for only PSY 351 (PGS 351) or PSY 350 (PGS 350)
PSY	351	Honors Social Psychology	Critical analysis of human social behavior for honors students; topics include stereotyping, social influence, attraction, aggression, helping, groups, and attitudes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): Barrett Honors College student; PSY 101 (PGS 101); Credit is allowed for only PSY 350 (PGS 350) or PSY 351 (PGS 351)

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PSY	360	Cognitive Science	Examines cognition from the varied perspectives of philosophy, linguistics, psychology, computer science (artificial intelligence), and neuroscience.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY		Cognitive Science	Examines cognition from the varied perspectives of philosophy, linguistics, psychology, computer science (artificial intelligence), and neuroscience.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	365	Community Psychology	Mental health and psychological well-being in the community, emphasizing current issues and related research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 315 (PGS 315), PSY 350 (PGS 350) or PSY 351 (PGS 351) with C or better; PSY 290 with C or better
PSY		Community Psychology	Mental health and psychological well-being in the community, emphasizing current issues and related research.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 315 (PGS 315), PSY 350 (PGS 350) or PSY 351 (PGS 351) with C or better; PSY 290 with C or better
PSY	366	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY		Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY		Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	369	Biology of Human Sexuality	Biology of Human Sexuality	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 101 (PGS 101) with C or better; completed one semester of Biology
PSY	370	Interpersonal Relationships	Development of personal skills for competent functioning in interpersonal relationships across multiple social contexts. Principles of mental health adjustment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	385	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
PSY	390	Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	L	Prerequisite(s): PSY 290 with C or better
PSY		Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 290 with C or better
PSY	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-4		Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 30 hours
PSY		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 30 hours
PSY		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 30 hours
PSY	395	Religion and Psychology	Examines religious experience from various psychological viewpoints and explores the relationship between religion and psychology in theory and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): ENG 102, ENG 105 or ENG 108 with C or better; PSY 101 (PGS 101) with C or better. Credit is allowed for only PSY 395 (PGS 395) or REL 395
PSY	399	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	Y	RSC	Y	YGB	Liberal Arts and Sciences	Department of Psychology	1-3		
PSY		Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	Y	RSC	Y	YGB	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
PSY		Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	Y	RSC	Y	YGB	Ira A. Fulton Engineering	Human Systems Engineering	1-3		
PSY		Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	Y	RSC	Y	YGB	Liberal Arts and Sciences	Department of Psychology	1-3		

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PSY		Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	Y	RSC	Y	YGB	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
PSY	414	History of Psychology	Historical development of psychology from its philosophical beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): PSY 290 with C or better
PSY	420	Analysis of Behavior	Research, applications, and philosophy of the analysis and control of human behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 290 and 320 with C or better
PSY	424	Genetic Psychology	Introduces the concepts, methodologies, and findings of behavioral genetics for Psychology majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 290 with C or better
PSY	425	Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 325 with C or better
PSY		Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Prerequisite(s): PSY 325 with C or better
PSY	426	Neuroanatomy	Structure and function of mammalian brain, including sheep brain dissection.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Psychology	4		Prerequisite(s): PSY 325 with C or better; Credit is allowed for only PSY 426 or 526
PSY	427	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): BIO 353, 462, 467, MIC 420, or PSY 325, 425 with C or better. Credit is allowed for only MIC 427 or PSY 427
PSY	430	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): MGT 301 or PSY 101 (PGS 101) with C or better
PSY		Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): MGT 301 or PSY 101 (PGS 101) with C or better
PSY	432	Embodied Cognition	Do left-handers think differently from right-handers? Do paraplegics perceive the world differently from those who can walk? If you say about a potential date, "He leaves me cold," do you literally feel cold? And does a Botox treatment to alleviate frown lines makes it difficult to understand sentences about sadness? The surprising answer to all of these questions is YES! Embodied cognition proposes that thinking is based on neural and bodily systems of perception, action and emotion. Explores this claim through readings, discussions, debates and embodied interactions, and considers implications of embodied cognition across areas of psychology and applications in education.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better; Credit is allowed for only PSY 432 or PSY 498 (Embodied Cognition) or PSY 529
PSY	434	Cognitive Psychology	Human organism as a processor of information, from perception to cognition. Abstract concepts, semantic memory, attention, and mental imagery.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 323 or 324 with C or better
PSY		Cognitive Psychology	Human organism as a processor of information, from perception to cognition. Abstract concepts, semantic memory, attention, and mental imagery.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Prerequisite(s): PSY 323 or 324 with C or better
PSY	437	Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	L	Prerequisite(s): PSY 290 with C or better
PSY		Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 290 with C or better
PSY	438	Human-Computer Interaction	Theories, methods, and findings concerning the usability of computer systems and the design of effective user interfaces.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	439	Training and Skill Acquisition	Theories, methods, and findings concerning the acquisition of skilled performance and the design of effective training systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	440	Industrial/Organizational Psychology	Examines personnel selection, performance assessment, job and workplace design, job satisfaction, organizational behavior, management systems, and industrial safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	441	Cognitive Development	Experimental and theoretical literature in child development and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY	443	Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): PSY 315 (PGS 315), 341, or PSY 366 (PGS 466) with C or better; PSY 290 with C or better
PSY		Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L or SB	Prerequisite(s): PSY 315 (PGS 315), 341, or PSY 366 (PGS 466) with C or better; PSY 290 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	444	Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY		Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY	446	Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY		Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L or SB	Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY	447	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 290 with C or better
PSY		Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 290 with C or better
PSY	448	Human Factors in Transportation	Examines human performance and human-machine design issues in aviation and ground transportation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	449	Human Factors in Sport	Examines how psychological principles can be applied to enhance the performance of athletes and coaches.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	451	Stereotyping, Prejudice, and Discrimination	Critical investigation of the processes underlying, and the factors contributing to, stereotyping, prejudice, and discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 350 (PGS 350) or PSY 351 (PGS 351) with C or better; PSY 290 with C or better
PSY	453	Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 350 (PGS 350) with C or better; Credit is allowed for only PSY 453 or 598 (Organizational Behavior)
PSY		Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 350 (PGS 350) with C or better; Credit is allowed for only PSY 453 or 598 (Organizational Behavior)
PSY	458	Group Dynamics	Theories and methods of group leadership, group effectiveness, communication within groups, and relations between groups and individual members.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 350 (PGS 350) or PSY 351 (PGS 351) with C or better; PSY 290 with C or better
PSY	461	Interpersonal Influence	Principles and procedures that affect the process of social influence; consideration of attitudinal, compliance-inducing, and perceptual influences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 290 with C or better; PSY 350 (PGS 350) or 351 with C or better
PSY	462	Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY		Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	465	Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 315 (PGS 315), 350 or 351 with C or better; PSY 290 with C or better
PSY		Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 315 (PGS 315), 350 or 351 with C or better; PSY 290 with C or better
PSY	468	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY		Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better

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PSY	470	Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 325 or one of the following: BIO 181 (or 188), 182 (or 187), 201, 202
PSY		Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 325 or one of the following: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	471	Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY		Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	472	Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better; PSY 366 (PGS 466) or 443 with C or better
PSY		Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better; PSY 366 (PGS 466) or 443 with C or better
PSY	473	Psychology and Politics of Child Maltreatment	Examines psychological literature on child maltreatment in the context of development. Explores interactions between professionals responding to maltreatment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 101 (PGS 101) with C or better; PSY 230 (PGS 341) with C or better; PSY 290 with C or better
PSY	475	Multicultural Issues in Clinical Psychology	Discussion-based course that focuses on cross-cultural conceptions of mental illness, diagnosis and treatment approaches, and beliefs and practices of specific ethnocultural groups in the United States. Encourage students to critically think about diversity issues in clinical psychology, one's own attitudes, and culture and psychology more broadly. Students achieve these objectives through reading empirical articles and chapters; taking quizzes and exams, completing hands-on exercises, essays and other writing assignments; and actively participating in and facilitating class discussions.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): Minimum 45 hours; Credit is allowed for only PSY 475 or 498 (Clinical Psychology: Multicultural Issues)
PSY	477	Applied Psychology Capstone Experience	Applied psychology from a systems perspective. Requires a report based on research and/or applied work as a culminating experience.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		
PSY	482	Social Influence and Consumer Behavior	Discusses social influence principles, emphasizing strategies employed by professionals that affect consumer behavior. Analyzes consumer defenses against manipulations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 350 (PGS 350) with C or better
PSY	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
PSY		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
PSY		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-6		Prerequisite(s): Barrett Honors student
PSY	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-6		Prerequisite(s): Barrett Honors student
PSY		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
PSY		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-6	L	Prerequisite(s): Barrett Honors student
PSY	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	Department of Psychology	1-6	L	Prerequisite(s): Barrett Honors student
PSY		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
PSY		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-4		Prerequisite(s): PSY 290 with C or better
PSY	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Prerequisite(s): PSY 290 with C or better
PSY		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): PSY 290 with C or better

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PSY	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-6		Prerequisite(s): Barrett Honors student
PSY	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-7		Prerequisite(s): PSY 290 with C or better
PSY		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-7		Prerequisite(s): PSY 290 with C or better
PSY		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-3		Prerequisite(s): PSY 399
PSY	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-3		Prerequisite(s): PSY 399
PSY		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		Prerequisite(s): PSY 399(PGS 399) with C or better
PSY	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	501	Supervised Teaching	Experience in and examination of perspectives on teaching undergraduate psychology.	N	PRA	N	OPT	Liberal Arts and Sciences	Department of Psychology	4		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	512	Advanced Learning	Principles and theories of learning, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	515	Quantitative Research Methodology and Statistics I	Introduces advanced experimental and quasi-experimental research design and analysis. Focuses on group-based design and univariate analysis of variance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): Psychology MS student
PSY	516	Quantitative Research Methodology and Statistics II	Advanced experimental and quasi-experimental research design and analysis. Focuses on principles underlying linear regression and related statistical techniques.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 515 with B or better; Credit is allowed for only PSY 516 or 598 (Psychological Methods II)
PSY	526	Neuroanatomy	Covers the structure and function of the mammalian brain, including sheep brain dissection.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Psychology	4		Prerequisite(s): graduate; Credit is allowed for only PSY 426 or PSY 526
PSY	528	Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	529	Embodied Cognition	Do left-handers think differently from right-handers? Do paraplegics perceive the world differently from those who can walk? If you say about a potential date, "He leaves me cold," do you literally feel cold? And does a Botox treatment to alleviate frown lines make it difficult to understand sentences about sadness? The surprising answer to all of these questions is YES! Embodied cognition proposes that thinking is based on neural and bodily systems of perception, action and emotion. Explores this claim through readings, discussions, debates and embodied interactions, and considers implications of embodied cognition across areas of psychology and applications in education.	N	SEM	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): graduate standing in Psychology; Credit is allowed for only PSY 432 or PSY 529 or PSY 591 (Embodied Cognition)
PSY	530	Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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PSY	531	Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		
PSY		Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	532	Analysis of Multivariate Data	Matrix algebra for multivariate procedures, component and factor analysis, canonical and discriminant analysis, classification, MANOVA, logistic regression, hierarchical linear model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	533	Structural Equation Modeling	Path analysis; exploratory and confirmatory factor analysis; recursive and nonrecursive latent variable models; mean and covariance structures; latent growth models.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	534	Psychometric Methods	Theory and practice of psychological measurement using classical and modern test theories. Reliability assessment, test validation, test construction, test usage.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	535	Cognitive Processes	Theoretical/empirical treatment of the human organism as a processor of information, including abstraction, memory structure, problem solving, and thinking.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	536	Statistical Methods in Prevention Research	Statistical methods used in prevention research including epidemiological methods, logistic regression, program effect estimation, estimation, and mediation analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	537	Longitudinal Growth Modeling	Growth modeling methodology to describe individual variation in development over time. Employs multilevel and structural equation modeling frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	538	Advanced Structural Equation Modeling	Mean and covariance structure analysis. Includes multiple-group modeling, two-level hierarchical modeling, longitudinal growth modeling, analysis with categorical outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	539	Multilevel Models for Psychological Research	Multilevel (i.e., hierarchical linear) modeling, as described by Raudenbush and Bryk (2002) and others. Covers analytic strategies for analyzing a variety of different nested data structures (e.g., couples data, clients nested within group therapy settings, children nested within classrooms, longitudinal data). Covers two- and three-level models for cross-sectional and longitudinal data and also addresses related topics such as centering and estimation. Students perform and interpret the results of these models using a variety of statistical software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Pre-requisite: PSY 531; Credit is allowed for only PSY 539 or 591 (Multilevel Modeling)
PSY	540	Missing Data Analysis	Covers analytic strategies for analyzing data with missing values, with a special emphasis on modern approaches for dealing with missing data, in particular maximum likelihood missing data handling and multiple imputation, maximum likelihood estimation and multiple imputation. Familiarizes students with missing data theory, traditional analysis methods (e.g., deleting incomplete cases, single imputation methods), maximum likelihood estimation, multiple imputation, planned missing data research designs, and the inclusion of auxiliary variables. Students learn how to perform and interpret the results of these models using a variety of statistical software packages.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Pre-requisite: PSY 532; Credit is allowed for only PSY 540 or 591 (Missing Data)
PSY	541	Research in Cognitive Development	Theoretical and empirical issues in the study of children's knowledge and cognitive processes. Comparison of research in Piagetian and other traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	542	Social Development	Reviews and critiques major issues in the area of social development. Covers theory, research, and content.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	543	Statistical Mediation Analysis	Specifically covers the substantive motivations for mediating variables and third-variable effects (interaction, confounder, covariate and mediator) in general. Mediation represents a chain such that one variable causes a mediating variable and the mediating variable causes a dependent variable. Describes the single mediator model in detail including assumptions, estimators and geometric interpretations. Once the details of the single mediator model are understood, analysis is extended to multiple mediator models, path analysis, and models with moderators and mediators. Discusses modern causal inference approaches for mediation along with latent variable models, multilevel models and special models for longitudinal data. Also describes research designs for investigating mediating variables. Students learn how to perform and interpret the results of analysis using a variety of statistical software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 530; PSY 531; Credit is allowed for only PSY 543 or PSY 591 (Mediation) or PSY 591 (Statistical Mediation Analysis)
PSY	550	Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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PSY	551	Advanced Social Psychology	Continuation of PSY 550.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	554	Item Response Theory	A collection of measurement models based on item response theory (IRT). The models express the probabilities of responses to test or questionnaire items as a function of latent respondent characteristics and item properties. IRT models form the basis for measurement in standardized educational testing, but generally are also now used in clinical, social and personality measurement in psychology, medicine and the social sciences. Assumptions underlying IRT models, methods of parameter estimation and fit evaluation. Also covers important applications of the models in computerized adaptive testing, the detection of measurement bias and multidimensional IRT. Uses several software tools useful in IRT modeling.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 534; Credit is allowed for only PSY 554 or 591 (Item Response Theory)
PSY	555	Experimental and Quasi-Experimental Designs for Research	Reviews research techniques. Analyzes lab and field research; applications to specific topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	560	Advances in Theoretical Psychology	Covers new empirical and theoretical work in psychology with emphasis on its applicability.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	561	Methods in Applied Psychology	Methods of particular value in applied settings, including usability testing, prototyping, and use of computers in data collection and analysis. May be repeated for credit up to 9 hours.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	562	Advanced Human Factors	In-depth study of the issues, methods, and findings in industrial and organizational psychology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	568	Stress and the Brain	Covers the fundamentals of stress and brain interactions. Presents a foundation from a historical perspective, then the basics of an organism's stress response, including the activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis. The stress response is highly conserved and allows organisms to respond and adapt to their environment. A highly effective and robust stress response facilitates adaptation and behavioral flexibility. However, a maladaptive stress response can produce detrimental outcomes. The ultimate goal is to understand the dynamic and reciprocal processes by which the stress response and brain interact to produce behavioral flexibility and resilience or detrimental outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	572	Psychological Assessment	Theory and research on assessment of personality, psychopathology, and intelligence; construction of psychological assessment instruments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	573	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	573	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	574	Psychotherapy	Detailed survey of the theoretical and empirical literature relating to verbal psychotherapy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	576	Dynamical Systems in Psychology	Analyzes patterns of behavior change in psychological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	578	Developmental Psychopathology	Covers major theories and research related to the development of psychological disorders of childhood and adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	582	Community Psychology	Community systems, intervention techniques, consultation models, history and current status of community mental health movement, and conceptualization of the roles of community psychologists in social system intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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PSY		Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
PSY	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
PSY		Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
PSY	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
PSY	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Human Systems Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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PSY	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY		Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
PUB	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman; maximum 25 hours
PUB	501	Introduction to Scholarly Publishing	Introduces the purpose, organization, and operation of scholarly publishing, including its history, societal role, and current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
PUB	502	Scholarly Editing	Publishing procedures, proofreading, and manuscript editing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	503	Advanced Scholarly Editing	Advanced manuscript editing, acquisitions, developmental editing, and indexing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	510	Research in Scholarly Publishing	Individual or group research projects on issues in scholarly publishing, including legal, economic, design, technological, and related topics.	N	REC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	580	Practicum		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		

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PUB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	592	Research		Y	LEC	Y	CNV	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	N	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUP	190	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	(HU or SB) & G	Credit is allowed for only PUP 190 or SOS 111
PUP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
PUP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	200	Cities in Cinema	Environmental, aesthetic, social, economic, political cultural, and other factors influencing global cities seen through films from around the world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	HU & H & G	
PUP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	301	Introduction to Urban Planning	Theoretical and practical aspects of city planning. Interrelationships among physical planning, environment, government, and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	
PUP	361	Planning Workshop I	Basic site planning and design techniques. Collection and analysis of information and basic planning research. Report writing and public presentation skills.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisites: PUP 301 with C or better; Minimum 45 hours
PUP	363	History of Planning	Historical overview of western urban and regional planning and planning theory, focusing on the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: PUP 301 with C or better
PUP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	410	Public Participation in Planning	Theory and practice of public participation in planning. Examines and critiques participation techniques and roles of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better
PUP	412	History of the City	The city from its ancient origins to the present day. Emphasizes European and American cities during the last five centuries. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as analytical essays and an in-depth research paper are required in addition to regular tests and quizzes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	(L or HU) & H	Prerequisite(s): minimum 45 hours; Credit is allowed for only MUD 598 (Great Cities) or PUP 412
PUP	420	Theory of Urban Design	Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	HU	Pre-requisite: PUP 301 with C or better
PUP	424	Planning Methods	Methods for urban planning research. Emphasizes research design, quantitative and qualitative methods, survey research, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisite: PUP 301 with C or better
PUP	425	Urban Housing Issues	Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: PUP 301; Minimum 45 hours; Credit is allowed for only PUP 525 or 425
PUP	430	Transportation Planning and the Environment	Overview of transportation planning from the perspective of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
PUP	432	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better
PUP	433	Zoning Ordinances, Subdivision Regulations, and Building Codes	Analyzes zoning ordinances, subdivision regulations, building codes, and other planning implementation techniques relative to local development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Senior student; PUP 301 with C or better
PUP	434	Economic Development Planning	Provides a broad overview of urban economic development planning in the U.S. This overview includes the role and goals of economic development planning in today's global information economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L or SB	Pre-requisite: PUP 301 with C or better
PUP	436	City Structure and Planning	Political structure and organization of government as it relates to planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better

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PUP	441	Economics of Environmental Planning	Overview of environmental and ecological economics and how their concepts and tools are used in dealing with environmental planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better; Credit is allowed for only PUP 541 or PUP 441
PUP	442	Environmental Planning	Environmental planning problems, including floodplains, water quality and quantity, solid and hazardous waste, air quality, landslides, and noise.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better
PUP	444	Preservation Planning	History, theory, and principles of historic preservation. Emphasizes legal framework and methods practiced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students. Credit is allowed for only PUP 527 or PUP 444
PUP	445	Women and Environments	Examines the role women play in shaping the built environment; ways built/natural forms affect women's lives. Focuses on contemporary U.S. examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	C	Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	452	Ethics and Theory in Planning	Ethics and theory of professional planning practice in urban and regional communities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	Pre-requisite: PUP 301 with C or better
PUP	462	Planning Workshop II	Comprehensive planning. Synthesis of complex data- and community-based analyses. Advanced report writing and public presentation skills.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisites: PUP 301 and PUP 361 with C or better
PUP	465	Sustainable Urbanism	Examines the history, theory and practice of "sustainable urbanism," now defined by reform movements such as new urbanism, ecological urbanism, smart growth, and livable cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s) with C or better: Sustainability major in a sustainability concentration: SOS 110, 111 (or PUP 190); minimum 45 hours. All other majors: PUP 301. Credit is allowed for only PUP 465 or PUP 565 or SOS 465
PUP	481	Optimization Fundamentals for Spatial Analysis	Covers the fundamentals of optimization for spatial analysis. Reviews elements of calculus, matrices, and basic linear algebra. Introduces linear programming, integer programming and branch and bound, and heuristics. Provides the basics for use and application of GIScience and spatial analysis methods. Objectives include: reviewing basics of math, calculus and linear algebra; introducing optimization approaches, including linear programming, integer programming and heuristics; and applying these methods to structured problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: MAT 270 (or 271 or 272) with C or better; Credit is allowed for only GIS 461, 561, PUP 481, 581, GCU 494 (Optimization Fundamentals) or 598 (Optimization Fundamentals)
PUP	482	Location Analysis and Modeling	Provides a technical overview of location theory in the context of GIScience, focusing on analysis and modeling issues. Relies upon applications associated with emergency service planning, natural resource management, retail site selection, among others, to make connections among models, spatial information, and interpretation of findings. Explores utilization and implementation considerations using GIS. Objectives include: exposing a range of location analysis and modeling approaches; applying approaches in combination with GIS and optimization software; and carrying out an application-oriented study relying on acquired skills.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GPH 373 or GPH 481; Credit is allowed for only GPH 482, 582, PUP 482, 582, or 598 (Location Modeling)
PUP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban Planning undergraduate student
PUP	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12	G	Pre-requisite: Junior standing; Credit is allowed for only GCU 485 or GPH 485 or LAP 485 or POR 485 or PUP 485 or 585
PUP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
PUP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PUP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
PUP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	501	Planning History and Theory	Comprehensive review of planning profession within a political, governmental, multicultural, and gender framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	505	GeoDesign Principles	Systematic exploration and evaluation of alternative complex human-environmental systems using spatially and temporally explicit theories, data and methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): GIS 601 and 602, or PUP 576; Credit is allowed for only GIS 505 or PUP 505
PUP	515	International Planning and Development	Introduces globalization, international development, international planning practices and policies, urbanization and urban and regional planning in developing nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	520	Planning Practice, Ethics and Processes	Reviews past and current theoretical developments related to social change perspectives, the role and ethics of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	525	Urban Housing Issues	Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 425 or 525
PUP	526	Historic Preservation Planning Practice	In-depth study of practical applications of historic preservation theory and methods. Overview of the professional work of the preservation field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	527	Preservation Planning	Explores the field of historic preservation. Overview of its historic development and the principles that guide its professional practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student. Credit is allowed for only PUP 444 or 527
PUP	531	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	535	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 535 or GPH 535
PUP	541	Economics of Environmental Planning	Application and limitations of economics in environmental planning and policy making in the United States and internationally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 441 or 541
PUP	542	Environmental Administration and Planning	Environmental administration of policies and their relationship to environmental planning practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
PUP	544	Urban Land Use Planning	Theory and methods of urban land use planning, including the rational planning process, comprehensive, functional, and neighborhood plans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	547	Gender, Activism, and the Built Environment	Explores issues of gender in the built environment. Includes traditional attitudes toward gender underlying the physical form and continuing impacts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only WST 547 or PUP 547

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PUP	548	Planning for Sustainable Communities	Theory and applications connecting sustainability sciences and practice to urban environmental planning. Sustainable urban development, restoration, and preservation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	550	Transportation and the Environment	Examines transportation planning from the perspectives of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	553	Urban Infrastructure Anatomy and Sustainable Development	Understanding how built environment infrastructure systems interact with ecosystem services is critical for policies and decisions directing urban sustainability. Brings together students from several disciplines to develop a semester-long research project focused on a particular urban sustainability problem in Phoenix. During the semester, students are given background on how infrastructure systems work and are interdependent, and explore tools and methods for urban sustainability assessment with peers from several disciplines. As a class, students evaluate a particular urban sustainability problem for Phoenix, interact with local policy and decision makers in developing solutions, and present their findings at the end of the semester to the ASU community.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit for only CEE 507 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or PUP553 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or SOS547 or SOS598 (Urban Infrastruct Anatomy & Sustain Dev)
PUP	561	Urban Design Workshop	Workshop course focuses on applying knowledge and skills in a "real world" setting, developing meaningful planning and design proposals for existing urban areas.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	562	Advanced Theory of Urban Design	Study of urban design practice and underlying social, political, and environmental issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	563	The Politics of Urban Space and Design	Advanced seminar critically examines major intellectual traditions investigating urban form, the production of urban space, and socio-spatial practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	565	Sustainable Urbanism	Examines the history, theory and practice of "sustainable urbanism," now defined by reform movements such as new urbanism, ecological urbanism, smart growth, and livable cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 465 or 565
PUP	571	Socio-Economic Impact Analysis	Theory, methods, and techniques of demographic and economic analysis utilized in urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	573	Survey Research and Multivariate Statistics	Methods of survey research design and primary data analysis for urban planning applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Pre-requisites: PUP 570 and PUP 571 with C or better; Graduate student (degree seeking or nondegree seeking)
PUP	575	Environmental Impact Assessment	Criteria and methods for compliance with environmental laws; develops skills and techniques needed to prepare environmental impact statements/assessments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	576	GIS Workshop	GIS as a tool to address large, multifaceted problems.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GIS 515 or PUP 576
PUP	577	Communication and Visualization Tools in Planning	Covers graphic and verbal skills required to effectively communicate planning information and ideas. Emphasizes digital graphics and other computer-based tools and presentation formats, focusing on applying visual strategies and tools most often used by planners to make a persuasive argument.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Pre-requisites: PUP 570 and 571 with C or better; Graduate student (degree seeking or nondegree seeking)
PUP	579	Qualitative Research	Covers key qualitative skills and techniques that planners require, including research design and the understanding of validity and reliability issues, case study research approaches, qualitative data collection strategies, and strategies for analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisites: PUP 570 and 571 with C or better; Graduate student (degree seeking or nondegree seeking)
PUP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	581	Optimization Fundamentals for Spatial Analysis	Covers the fundamentals of optimization for spatial analysis. Reviews elements of calculus, matrices and basic linear algebra. Introduces linear programming, integer programming and branch and bound, and heuristics. Provides the basics for use and application of GIScience and spatial analysis methods. Objectives include: (1) review basics of math, calculus and linear algebra; (2) introduce optimization approaches, including linear programming, integer programming and heuristics; and (3) apply these methods to structured problems.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only GIS 461, 561, PUP 481, 581, GCU 494 (Optimization Fundamentals) or 598 (Optimization Fundamentals)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PUP	582	Location Analysis and Modeling	Provides a technical overview of location theory in the context of GIScience, focusing on analysis and modeling issues. Relies upon applications associated with emergency service planning, natural resource management, retail site selection, among others to make connections among models, spatial information and interpretation of findings. Explores utilization and implementation considerations using GIS. Objectives include: (1) exposure to a range of location analysis and modeling approaches; (2) ability to apply approaches in combination with GIS and optimization software; and (3) capability of carrying out an application-oriented study relying on acquired skills.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GPH 581; Credit is allowed for only GPH 482, 582, PUP 482, 582, or 598 (Location Modeling)
PUP	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Urban/Environmentl Planning MUEP student
PUP	585	International Field Studies	Organized field study in specified international locations.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only GCU 485, GCU 586, GPH 485, GPH 585, LAP 485, LAP 585, POR 485, PUP 485 or PUP 585
PUP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Graduate student
PUP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Pre-requisites: Urban and Environmental Planning graduate student
PUP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	642	Urban and Regional Economic Analysis	Land use and locational impact of economic activity and the urban real property market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	644	Public Sector Planning	Urban fiscal problems and public goods provision in state and local governments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
PUP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PUP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		
PUP	701	Urban Planning Colloquium	Presents and discusses new research findings and methods in urban planning.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	710	Current Planning Theory and Practice	Explores and critically evaluates planning theories and approaches with the objective of articulating new ideas for planning research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	718	Econ Dev in Indian Country	Focuses on the unique legal, economic, and political issues confronting tribal governments in developing diversified reservation economies.	N	LEC	N	OP6	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2-3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)Credit is allowed for only LAW 718 or PUP 718
PUP	724	Planning Methods for Doctoral Students	Tools useful for urban planning research; emphasis on research design and survey methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
PUP	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
QBA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-3		
QBA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
QBA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-6		Prerequisite(s): Barrett Honors student
QBA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Prerequisite(s): Barrett Honors student
QBA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-6		Prerequisite(s): Barrett Honors student
QBA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-7		
QBA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		
QBA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Students only (degree and non-degree seeking)
QBA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Degree Seeking Students only
QBA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		
QBA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		
QBA	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		

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QBA	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		
QBA	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey Graduate Degree Seeking Students only
QBA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		
QBA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		
QBA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		
RDG	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
RDG	291	Children's Literature	Focuses on selecting and using children's literature and related nonprint media to support the elementary school curriculum. Covers the elements, genres and applications of children's literature as well as the resources available for elementary classroom teachers. Constructs criteria for the selection of trade books for educational and personal use. Also explores the role of digital media in children's literature.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	HU	
RDG	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
RDG	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
RDG	322	Language Literacy 1 in Elementary Schools	Theoretical knowledge and pedagogical skills for implementing a high-quality reading program. Course objectives and topics are aligned to standards for reading and research from the International Reading Association (IRA), Arizona College and Career Ready Standards (ACCRS), Interstate Teacher Assessment and Support Consortium (InTASC) standards, and the National Reading Panel Report (2000). Focuses on emergent literacy, phonemic awareness, phonics, fluency, vocabulary and comprehension. Presents strategies and assessments to support students of a variety of ability levels and cultural backgrounds with a specific focus on the struggling readers and English language learners. For education majors only.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program; Credit is allowed for only RDG 322 or SPE 325
RDG	323	Literacy Processes in Content Areas	Principles and practices for planning subject matter units of instruction that explicitly address learning with texts across academic disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
RDG	413	Language Literacy 2 in Elementary Schools	Applies effective practices for literacy instruction in authentic classroom settings. Prepares teacher candidates to plan and deliver balanced literacy approaches with diagnostic assessment strategies and adaptations to support second language learners and struggling readers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
RDG	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): Admission to Professional Teacher Preparation Program
RDG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
RDG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
RDG	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
RDG	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-7		
RDG	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
RDG	505	Developmental Reading	For classroom and special reading teachers. Specific professional skills in decoding, comprehension, and evaluation. Required for Special Reading Endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	507	Content Area Literacy	Theory, teaching strategies, and practical application concerning learning from text across subject matter disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	508	Essential Elements of Elementary Content Area Literacy (K-8)	Presents theory, rationale, and teaching strategies concerning learning from oral, print, and electronic texts across subject-matter disciplines. Emphasizes practical application of content area literacy principles. Familiarizes participants with the literate lives of today's youth, facilitate participants' inquiry into strategies to motivate students in content learning, and provide strategies to improve students' comprehension and application of content material. Readings, online inquiries, and assignments focus on application of course content. Emphasizes implications of recent research and theory in content literacy and adolescent literacy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	509	Essential Elements of Secondary Content Area Literacy (6-12)	Presents theory, rationale, and teaching strategies concerning learning from oral, print, and electronic texts across subject-matter disciplines. Emphasizes practical application of content area literacy principles. Familiarizes participants with the literate lives of today's youth, facilitate participants' inquiry into strategies to motivate students in content learning, and provide strategies to improve students' comprehension and application of content material. Readings, online inquiries, and assignments focus on application of course content. Emphasizes implications of recent research and theory in content literacy and adolescent literacy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	512	Theoretical Foundations in Language and Literacy	Introduces theoretical lenses useful in understanding issues in language and literacy education and research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	520	Essential Elements of Elementary Literacy (K-8)	Intended for practicing teachers, focuses on the development of a comprehensive approach to Reading and Writing Instruction K-8.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	525	Emergent Literacy	Examines recent research on oral language and literacy development and effective strategies for teaching language and literacy in prekindergarten to grade 3, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	531	Language and Literacy I	Focuses on the theoretical knowledge and pedagogical skills necessary to equip future teachers to plan and implement high-quality reading and writing instruction in a classroom setting. Course objectives and topics are aligned to standards for reading and research from the International Reading Association (IRA), Arizona College and Career Ready Standards (ACCRS), Interstate Teacher Assessment and Support Consortium (InTASC) standards, and the National Reading Panel Report (2000). Focuses on reading readiness, language development, phonemic awareness, phonics, fluency, vocabulary and comprehension. Presents strategies and assessments to support struggling readers as well as a variety of ability levels and cultural and linguistic backgrounds to include English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Teachers College graduate student; Credit is allowed for only RDG 531 or SPE 538

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	532	Language and Literacy II	Builds on the theoretical knowledge and pedagogical skills presented in the previous course. Uses diagnostic assessments in the planning and implementation of intervention literacy lessons for struggling readers/writers in a classroom setting as part of the course case study assignment. Includes differentiated instructional and assessment strategies to address the needs of diverse learners to include English language learners. Also includes an emphasis on writing and composition to ensure future teachers have the knowledge necessary to teach all forms of writing in the elementary classroom. Includes an overview of the historical development of children's literature and the criteria necessary for analyzing and selecting all genres of quality children's literature.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Teachers College graduate student; Pre- or corequisite(s): RDG 531
RDG	550	Practicum Experiences in Elementary and Secondary Reading	Practicum experience utilizing assessment and instructional techniques for classroom settings. See RDG 557 for State of Arizona reading endorsement.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	555	Formal Measures of Literacy	Understanding the attributes of standardized tests and applying this information to analyze, select, and explore their use.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	556	Assessment and Procedures in Elementary and Secondary Reading	Techniques for classroom and clinical reading/literacy assessment and instruction. Emphasizes continuous assessment. May be taken concurrently with RDG 550 or 557. Recommended for State of Arizona reading endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	557	Advanced Elementary and Secondary Reading Practicum	Advanced practicum experience utilizing specialized reading and other assessment and instruction techniques for classroom and clinic settings. Lab sections. Recommended for State of Arizona reading endorsement. May be taken concurrently with RDG 556.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	563	Children's Literature	Selects and uses children's literature and related nonprint media to support the elementary school curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
REA	300	Real Estate Analysis	Applies economic theory and analytical techniques to real estate markets. Topics include law, finance, appraisal, market analysis, investments, development.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: W.P. Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.
REA	380	Real Estate Fundamentals	Real estate for the student/consumer with an emphasis on the applied aspects of each area of real estate specialization. Not open to Real Estate majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: Minimum cumulative GPA of 2.00; Minimum 56 hours OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student
REA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
REA	401	Real Estate Appraisal	Factors affecting the value of real estate. Theory and practice of appraising and preparation of the appraisal report. Appraisal techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey BA or BS major OR non-business major with FIN 300 (or FIN 302 or 303 or REA 380) with C or better; 2.50 ASU GPA; 2.50 ASU business GPA; minimum 56 hours

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REA	411	Real Estate Law	Legal and ethical aspects of land ownerships, interests, transfer, finance development, and regulations of the real estate industry.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s) with C or better: FIN 300 or 302 or 303 or REA 380; W.P. Carey BA or BS Business major OR non-business student with minimum 56 hours and 2.50 ASU and business GPA OR non-degree graduate student. Credit is allowed for only LES or REA 411
REA	441	Real Estate Land Development	Neighborhood and city growth. Municipal planning and zoning. Development of residential, commercial, industrial, and special purpose properties.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s) with C or better: FIN 300 or 302 or 303 or REA 380; W.P. Carey BA or BS Business major OR non-business student with minimum 56 hours and 2.50 ASU and business GPA OR non-degree graduate student
REA	456	Real Estate Investments	Analyzes investment decisions for various property types. Cash flow and rate of return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey BA or BS major OR non-business major with FIN 300 (or FIN 302 or 303 or REA 380) with C or better; 2.50 ASU GPA; 2.50 ASU business GPA; minimum 56 hours
REA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		
REA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree OR Graduate student.
REA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
REA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Finance	1		
REA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RED	501	Urban Economic and Real Estate Development Principles	Explores the basic principles of urban economics and their application to real estate decision making.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1		Prerequisite(s): degree- or nondegree-seeking graduate student
RED	502	Real Estate Valuation-Finance and Capital Markets	Addresses the concepts of valuation applied to real estate and teaches how to apply these principles. Intermediate- to advanced-level course in mortgage finance, and associated capital market innovations.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only RED 691-Real Estate Fin/Analysis or RED 502
RED	503	Real Estate Market Analysis	Focuses on market analysis and market data gathering methods, means, and techniques necessary in identifying market opportunities and developing specific market strategies for successful real estate development.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only RED 503 or 591 (Real Est Site Analys/Dsg)
RED	504	Real Estate Site Analysis, Master Planning and Design	Analyzes the physical characteristics of a property, including the site and physical area, legal, political, economic, and financial facts that impact the highest and best use of a property and what can be built upon the property.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: Graduate student; Credit is allowed for only RED 504 or 591 (Real Estate Develop Principles)
RED	505	Land Use Law and Public Entitlement Process	Covers a basic understanding of the legal and practical zoning and governmental land entitlement process. Examines the legal history, structure, and implications of zoning, as well as the fundamentals of "real life" situations that occur in the entitlement and real estate development field. Provides a broad overview of this process from a legal and development viewpoint, but is not intended to be a comprehensive analysis of all entitlement issues.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: Graduate student; Credit is allowed for only RED 505 or 591 (Mkt Segmentation/Analysis)
RED	506	Real Estate Law for Developers	Covers the nature of property and the legal system as it relates to purchase agreements, title, surveys, declarations of covenants, defining easements, and licenses among other related topics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: Graduate student; Credit is allowed for only RED 506 or 591 (Public Entitlement Process)
RED	507	Synthesis Project #1 Residential Development	Employs the students learning through application of developing a specific parcel of land.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1		Pre-requisite: Graduate student; Credit is allowed for RED 507 or 591 (Mkt Segmentation/Analysis)
RED	508	Real Estate Engineering and Construction	Explores the basic principles of engineering and construction of real estate development projects. Reviews construction technologies within the framework of architectural design and engineering as well as construction means, methods, and systems.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: Graduate student; Credit is allowed for only RED 508 or 598 (Compar Analys; in Fill Housing)
RED	509	Advanced Financial Analysis for Commercial Real Estate	Teaches more complex financial analysis of income-producing property, including various decision-making tools such as Monte Carlo, option pricing, assessing alternatives, and how to build these into financial models. Also teaches financial analysis of business structures to determine potential outcomes such as debt and equity structures, waterfalls, claw backs, and other business and ownership concepts. Emphasizes strategic alternatives, assessing risk and conversion events.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: MRED student; Credit is allowed for only RED 509 or 691 (Contemp Issues Real Estate Dev)
RED	510	Real Estate Development Business and Project Management	Teaches management of real estate development companies and process. Students learn the various aspects of project management, financial management and project accounting, lending relations and managing loans and pay applications as well as dispute resolution and strategic partnerships.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: MRED student; Credit is allowed for only RED 510 or 598 (Income Analys; Comm/Retail)
RED	511	Design of the Built Environment	Teaches the built environment and how that applies to creation of places, market positioning, capturing value and the importance of good design to the business of real estate.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: MRED student; Credit is allowed for only RED 511 or 691 (Real Estate Dev Project Mgmt)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RED	512	Real Estate Law for Developers	Teaches issues faced by developers such as various types of financing structures, including special districts, TIF and bond financing. Covers issues and process of raising capital and various forms of securing equity. Discusses private placement memorandums, limited liability companies, partnerships and public private partnerships. Students also learn about environmental law, income tax issues, negotiation, and alternative dispute resolution.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: MRED student; Credit is allowed for only RED 512 or 691 (Adv Real Estate Finance/Analys)
RED	513	Advanced Real Estate Engineering, Construction Management and Sustainable D 2	Covers various construction delivery methods, construction project management and scheduling, construction contracts, mechanics and materials liens, and pay applications. Students also learn about sustainability and the built environment.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: MRED student; Credit is allowed for only RED 513 or 691 (Real Estate Dev. Project Mgmt)
RED	514	Synthesis Project #2 Income Property Development	Through application to a specific problem given by faculty, students work in teams to analyze and seek solutions to development of land for an income-producing property. Students investigate a specific parcel of land, performing due diligence, preparing a market and segmentation analysis, defining highest and best use(s), designing a solution, preparing residual land value analysis, defining a product offering, pricing points, building design, site planning and comparative valuation analysis.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: MRED student; Credit is allowed for only RED 513 or 691 (Adv Real Estate Finance/Analys)
RED	515	Synthesis Project #3 Capstone Project Mixed-Use Property Development	Employs all that the students have learned through application to a specific problem given by faculty. Students work in a team to analyze and seek solutions to development of land for a complex, mixed-use project. Students investigate a specific parcel of land and are required to perform due diligence, prepare a market and segmentation analysis, define highest and best use(s), design a solution, prepare residual land value analysis, define a product offering, price points, building design, site planning and comparative valuation analysis.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	4		Pre-requisite: Master of Real Estate Development major; Credit is allowed for only RED 515 or 598 (Ret Analys; High Dens Mix Use)
RED	520	Real Estate Development Business and Project Management Internship	Integrates the knowledge and skills cultivated in the MRED program (real estate business management, creative problem solving, team building, critical analysis and thinking). Helps students secure relevant functional and industry experience by providing hands-on work experience across a variety of internship sites demonstrating the varied and changing demands and possibilities of work within the real estate industry. Uses internship experiences to analyze the shifting landscape of work and to assess potential employment environments and career paths.	N	PRA	N	YGB	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: MRED student
RED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
RED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
RED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
RED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
RED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		
RED	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
RED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
RED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
RED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REL		Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU & G	Credit is allowed for only REL 100 or 200
REL	100	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Credit is allowed for only REL 100 or 200
REL		Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Credit is allowed for only REL 100 or 200

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REL	107	Religion and Globalization	Explores how different religions interact with the various processes of globalization, including how the world's major religions have been transformed by economic, political, cultural, and technological aspects of globalization. Topics include religious terrorism, human rights, religion, and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Credit is allowed for only REL 107, 194 (Religion and Globalization) or SGS 107
REL	111	Introduction to Asia	Offers a basic introduction to the geography, history, cultures, states, and societies of South and Southeast Asia as well as China, Japan, and Korea.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST 111 or REL 111
REL	131	Biblical Hebrew I	Offers an introduction to Biblical Hebrew, the language in which most of the books of the Hebrew Bible/Old Testament have been written. Provides the basic tools to understand and translate Biblical Hebrew texts. Covers the Hebrew alphabet, basic vocabulary, morphology and syntax. Students learn idiomatic expressions, basic literary techniques in narratives and poetry, as well as specificities of Semitic languages. Emphasizes a critical approach to the ancient text. Also introduces the evolution of the biblical text, from ancient manuscripts to contemporary editions and translations. Includes an introduction to the development of writing and to the evolution of Hebrew, from earliest inscriptions to its revival in modern Israel. The texts translated in class are situated in the history of Israel, but also in their Jewish and Christian cultural and religious contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Credit is allowed for only HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I)
REL	132	Biblical Hebrew II	Completes the study of basic Biblical Hebrew grammar and vocabulary (Futato's Beginning Biblical Hebrew, chapters 21-40). Prepares students to translate narrative and legal texts from Hebrew Bible. Students learn to use dictionaries, grammars, paradigms and critical editions of the biblical text.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I) with C or better; Credit is allowed for only HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II)
REL	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
REL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL		Exploring the World's Religions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & G	Pre-requisites: Maximum 75 hours; Credit is allowed for only REL 100 or 200
REL	200	Exploring the World's Religions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Pre-requisites: Maximum 75 hours; Credit is allowed for only REL 100 or 200
REL		Exploring the World's Religions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Pre-requisites: Maximum 75 hours; Credit is allowed for only REL 100 or 200
REL		Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	
REL	201	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	
REL		Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
REL		Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU & C	
REL	202	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	
REL		Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C	
REL		Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU & H	
REL	203	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL		Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	
REL		Life, Sex and Death	Ways that religions have understood birth, sexuality, death, and the passing of generations. Examples from traditions throughout the world.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
REL	205	Life, Sex and Death	Ways that religions have understood birth, sexuality, death, and the passing of generations. Examples from traditions throughout the world.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL		Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	
REL	207	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	
REL		Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
REL	210	Introduction to Judaism	Beliefs, ceremonies, festivals, and institutions of Judaism emphasizing the contemporary era. Assumes no previous knowledge about Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only JST 210 or REL 210
REL	211	Jews and Judaism in America	Chronological analysis of Jews and Judaism in American history and letters.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Credit is allowed for only HST 211 or JST 211 or REL 211
REL	225	African American Religion	Introduces the history and development of the African American religious tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	
REL	230	Introduction to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST, JST or REL 230
REL	231	Biblical Hebrew III	Advanced study of Biblical Hebrew. Deepens understanding of the grammar and composition of the Hebrew Bible. Translates texts of different literary genres (narrative, legal, poetic, prophetic) and different periods. Introduces the basic principles of textual criticism and different approaches to interpret the texts of the Hebrew Bible.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II) with C or better; Credit is allowed for only HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III)
REL	232	Biblical Hebrew IV	Addresses advanced topics in Biblical Hebrew grammar and interpretation. The first half of the semester is devoted to texts from the Hebrew Bible; the second half on extra-biblical texts written in ancient Hebrew (for example: Dead Sea Scrolls, Rabbinic texts, ancient Hebrew poetry). Topics and texts change annually.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III) with C or better; Credit is allowed for only HEB, JST, REL 232 or HEB 294 (Biblical Hebrew IV)
REL	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
REL		Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
REL	245	Introduction to South Asia	Provides an introduction to the history and major contemporary political, economic, social, religious and cultural features of the South Asia region at large and of selected South Asian nations in particular.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Pre-requisites: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only HST, REL, SGS 245 or REL 294 (Introduction to South Asia)
REL	260	Introduction to Islam	Examines Islamic beliefs, ceremonies, festivals, and institutions. Assumes no prior knowledge about Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	
REL	270	Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	
REL		Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
REL	282	Pre-Hispanic Native Am Wrldview	Surveys cosmological traditions of indigenous civilizations on the Pre-Columbian American continents	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
REL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
REL	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student

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REL	300	The Future of Religions	Critical theorists of modern religious and secular beliefs argued that both theism and atheism have had their martyrs and tyrants. Nietzsche proclaimed "God" of the West dead, Marx unmasked religion as opium for the oppressed masses, and Freud analyzed religious future as an unconscious illusion. The future of secular progress has become equally suspect in the wake of the Holocaust, Hiroshima, the gulags, the killing fields of Cambodia, Rwanda. Globally motivated terror revealed itself as capable of religious as much secular justifications. The future of faith and reason has become a doubly open theoretical and practical question in philosophy, religious studies, literary study, critical theory, cultural and gender studies, and all sciences. Applies theoretical and methodological tools to critically exam beliefs, practices, and communities and their role in both generating and transforming the ethical and spiritual discontents of the global age.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; Credit is allowed for only HON 394 (The Future of Religions), PHI 303 or REL 300
REL	301	Comparative Mysticism	Comparative examination of Eastern and Western mystical traditions from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	307	Approaches to Religion	Examines the intellectual history of academic study of religion through various theoretical approaches, major themes, and thinkers.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Religious Studies student; ENG 102, 105 or 108 with C or better; REL 207 with C or better
REL	310	Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL		Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	311	Israeli Society and Culture	Different partitions of the Israeli society, based on ethnic origin, by religious affiliation or by political association. Depicts how Israel is an absorbing immigration state. Israel is a welfare state and the course covers aspects of a welfare state, such as health, retirement, public transportation, art, higher education and more.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better. Credit is allowed for only HEB 348 or HEB 394 (Israeli Culture and Society) or JST 348 or REL 311 or SLC 348
REL	312	History and Memory of the Holocaust	In-depth study of the history of the genocide of Jews, the rise of modern antisemitism within the context of Nazi Germany, and the memory and memorialization of the Holocaust post 1945.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 369, 304 (Shoah: History, Memory, and Representation), 394 (History of the Holocaust) or REL 312
REL	313	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
REL	314	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
REL		Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
REL	315	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST or REL 315

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REL	315	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST or REL 315
REL	316	Literary Readings of the Hebrew Bible	Literary analysis of two of the main genres of the Hebrew Bible: narrative art and poetry. Students learn the main literary conventions of biblical prose and poetry, and how these conventions are applied or subverted. Each class comprises the study of a literary aspect, close readings, and thematic discussions. Biblical texts are read only in translation. They are situated in the religious, literary and artistic traditions that have developed on their basis.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only ENG 316, HEB 316, JST 316, REL 316 or HEB 394 (Literary Readings of the Bible)
REL	317	Introduction to Rabbinic Judaism	Historical analysis of the thought, literature, and institutions of rabbinic Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST 317 or REL 317
REL	318	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST 318, REL 318 or SOC 375
REL	319	Religion, Violence and America	In-depth study of ways in which religion and violence have shaped American history, culture and identity.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only REL 319 or 394 (Religion, Violence & America)
REL		American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	320	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL		American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL		Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	321	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL		Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	323	African American Religion: A Biographical Approach	Examines the experiences, motivations, and contributions of a number of figures associated with African American religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	324	Spirituals and the Blues	Multidisciplinary exploration of the African American religious and musical response to the North American diaspora experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	326	U.S. Latino Religion and Culture	U.S. Latino and Latin American religious history with special attention to what have become Hispanic mestizo hybrid cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only TCL 328 or REL 326
REL	330	Native American Worldviews	Presents worldviews through the art, architecture, writing, mythology, ritual and folklore of tribes in Native America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	Prerequisite(s): minimum 24 hours; ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	331	History of Native American Religions	Explores the role of religion in Native American history, including missionization; adaptation; and prophetic, messianic and religious revitalization movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 24 hours
REL	332	South American Indian Religions	Introduces the sacred stories, ceremonies, and beliefs of Native South American peoples in their historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): minimum 30 hours; ENG 102, 105, or 108 with C or better
REL	338	The Daoist Bible: Daode jing	At 5,000 words, the Daode Jing (Tao-te ching) is arguably the shortest religious book in the world. It is also the most widely translated, after the Christian Bible. Introduces the wisdom of the Old Boy, Laozi himself, and to some of the startlingly wide variety in which his short, gnomic utterances have been interpreted. No knowledge of Chinese required; all readings and lectures in English.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101, 105 or 107 with C or better; Credit is allowed for only CHI 338, 394 (Daoist Bible: The Dao De Jing) or REL 338
REL	343	Daoism	Introduces the history, doctrines, and practices of Taoism from the mid-second century CE up to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only CHI or REL 343
REL	344	Religion and Values in Japanese Life	Japanese values expressed in the life and annual cycles of the family, local and national identities, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	345	Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL		Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	346	Chinese Religions	Examines the history and practices of Chinese religions with particular attention to culture, society, and history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	347	Peace and Conflict in India	In-depth analysis of major Indian religious traditions in historical and contemporary context, with attention to theologies, textual genres, doctrines, rituals, political and cultural expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 24 hours; Credit is allowed for only REL 347 or REL 394 (Religions of India)
REL	348	Religion and Culture in Southeast Asia	In-depth study of the religious diversity of Southeast Asia including Hinduism, Buddhism, Islam, Christianity, spirit cults and ancestral religions.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 24 hours; Credit is allowed for only REL 294 (Southeast Asia Global Crossroads) or REL 348
REL	350	Hinduism	Studies diverse forms of Hinduism through its institutions, literature, folklore, art, and architecture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	351	Buddhism	Doctrines, practices, and institutions of the Buddhist religion, emphasizing its role in the history and culture of Asian societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	352	Modern Buddhism	Focuses on modern issues related to Buddhism with special attention to colonialism, nationalism, the development of the nation-state and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only REL 352 or 394 (Modern Buddhism)
REL	353	Folk Religions of Korea	Introduces forms of folk religions in Korea: shamanism, village rituals, ancestor-worship, fortune-telling, geomancy, and folk elements in major traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only KOR 353 or REL 353
REL	354	Religious Traditions of Korea	Examines major religious traditions of Korea: Buddhism; Christianity; Neo-Confucianism; indigenous practices and their development through political, cultural, and social frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only KOR 354 or REL 354

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	355	Japanese Cities and Cultures to 1800	Relations among ideas and literary, visual, and performing arts of the ancient aristocracy, medieval samurai, and early modern townspeople.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	356	Buddhism in America	Examines diverse Buddhist traditions in the U.S. among Asian-American communities and converts to this religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	357	Theravada Buddhism in South and Southeast Asia	Examines Theravada Buddhist institutions, practices, and communities in ancient and contemporary south and southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	360	Ancient Greek Religion	Surveys ancient Greek religion, including its gods, ritual practices and festivals. Analyzes the development of the religion over time, and how both ancient and modern figures interpreted its meaning.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; Credit is allowed for only GRK 362, REL 360, SLC 362 or SLC 394 (Ancient Greek Religion)
REL	361	Roman Religion	Roman religion was never static, despite the best efforts of the Roman state to make it so. Understands the artifacts and procedures of Roman state cult from its earliest origins to the late empire, using ancient literary sources, archaeology throughout the ages and modern scholarly theories. Clarifies the forces that influenced development and change in Roman religion, both internal and external.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only LAT 361, REL 361, SLC 361 or SLC 394 (Roman Religion)
REL	362	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 372 (or AFS 372) or REL 362 or SGS 366 or AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History)
REL	363	Islam and World Affairs	Advanced examination of complex trends to construct the roles of Islam as a belief, its institutions, leaders and ordinary believers in contemporary world affairs. Studies different developments, including the rise of (political Islam) fundamentalism, to subsequent changes in the Muslim world, challenges Muslims face, and domestic and international conflicts. Challenges students to reconceptualize and broaden their understanding of the powerful presence of religion in this era of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 373 (or AFS 373) or REL 363
REL	364	Islam in Eurasia and Central Asia	Examines the changing role of Islam in Eurasia and Central Asia through history and interprets current transformations in the region.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only REL 364 or 394 (Islam in Eurasia & Central Asia)
REL	365	Islamic Civilization	Global historical survey of Islamic cultures and societies up to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105, or 108 with C or better
REL	366	Islam in the Modern World	Examines the worldwide transformations of Islamic religion, cultures, and societies in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	369	Women in Islam	Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		
REL		Women in Islam	Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
REL	371	New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU	
REL		New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
REL	372	Formation of the Christian Tradition	Origins, development, and expansion of Christianity; major themes and tensions from the New Testament world to the beginning of the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisite: Minimum 24 hours; ENG 102, 105 or 108 with C or better

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REL	373	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Minimum 24 hours; ENG 102, 105 or 108 with C or better or WST 100 or WST 300 with C or better; Credit is allowed for only JST 373, REL 373 or WST 372
REL	374	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours. Credit is allowed for only HST 361 or REL 374
REL	374	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours. Credit is allowed for only HST 361 or REL 374
REL	375	Lost Scriptures, Lost Christianities	Wide diversity of early Christianity and its suppressed and lost texts, which have been found in modern times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	376	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Pre-requisites: ENG 102, 105 or ENG 108 with C or better. Credit is allowed for only FMS 376 or REL 376
REL	377	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only HST 371 or REL 377
REL	378	Religion, War and Peace	In-depth study of the religious, political and ethical dimensions of violence and war. Compares perspectives of Christian, Jewish and Islamic traditions as well as secular viewpoints.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only POS 378, REL 378 or 394 (Religion, War and Peace)
REL	379	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only REL 379 or SGS 343
REL	380	Theology of Terror	Historical background, theological foundations, and consequences of violent Islamist movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL		Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or HU	
REL	381	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	
REL		Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
REL	382	Magick, Religion and Science	Relationship and conflict among magic, religion and science in the West from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	384	The Bible and Archaeological Discoveries	Studies the Bible alongside the stories that architecture, pottery, metalwork, sculpture, tombs, and paintings of the ancient Near East have to tell. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only JST 384 or REL 384
REL	385	Contemporary Western Religious Thought	Introduces contemporary Jewish and Christian thought. Topics include religion and politics, problem of evil, interpretations of God, and feminist theology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better

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REL	386	America and the Holocaust	Analyzes the historical and sociopolitical factors that shaped U.S. policy decisions regarding Germany's assault on Europe's Jews.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU or SB	
REL	387	Religion and Conflict: Theories and Cases	In-depth study of religion and conflict across multiple traditions and regions.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 24 hours; Credit is allowed for only REL 387 or 394 (Religion and Conflict: Theories and Cases)
REL	388	Religion, Ethics, and International Politics	Religious and ethical dimensions of international politics. Addresses historical and contemporary ideas, movements, issues and events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only POS or REL 388
REL		Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	HU & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only REL 390 or WST 390
REL	390	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only REL 390 or WST 390
REL		Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only REL 390 or WST 390
REL		Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or ENG 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357 or PHI 391 or REL 391
REL	391	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: ENG 102, 105 or ENG 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357 or PHI 391 or REL 391
REL	393	Religion and Sexuality	Examines what issues are involved in incorporating sexuality into religion and how/why religious traditions seek to control sexuality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
REL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
REL	395	Religion and Psychology	Examines religious experience from various psychological viewpoints and explores the relationship between religion and psychology in theory and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, ENG 105 or ENG 108 with C or better; PSY 101 (PGS 101) with C or better. Credit is allowed for only PSY 395 (PGS 395) or REL 395
REL	396	Women in the Bible	Uses feminist criticism to reconstruct the remarkable women who stand in the shadow of the patriarchy in the bible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only JST or REL 396
REL	401	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Credit is allowed for only IAS 401, MAS 598 (Sacred Scriptures & Social Choices) or REL 401
REL	405	Problems in Religious Studies	Selected topics in religious studies; involves students in research interests of instructor.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: REL 307 with C or better; Religious Studies major

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REL	406	Religious Studies Capstone I	Develops skills necessary for conducting and presenting in-depth research in the field of religious studies.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Prerequisite(s): REL 307 with C or better; Religious Studies major; senior standing
REL	407	Religious Studies Capstone II	Uses previously developed research to produce original research project in religious studies.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	2		Prerequisite(s): REL 406
REL	410	Judaism in Modern Times	Variety of expressions of Judaism and Jewishness in the modern period. Topics may include American Judaism or religious responses to the Holocaust.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	411	Judaism and the Beginnings of Christianity	Studies the beginnings of Christianity in relation to Judaism: their common context, the process of their distinction and their mutual influence. Through a historical and thematic approach, explores the parallel construction of Jewish and Christian identities. Combines readings from primary sources (Hellenistic Judaism, Qumran, New Testament, Early Christianity, Rabbinic Judaism) and up-to-date scholarly literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101 or 105 or 107 or 108 or HST 100 or 102 or REL 100 or SLC 142 or 202 with C or better; Credit is allowed for only HEB/JST/REL 411 or HEB 394 (Judaism and the Origins of Christianity) or HEB 494 (Judeo-Hellenistic Literature)
REL	420	Religion in American Life and Thought	Influence of religion on American society, culture, and ideas; the distinctive character of religion in America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
REL	427	American Religious Thought	Thought of representative American religious thinkers, e.g., Jonathon Edwards, William Ellery Channing, Horace Bushnell, and Reinhold Niebuhr.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	430	Shamans and Mesoamerica	Analyzes process of religious hybridization in Mesoamerica; examines symbolic interpretations of Amerindian religious practice and cosmological concepts of Mesoamerican priests.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better
REL	460	Studies in Islamic Religion	Issues in the interpretation and understanding of Islamic texts, history, society, culture, and rituals. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	
REL	461	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AFR 480 (or AFS 480) or REL 461 or SGS 442
REL	470	Religion in the Middle Ages	Religious aspects of medieval life and thought; variety of forms of dissent, heresy, and reform movements from the 4th to 13th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	471	Reformation and Modern Christianity	Protestant Reformation to contemporary Christian movements; includes factors in the dissolution of the Medieval Christian synthesis, variety of reform movements and reformation patterns, Catholic counter-reform measures, formation of liberal theology, ecumenical movement, and the World Council of Churches.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	480	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L & G	Credit is allowed for only REL 480 or SGS 441
REL	482	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only JUS 473, POS 473 or REL 482
REL	483	Religion and Science	Investigates the correlation between science and religion as an interdisciplinary study from a historical perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
REL		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	486	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
REL	487	Religion and Film	Uses a transdisciplinary approach to explore cinematic representations of religious institutions, belief, and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
REL	490	Senior Thesis	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student.	N	RSC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
REL		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
REL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Prerequisite(s): Barrett Honors student
REL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
REL	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
REL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		
REL		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		
REL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
REL		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
REL	500	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	501	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on classical texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	502	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on contemporary texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	585	Philosophical and Spiritual Issues in Death and Dying	From Plato to Maimonides to Heidegger to Kubler-Ross, scholars, clinicians, and spiritual writers have recognized that attitudes about death and dying contribute to understandings of human existence. Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to integration of body-mind-spirit, this course introduces basic concepts and practices of care ethics and spirituality. Focuses on relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. Theoretically, the course is inter-faith in approach, holistic in scope, and specialized in content. Practically, students examine real-life issues in care ethics and spirituality from multiple perspectives.	N	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3-9		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MAS, PHI 550 or REL 585
REL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL		Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
REL	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		
REL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	603	Teaching World Religions	Seminar designed to prepare participants to teach a course similar to ASU's REL 100.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Phd or Masters student in Religious Studies
REL	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
REL	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		
REL	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
ROM	101	Elementary Romanian	Basic grammar with intensive drills in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
ROM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	201	Intermediate Romanian	Continuation of ROM 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
ROM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	313	Romanian Composition and Conversation	Develops skills in written Romanian and correct oral expression. Must be taken in sequence with ROM 314.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ROM 201
ROM	314	Romanian Composition and Conversation	Continuation of ROM 313. Develops skills in written Romanian and correct oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ROM 313

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ROM	411	Advanced Spoken and Written Romanian I	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ROM 101, 201, 313, 314 with C or better
ROM	412	Advanced Spoken and Written Romanian II	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ROM 101, 201, 313, 314, & ROM 411 with C or better
ROM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ROM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	101	Elementary Russian	Structural grammar and basic vocabulary. Introduces and reinforces aural/oral reading and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
RUS	102	Elementary Russian	Structural grammar and basic vocabulary. Introduces and reinforces aural/oral reading and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
RUS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
RUS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	201	Intermediate Russian	Systematic review of grammar. Develops vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	
RUS	202	Intermediate Russian	Systematic review of grammar. Develops vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	
RUS	211	Basic Russian Conversation	Intensive aural/oral drill to supplement reading and grammatical skills acquired in RUS 101, 102, 201, and 202. Required of Russian majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	
RUS	212	Basic Russian Conversation	See RUS 211.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	
RUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	311	Russian Composition and Conversation	Develops writing ability and oral expression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: RUS 202 with C or better
RUS	312	Russian Composition and Conversation	See RUS 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: RUS 202 with C or better
RUS	321	Foundations of Russian Literature	An in-depth study from Early Kievan religious writings and the medieval epic "The Lay of Igor's Host", to folklore and 18th Century literary movements in prose, poetry and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
RUS	322	Scandals and Scoundrels: The Nineteenth-Century Russian Novel	An in-depth study of the Golden Age of Russian literature, including novels of Pushkin, Lermontov, Gogol, Khvoshchinskaia, Turgenev, Dostoevsky, Tolstoy, and Chekhov. Taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
RUS	323	Russian Literature and Revolution: The Twentieth Century	An in-depth study of 20th-Century Russian prose and poetry by Zinovieva-Annibal, Gorky, Bely, Babel, Mayakovsky, Platonov, Pasternak, Erofeev, Petrushevskaia, and other writers. Taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Pre-requisites: ENG 102, 105 or 108; Credit is allowed for only RUS or SLC 323
RUS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	411	Advanced Composition and Conversation I	Improves aural discrimination and self-expression in oral and written skills, emphasizing vocabulary building. Subject materials drawn from current post-Soviet-Russian publications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: RUS 312 with C or better
RUS	412	Advanced Composition and Conversation II	See RUS 411.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: RUS 312 with C or better

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RUS	421	Pushkin	Pushkin's poetry, plays, and prose fiction, including Eugene Onegin, The Little Tragedies, Tales of Belkin, Queen of Spades and The Captain's Daughter. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	
RUS	423	Dostoevsky and Tolstoy	An in-depth study of Dostoevsky's and Tolstoy's major works, including "Crime and Punishment", "Brothers Karamazov", and "Ana Karenina". Taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
RUS	424	Tolstoy and War and Peace in Russian Literature and Cinema	In English, course includes Tolstoy's War and Peace, the Sebastopol Tales, and Hadji Murad; Babel's Red Cavalry (Russian Civil War); and classic films of War and Peace, World War II, and the war in the Caucasus.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
RUS	425	Chekhov and Russian Drama	An in-depth study of Chekhov's major works, representative short stories and major plays, including "The Cherry Orchard" and "Three Sisters". Taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only RUS or THE 425
RUS	430	Russian Short Story	Detailed study of representative works of the Russian short story genre. Includes authors from both Imperial and Soviet Russia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: RUS 312 with C or better
RUS	439	Art in Exile: Vladimir Vladimirovich Nabokov	In English. The scandalous success of Lolita (1955) allowed Vladimir Nabokov to retire from teaching at Cornell University and move to Switzerland to devote himself to fiction, translation, criticism and lepidoptery. This was only one of the many metamorphoses that Nabokov, a Russian noble, underwent while in exile, moving from Russia to the Crimea, Cambridge UK, Berlin, Paris, Cambridge MA, Ithaca, Hollywood and finally Montreux. Examines the Russian roots of Nabokov's Russian (in translation) and American novels about exile: his first novel, Mary (1926), The Defense (1929), Glory (1932), and his tribute to 19th-century Russian literature, The Gift (1938), which he considered his greatest Russian novel. These are followed by Lolita (1955), Pnin (1957) and Pale Fire (1962), his memoirs, Speak, Memory (1966), and some essays and short stories. Films include Lolita by Stanley Kubrick (1962) and Adrian Lyne (1997).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only RUS 439 or SLC 439 or ENG/RUS/SLC 494 (Art in Exile: Vladimir Vladimirovich Nabokov)
RUS	440	Russian Mass Media	Explores various aspects of modern Russian life through printed mass media, especially Internet media sources, and helps to develop advanced spoken, listening, reading and written skills in Russian. Students work with live television news broadcasts and investigate the most important general sources of electronic information, including electronic newspapers and the main Russian Web sites on a wide range of issues such as culture and the arts, government and politics, business and economics, armed conflicts, and accidents and catastrophes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): RUS 211; 212 with C or better. Credit is allowed for only RUS 440 or RUS 494 (Russian Mass Media)
RUS	441	Survey of Russian Culture	Interplay of artistic, social, and political forces in the development of Russian culture from the Kievan period to the present. Exclusive use of Russian language source materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G & H	Pre-requisites: RUS 312 with C or better
RUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
RUS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
RUS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
RUS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	495	Russian for Heritage Speakers	Generates professional proficiency by developing advanced communicative and written competency in standard literary Russian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
RUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
RUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
RUS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SAO	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SAO	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	196	Study Abroad Office Placeholder	Reserved for undergraduate participants in Study Abroad Office (SAO) Partnership and Exchange study abroad programs. This placeholder course remains on the student's academic record until the student's record is updated by SAO following the completion of the student's study abroad program. This course is then dropped and replaced with the ASU courses, credits, and grades equivalent to the coursework completed abroad. Students must register for at least the number of credits equivalent to full-time study at ASU (i.e., 12 hours during the fall and spring semesters, or 1-6 hours during the summer session). Students participating in an SAO Partnership program must register for the topic "SAO: Study Abroad Program"; participants in an SAO Exchange Program must register for the topic "SAO: Exchange Program." NOTE: This placeholder course is not an indication of the level of coursework or the total number of credits the student may complete abroad. Acceptance to an ASU Study Abroad Office program is required.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Office of the Provost	Office of the Provost	1-12		
SAO	494	International Program Courses	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	596	Study Abroad Office Placeholder	Reserved for graduate participants in Study Abroad Office (SAO) Partnership and Exchange study abroad programs. This placeholder course remains on the student's academic record until the student's record is updated following the completion of the student's study abroad program. This course is then dropped and replaced with the ASU courses, credits, and grades equivalent to the coursework completed abroad. Students must register for at least the number of credits equivalent to full-time study at ASU (i.e., 9 hours during the fall and spring semesters, or 1-6 hours during the summer session). Students participating in an SAO Partnership program must register for the topic "SAO: Study Abroad Program"; participants in an SAO Exchange Program must register for the topic "SAO: Exchange Program." NOTE: This placeholder course is not an indication of the level of coursework or the total number of credits the student may complete abroad. Acceptance to a Study Abroad program is required.	N	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	598	International Program Courses	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SBS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SBS	200	Introduction to Social and Behavioral Sciences	Overview of the social and behavioral sciences, indicating their contributions to society and emphasizing interdisciplinary integration	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SBS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SBS	301	Cultural Diversity	Critical analysis of the complexities of the cultural politics of difference in the contemporary United States. Through interdisciplinary and comparative study, examines a range of theoretical and public/popular cultural discourses about the cultural contributions, experiences, perspectives of, by, and about U.S. residents of diverse racial, ethnic, class, gender, sexual, and transnational origins or identities. Analyzes the social conditions and historical precedents that have shaped current diversity concepts and debates, deepening knowledge and understanding of multiple perspectives on these issues and their relevance to social and behavioral sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(L or SB) & C	Pre-requisites: Minimum Junior standing; ENG 102, 105 or 108 with C or better
SBS	302	Qualitative Methods	Basic methodological issues in the systematic application of qualitative analysis of human social life. Surveys range of qualitative methods used by social and behavioral scientists.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	303	Quantitative Methods	Concepts underlying design and implementation of quantitative research methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SBS	304	Social Statistics I	Statistical techniques of the social and behavioral sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	CS	
SBS	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
SBS	342	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB, SBS or SOC 342
SBS	356	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356
SBS	374	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only ASB, POS, SBS or SOC 374
SBS	389	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		
SBS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SBS	404	Social Statistics II: Multivariate Analysis	Analysis of variance, multiple regression, dummy variable regression, path analysis, and related topics. Computer application to problem solving.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	CS	Pre-requisites: SBS 303 with C or better; SBS 304 with C or better
SBS	410	Topics in Identity/Difference	Topics which focus on race/ethnic, gender, sexual or cultural identity/difference. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	430	Topics in Power/Knowledge	Selected topics concerning the effects of political and social institutions on perceptions of politics and political culture. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	440	Family Studies	Theoretical frameworks for analyzing the development of family systems. Impact of social and economic conditions on family forms. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	447	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB, POS or SBS 447
SBS	450	Topics in Local/Global	Examines links among social, political, economic changes at local, national, global levels. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
SBS	460	Urban Studies	Studies local and global urban issues such as social geography, political economy, culture and social space, urban social diversity.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours. Credit is allowed for only ASB 442 or SBS 460
SBS	480	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	Credit is allowed for only POS 480, SBS 480, CMN 598 (Global Justice), JHR 598 (Global Justice) or MAS 598 (Global Justice)
SBS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
SBS	490	Senior Thesis I	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. First part of a six-semester-hour sequence, followed by SBS 491.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	491	Senior Thesis II	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. Second part of a six-semester-hour sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
SBS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
SBS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SBS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SBS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
SBS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SCM	300	Global Supply Operations	Resources and information to create and deliver products globally. Interfirm systems and industry supply chains. Customer, producer, and employee perspectives.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prereq(s): WPC or Nonbus major:ACC 240, 241, 242, 271; CIS 105, 220, 236, CON 251, CSE 100, 180; ECN 221, 231, IEE 380, STP 280; MAT 211, 266, 271; min 2.50 GPA OR Engr Mgmt major:ACC 241; CSE 110; IEE 380; MAT 266 w/ min C; Credit for OPM 301 or SCM 300
SCM	301	Introduction to Modern Global Supply Chain Management	Examines the purchasing, operations, and logistics functions from the customer, producer, and employer perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): non-Business major; minimum 2.00 ASU cumulative GPA; minimum 56 earned hours. Credit is allowed for only SCM 300 or SCM 301
SCM	303	Honors Global Supply Operations	Explores the principles, concepts, and tools of supply chain management, with emphasis on how these are applied in the business world.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey School of Business Honors student; ECN 221 or 231 with C or better; Pre- or corequisite(s): ACC 241 or 242 or 271
SCM	314	Analytics for Logistics	Focuses on practical tools for real-world decision making.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey BA or BS major; SCM 300 or SCM 303 with C or better
SCM	315	Business Decision Models	Introduces quantitative tools used to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisites: SCM 300 or SCM 303 with C or better
SCM	344	Applied Logistics Management	Presents a synthesis of the principles in logistics (and supply chain) activities emphasizing the operation and integration of activities such as transportation, inventory, warehousing, facility location, customer service, packaging and materials handling.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre- or corequisite(s): SCM 314 with C or better if completed
SCM	345	Logistics Management	Logistics and supply chain activities emphasizing integration of transportation, inventory, warehousing, facility location, customer service, packaging, and materials handling.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite: W.P. Carey BS Supply Chain Management major; Pre/Corequisites: SCM 315 with C or better if completed
SCM	354	Procurement of Services	Management of the supply function for logistics-based organizations. Allows students to better understand the nature of procuring a service, contracting that service and establishing appropriate performance metrics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): SCM 300 or SCM 303 with C or better
SCM	355	Supply Management	Management of the supply function, including organization, procedures, supplier selection, quality, inventory decisions, and price determination.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3	L	Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 300 or 303 with C or better
SCM	385	Business & Sustainability I	Focuses on sustainability practices at the organizational level. Describes how business and consumer products impact our physical environment and the communities that they interact with, and identifies ways to measure and improve the sustainability of products and the supply chains that deliver them. Students will examine organizational practices with regard to sustainability, evaluate the impact of products and services on the environment, and explore a business case for sustainability.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): minimum 60 hours; SCM 300 or SOS 110 with C or better; Credit is allowed for only SCM or SOS 385
SCM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		

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SCM	432	Planning and Control Systems for Supply Chain Management	Planning and control systems for product and service flows in supply chain: production planning, master scheduling, MRP, ERP, inventory management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey Supply Chain Management BS major; SCM 315 and 345 with C or better; Pre- or corequisite(s): SCM 355
SCM	440	Quality Management/Measurement	Quality management and measurement, relationships with suppliers and customers, quality awards, certifications, programs, tools for process improvement and cost analyses.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey BA Business (Retail Management) or BS Supply Chain Management major; SCM 300 or SCM 303 with C or better
SCM	445	Advanced Logistics Management	Logistics processes account for approximately 10% of U.S. GDP; therefore, the efficient and effective execution of these processes is critical to supply chain managers in corporations, government entities and nonprofit organizations. Includes an overview of the processes involved, a survey of the institutions and players in the processes, and the analytical tools to evaluate their efficiency and effectiveness.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): SCM 344 with C or better
SCM	455	Research and Negotiation	Current philosophy, methods, techniques for conducting strategic and tactical supply chain research and negotiations. Includes supplier price and cost analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 355 with a grade of C or greater
SCM	463	Global Supply Chain Management	Supply chain activities in international business with special emphasis on management of transportation, global sourcing, customs issues, and facility location in a global environment.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3	G	Pre-requisites: W.P. Carey BS or BA student; SCM 300 or SCM 303 with C or better
SCM	479	Supply Chain Strategy	Integrated supply chain strategies synthesizing supply management, production, logistics, and enterprise systems. Provides a comprehensive perspective of supply chain management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3	L	Prerequisite(s): W.P. Carey Supply Chain Management BS major; SCM 355 with C or better; SCM 432 with C or better
SCM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	485	Business and Sustainability II	Exposes students to a variety of ideas, concepts, theories, and models concerning sustainable technologies. Students learn to apply a systematic research process in order to assess a technology with potentially positive sustainability attributes; perform hotspot analysis on a technology in order to understand key environmental and social issues; forecast the future of a sustainable technology through application of technology forecasting models; predict how sustainable technologies are likely to get successfully adopted and diffused.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisites: SCM 385 or SOS 385 with C or better. Credit is allowed for only SCM 485, SCM 494 (Business and Sustainability II) or SOS 485
SCM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-6	L	Prerequisite(s): Barrett Honors student
SCM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Pre-requisite(s): Minimum 60 hours
SCM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		Prerequisite(s): Barrett Honors student
SCM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-7		
SCM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
SCM	502	Operations and Supply Management	Contemporary management issues, including environmental, project, and supply chain management; new product development; quality control; TQM.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey MBA students
SCM	511	Integrated Supply Chain Management	Management of sourcing, operations, and logistics as an integrated process.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	515	Decision Models for Supply Chain Management	Decision modeling approaches for supply chain management such as optimization, simulation, and decision analysis. Emphasizes spreadsheet-oriented approaches.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		

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SCM	516	Introduction to Applied Analytics	Provides a solid foundation and deeper understanding of the use of quantitative modeling tools and techniques to solve problems faced in modern supply chains. Uses Excel workbooks to implement the appropriate quantitative methods, including forecasting demand, determining the capacity of a manufacturing line and the cycle times of parts being processed on the line, and methods to manage inventory.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): Business Analytics MS major
SCM	517	Data-Driven Quality Management	Addresses the use of analytics tools and techniques to enhance the ability of quality management approaches to improve processes. Introduces modern quality management approaches including six sigma and design for six sigma. Covers the define, measure, analyze, improve and control (DMAIC) improvement cycle: the core process used to drive six sigma projects. DMAIC refers to a data-driven improvement cycle used for improving, optimizing and stabilizing business processes and designs. Provides an analytics roadmap to help users work through the DMAIC problem-solving process.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): Business Analytics MS major
SCM	518	Analytic Decision-Making Tools I	Covers the skills and knowledge necessary for mastery of the use of quantitative modeling tools and techniques to support a variety of business decisions. Deterministic optimization techniques, including linear programming, nonlinear programming, integer programming, network models and a brief introduction to metaheuristics. Covers the use of these models for a variety of common business problems. Requires implementation of these models using Excel and standalone software. Studies how to ensure that these solutions work in a wide variety of situations (what-if analysis).	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): Business Analytics MS major
SCM	519	Analytic Decision-Making Tools II	Addresses the skills and knowledge necessary to model situations where uncertainty is an important factor. Covers models including decision trees, queuing theory, Monte Carlo simulation, discrete event simulation and stochastic optimization. Uses these models for a variety of common business problems. Requires implementation of these models using Excel and stand alone software. Studies how to ensure that these solutions work in a wide variety of situations (what-if analysis). Describes each of these methods in detail.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): Business Analytics MS major
SCM	520	Strategic Procurement	Applies the principles, philosophies, and processes of supply management to the purchasing management process on a global basis and to facilitate the continuous improvement of the purchasing management system.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisites: SCM 502 with C or better
SCM	521	Supply Management and Negotiation	Selecting, developing, and executing appropriate sourcing strategies and processes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	532	Supply Chain Cost and Design Issues	Strategic design and development of supply chains. Focus on cost-management tools applied to supply chain design and supplier management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	541	Logistics in the Supply Chain	Critical issues for customer perception of supply chain performance, including inventory planning, transportation, warehousing, information technology, and integrated logistics service.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	542	Logistics, Globalization, and Economic Development	Global trade, global networks and the influence those networks have on economic development worldwide. Exposes geographic, economic and sociopolitical perspectives on these issues and invites students to draw conclusions from an increasingly informed perspective.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisite: SCM 502 and 541; Co-requisite: SCM 515
SCM	545	Cases in Global Logistics	Capstone experience for students in the MS in Global Logistics program. Synthesizes learnings from previous courses and applies this learning to specific issues that have a major global logistics component.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisite: SCM 502, 515, 541 and 542
SCM	551	Operations Planning and Execution	Managing the conversion of raw materials to finished goods, including scheduling, work-in-process inventory management, and postponement/customization.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SCM	581	Management of Technology and Innovation	Technology life cycles, technology forecasting, new product development process, innovation teams, innovation best practices.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SCM	587	Project Management	Planning, scheduling, and controlling of projects in R & D, manufacturing, construction, and services. Project selection, financial considerations, and resource management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SCM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		

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SCM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	N	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1		
SCM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCN	250	Physical Science by Inquiry	Laboratory-based development of concepts and reasoning skills in the physical sciences. Emphasizes open-ended investigations, dialogues between the instructor and individual students, and small group discussions. Helps students think of physical science as an active process of discovery in which they can participate. Helps preservice teachers understand inquiry and develop inquiry skills. Liberal arts students gain experience in the scientific process. Useful for students who wish to improve their science preparation before taking further science courses. Forms foundation for scientific literacy.	N	LAB	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	4	SQ	Credit is allowed for only SCN 250 or 294 (Physical Science by Inquiry)
SCN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SCN	300	Foundations of Environmental Education	Introduces environmental education, including the philosophy, historical development, resource identification, curriculum development, field trips and other activities designed to provide the structure and development of the field of environmental education. Explores the antecedents to the present-day field and connects the field of environmental education to curricular programs that are an outgrowth of perceived and actual need in the field of environmental education.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
SCN	301	Ecology and Natural History of the Sonoran Desert	Overview of the plants, animals, and geology of the desert ecosystem based on the Arizona K-12 Science Standards. Provides students with basic knowledge of the Sonoran Desert characteristics and its relationship to the total school curriculum.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
SCN	302	Outdoor Education	Develops a meaningful framework for those who wish to enhance their skills in teaching about outdoor education and personal knowledge of the desert. Whether it be for personal challenge, leadership training or professional certification, outdoor education offers all participants the experience, inspiration and encouragement to live more sustainable lifestyles. The best thing you can do for the natural environment is to discover it then show it to others.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
SCN	303	Environmental Education Internship	Provides opportunities to learn more about natural sciences and local history; outdoor education and field trip course facilitation and training; individual and group development; facility care and maintenance including landscaping, gardening and carpentry; and the restoration and maintenance of the grounds and teaching materials. Supports and/or develops education projects and programs as outlined by the locations' Educational Outreach office. Various other tasks include: field trip coordination, development of curriculum and classroom materials, hands-on fieldwork, school outreach, off-site outreach events support, and Outdoor Education event support.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Prerequisite(s): Minimum 45 hours
SCN	304	Sonoran Desert Flora	Plants and plant communities support much of the diversity of life in the Sonoran Desert and the surrounding regions. Covers the fundamentals of ecology from the perspective of plants including population, community and ecosystem ecology. Also includes identification and classification of plants and plant communities in the Sonoran Desert region. Incorporates practical field exercises designed to acquaint the student with plant community analysis, classification and description.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SCN	305	Tropical Ecosystems of Costa Rica	To better understand the astonishing diversity of tropical ecosystems students work together to investigate the ecology and cultures of neotropical ecosystems: how they were formed and how they are changing. Introduces students to language, culture and society of people and communities in Costa Rica. Students also examine their own cultural perspectives and beliefs. Focuses on four areas: (1) background on history and present-day society of Costa Rica, introductory conversational Spanish for interacting with Costa Ricans; (2) living in Costa Rica, community, family and education: visiting families and private and public schools; (3) debriefing and reflecting on Costa Rican language and culture; and (4) the location of Costa Rica, the rainforests' impact on the world, climate, cultures and contributions to science.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only SCN 305 or SCN 494 (Tropical Ecosystems of Costa Rica)
SCN	307	Learning from Nature: Biomimicry and STEM	Introduces biomimicry, an emerging discipline that seeks to learn from nature to solve human problems. "Biomimicry" (from bios, meaning life, and mimesis, meaning to imitate) is a new discipline that studies nature's best ideas and then imitates these designs and processes to solve human problems. With an emphasis on getting outside and exploring the land around, focuses on observing, appreciating and learning from nature and natural systems in our local environment.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only SCN 307 or SCN 494 (Learning from Nature: Biomimicry & STEM)
SCN	400	Sustainability Science for Teachers	Explores the challenges of sustaining human health and well-being on Earth due to human exploitation of natural resources. Seeks sustainable solutions through science, technology and society acting at global and local levels. Covers diverse approaches used by scientists, scholars and practitioners to study and assess human-environment interactions pertaining to sustainability challenges and solutions. Focuses on how to teach sustainability concepts in the K-8 classroom.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only SCN 400 or SCN 401 or SCN 494 (Sustainability for the Elementary Teacher)
SCN	401	Sustainability Science, Technology, and Society	Explores the challenges of sustaining human health and well-being on Earth due to human exploitation of natural resources. Prepares students to think and engage critically with the world around them. Seeks sustainable solutions through science, technology and society acting at global and local levels. Uncovers diverse approaches used by scientists, scholars and practitioners to study and assess human-environment interactions pertaining to sustainability challenges and solutions.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing; Credit is allowed for only SCN 400 or SCN 401 or SCN 494 (Sustainability Science, Technology, and Society)
SCN	411	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Admission to the professional program; Credit is allowed for only EED or SCN 411
SCN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
SCN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SCN	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-7		
SCN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Engy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	588	Solar Energy Colloquium	Discussion-oriented class focusing on topical issues in solar energy. Knowledge of thermodynamics or electric power systems is recommended to succeed in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Engy	3		Prerequisites: Graduate Engineering major; credit is allowed for only MAE 588 or SEC 588
SEC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Engy	1-12		
SEC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Engy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Engy	1-12		

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SEC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	N	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-4		
SEC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		
SEC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report or publication. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	784	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		
SEC	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	111	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1		
SED	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SED	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SED	322	Classroom Leadership in Secondary Schools	Theories and practices for managing and maintaining secondary classrooms for learning, strategies for home/school communication, and leadership roles for teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Prerequisite(s): Admission to Professional Teacher Preparation Program
SED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): Admission to Professional Teacher Preparation Program
SED	396	Clinical Experience I	Applies course content in a secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): Admission to Professional Teacher Preparation Program
SED	397	Clinical Experience II	Applies course content in a secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-1		Prerequisite(s): Admission to Professional Teacher Preparation Program
SED	464	Middle-School Curr/Org	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
SED	478	Student Teaching in the Secondary School	Practice of teaching. Relationship of theory and practice in teaching.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-15		Prerequisite(s): Admission to Professional Teacher Preparation Program
SED	480	Special Methods of Teaching Social Studies	Interdisciplinary approaches; production and collection of materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
SED	481	English Teaching Methods for Secondary Schools	Instructional, organizational, and presentation methods for English in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program

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SED	482	Science Teaching Methods for Secondary Schools	Methods of instruction, organization, and assessment of science for secondary and middle grade schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
SED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): Admission to Professional Teacher Preparation Program
SED	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
SED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SED	496	Clinical Experience III	Applies course content in a secondary school setting. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): Admission to Professional Teacher Preparation Program
SED	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SED	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-7		Prerequisite(s): Admission to Professional Teacher Preparation Program
SED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): Admission to Professional Teacher Preparation Program
SED	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	501	Introduction to Effective Instruction	Introductory course for certification program in secondary education. Emphasizes developing basic classroom management, instruction, and evaluation. Includes a field assignment of at least 120 hours.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	511	English/Language Arts Teaching Methods in Secondary School	Instructional, organizational, and presentation methods. This course, which focuses on the general content and pedagogy of Secondary English/Language Arts, is aligned directly with the State of Arizona Professional Teaching Standards and NCTE standards for teaching secondary English.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: enrolled in the MAC or InMAC program
SED	512	Math Teaching Methods for Secondary Schools	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: enrolled in the MAC or InMAC program
SED	513	Science Teaching Methods for Secondary School	Methods of instruction, organization, and assessment of science for secondary and middle grade schools. This course, which focuses on the general content and pedagogy of secondary science, is aligned directly with the State of Arizona Professional Teaching Standards and INTASC Principals.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: enrolled in the MAC or InMAC program
SED	520	Science Methods for Early Adolescence	Examines the interrelationships between theory and practice in teaching science.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	522	Secondary School Curriculum Development	Social processes, issues, principles, patterns, and procedures in curriculum development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
SED	533	Middle/Secondary Instruction, Management, and Assessment	Analyses of procedures, methods, techniques, and experiments in teaching in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Must be a graduate student
SED	544	Creating Classroom Climates	Emphasizes classroom management and instructional strategies for establishing positive classroom climates that facilitate learning. Includes field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	547	Teaching Mathematics in the Middle Grades (5-9)	Strategies and methodologies to teach mathematics in the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	560	Teaching Mathematics with Technology	Strategies and methodologies to teach mathematics with technology, focusing mainly on the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	561	Teaching Science with Technology	Strategies and methodologies for effective technology-enhanced science classrooms and improved learning. Models student-driven inquiry teaching throughout the course.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SED	567	Clinical Experience I	The teaching internship or clinical experience is the occasion for the student to become an active member of the teaching profession. This tremendous learning opportunity requires commitment, reflection, time and effort. Challenges students to develop subject area knowledge; ability to collaborate with colleagues and parents; understanding of pre K-12 students as people with social, emotional and intellectual needs. Also challenges ability to plan and conduct learning experiences with students; ability to assess learning and program outcomes; and ability to improve, through thoughtful questioning and analysis, their own instructional decisions while developing their own ideas about the structure of schooling, field of education, and the nature of learning.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	576	Clinical Experience II	The teaching internship or clinical experience is the occasion for the student to become an active member of the teaching profession. This tremendous learning opportunity requires commitment, reflection, time and effort. Challenges students to develop subject area knowledge; ability to collaborate with colleagues and parents; understanding of pre K-12 students as people with social, emotional and intellectual needs. Also challenges ability to plan and conduct learning experiences with students; ability to assess learning and program outcomes; and ability to improve, through thoughtful questioning and analysis, their own instructional decisions while developing their own ideas about the structure of schooling, field of education, and the nature of learning.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	578	Student Teaching in the Secondary School	Practice of teaching. Relationship of theory and practice in teaching. Postbaccalaureate students only.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	579	Apprentice Teaching in Secondary Education	Apprentice teaching in secondary school classrooms. Synthesized experience in classroom management, curriculum, instruction and assessment. Must be taken four times for a total of 12 semester hours.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	2-3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: postbaccalaureate undergraduate or graduate student (degree seeking or nondegree seeking)
SED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

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SED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SEM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-3		
SEM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
SEM	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		
SEM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
SEM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		
SEM	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-15		Pre-requisites: Science & Engr of Materials PhD students
SEM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		
SEM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-15		Pre-requisites: Science & Engr of Materials PhD students
SER	101	Introduction to Engineering Design I	Introduces engineering as a profession, critical thinking in engineering design and modeling, team dynamics, engineering communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Credit is allowed for only SER 101 or EGR 101

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SER	102	Foundations of Engineering Design Project II	Development and experimental verification of engineering models, engineering design, data acquisition, critical analysis of data, introduction to CADD, engineering communications.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisites: EGR 101; MAT 170; Pre or Co-requisite: ENG 101 (or ENG 105, 107 or 111); Credit is allowed for only EGR 102 or SER 102
SER	105	Personal Computing Environment	Introduces computing devices and their ethical use for creativity, communication and organizing information; utilizes a range of devices and applications; program-ability for the end-user; approaches for organizing, sharing, securing and communicating information; managing a secure computing environment.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		
SER	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-3		
SER	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
SER	200	Software Engineering I	Overview of the foundations of software engineering, with particular orientation toward software development lifecycle processes (SDLP).	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	1		
SER	215	Software Enterprise I: Personal Process	Software engineering; personal software processes for individual professionalism; time and defect estimation, yield, and productivity. Software tools. Project based.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 200 with C or better
SER	216	Software Enterprise II: Testing & Quality	Project-centered course covering testing and quality in software engineering; concepts, tools, and methods in testing and quality management; teamwork and communication in software engineering. Project based.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 215; Pre- or corequisite(s): CST 230 or SER 222
SER	221	Programming Languages and Their Execution Environment	Introduces the fundamental programming language concepts of data, type, control, abstraction, and structure; software development and execution environments; programming language paradigms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisites: CST 200 or SER 102; Credit is allowed for only CST 220 or SER 221
SER	222	Design and Analysis of Data Structures and Algorithms	Data structures and related algorithms for their specification, complexity analysis, implementation and application. Sorting and searching. Professional responsibilities that are part of program development, documentation and testing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisites: EGR/SER 102 (or CST 200); MAT 243; Credit is allowed for only CST 230 or SER 222
SER	232	Computer Systems Fundamentals I	Logic design and computer organization; number systems and arithmetic, boolean algebra; digital systems components; assembly language and instruction set concepts and application.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3	CS	Pre-requisite(s): CST 100, EGR 101 or SER 101 (or corequisite: CST 100); MAT 117 or higher; Credit is allowed for only CST 150 or SER 232
SER	234	Operating Systems and Networks	Fundamentals of operating systems, process management, scheduling, synchronization techniques and file management. Network technology, topologies, protocols, application control; network and operating system security.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisites: CST 200; SER 232
SER	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
SER	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	Z1	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student
SER	316	Software Enterprise: Construction and Transition	Best practices in software construction in the context of a team project, including refactoring, defensive programming, unit testing, and configuration and release management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre/Co-requisite: CST 315
SER	321	Principles of Distributed Software Systems	Design and implementation of distributed software components; process and memory management underlying software applications; sockets, protocols, threads, XML, serialization, reflection, security, and events.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisites: CST 200 (or SER 102); MAT 243; Credit is allowed for only CST 420 or SER 321
SER	322	Principles of Database Management	Fundamental methods in modeling and managing data-oriented systems. Relational, object, and hierarchical data modeling techniques. Query languages including SQL. Semantics of transaction processing. Database system architectures including cloud-based, client-server, and embedded databases. Security and privacy issues. Modern trends in data management including managing data on the cloud, unstructured data type management, data mining, and business analytics, and NoSQL data management platforms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 200 (or SER 102) and MAT 243 with C or better; Credit is allowed for only CST 433, SER 322 or CST 598 (Principles of Database Management)
SER	332	Introduction to Graphics and Game Development	Foundations of graphics as used in modern rendering and basic principles of the game development pipeline. Graphics and math concepts and their application in games, graphics and visualization.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 200
SER	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SER	401	Computing Capstone Project I	First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier coursework.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisites: Senior standing; BS Applied Computer Science or BS Software Engineering major
SER	402	Computing Capstone Project II	Second half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier coursework.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: SER 401
SER	421	Web-Based Applications and Mobile Systems	Distributed Web and mobile applications, their design, architecture and supporting technologies; user-interaction concepts and technologies; design and implementation of software servers for Web and mobile systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: SER 321
SER	422	Web Application Programming	Design and implementation of Web application. Languages, frameworks, technologies, tools and methods used to realize Web client and server solutions. Approaches for securing, testing as well as determining the quality and reliability of Web applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 433 (or SER 322); SER 421
SER	423	Mobile Systems	Mobile applications, their architecture, design, and supporting technologies; mobile device operating systems and frameworks; synchronizing mobile applications, support for inter-application data-exchange; accessing and manipulating special-purpose device capability such as location, orientation and input modality. Practices for securing mobile runtimes and optimizing run-time performance.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: SER 421
SER	431	Advanced Graphics	Topics in real-time rendering and graphics hardware. Uses graphics processing unit hardware to implement rendering of higher-order surfaces and special effects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: SER 332
SER	432	Game Engine Architecture	Functional requirements of a modern game engine architecture. Students work in teams to develop advanced features for a game engine.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 420 or SER 321
SER	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		
SER	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student
SER	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Software Engineering	1-6	L	Prerequisite(s): Barrett Honors student
SER	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
SER	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-7		
SER	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-3		
SER	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	501	Advanced Data Structures and Algorithms	Advanced algorithms and how they are effectively applied to solve problems. Algorithm design, analysis, classification, optimization, and application. Practice implementing and employing algorithms to solve realistic problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Fulton Engineering graduate student
SER	502	Emerging Languages and Programming Paradigms	Emerging programming languages, their design, description, implementation, and advanced features; API design, including facilities for creating secure distributed applications, facilities supporting software services, naming and composition; language paradigms and the resulting implications on execution; run-time systems and storage management; approaches to compilation and execution. Requires ability to program in an object-oriented programming language and knowledge of data structures, algorithms, and analysis.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Fulton Engineering graduate student
SER	515	Software Enterprise: Inception and Elaboration	Project-centric course focusing on the relationship of software processes to entrepreneurship and business processes; requirements specification and requirements analysis; study of the context and evolution of the software enterprise. The first of a two-semester sequence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Master of Computing Studies or Software Engineering MS student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SER	516	Software Enterprise: Project and Process Management	Project-centric course focusing on software process, project management, and technical leadership. Study of the context and evolution of software enterprise project management. The second of a two-semester sequence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 515
SER	517	Software Factory I	First in a two-semester capstone culminating experience for graduate students. Student teams work through concurrent product and service offering lifecycles in a project context. Covers concepts including opportunity assessment, risk management, technology evaluation, licensing models, resource planning, delivery models such as hosted, turnkey, and Software as a Service (SaaS), technology acquisition, outsourcing, governance, quality assurance, software certification, and continuous process improvement.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Masters of Computing Studies or Software Engineering MS student
SER	518	Software Factory II	Second in a two-semester capstone culminating experience for graduate students. Student teams work through concurrent product and service offering lifecycles in a project context. Covers concepts including opportunity assessment, risk management, technology evaluation, licensing models, resource planning, delivery models such as hosted, turnkey, and Software as a Service (SaaS), technology acquisition, outsourcing, governance, quality assurance, software certification, and continuous process improvement.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 517
SER	520	Computer Architecture	Basics of computer architecture. RTN, RISC, CISC concepts; computer arithmetic; ALUs; memory systems; I/O.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Fulton Schools of Engineering student, CST 364 (CET 364) OR Graduate, Non-Degree, or Post Bacc student
SER	533	Database-Centric Enterprise Applications Development	Solutions for enterprise software systems based on relational database technology. Persistence solutions in middleware frameworks. O/R, XML, and scalability issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0; CST 433
SER	540	Internet-Enabled Embedded Devices	Accessing hardware devices through Internet, including Applets, HTTP, custom byte streams, XML-RPC, SOAP. Building network-based applications that interface hardware.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 420 with C or better
SER	552	Digital Systems Design	Digital system design techniques and applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CST 452
SER	554	Distributed Computing	Topics in distributed systems, including communications, distributed operating systems, fault-tolerance, and performance issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	556	Distributed Applications for Windows Platforms	Distributed Web-based applications using Windows frameworks such as .NET. Essential components, XML, remoting, Web services, windows services, user interfaces.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); CST 420 with C or better
SER	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0
SER	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		
SER	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SER	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
SER	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Software Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Software Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SER	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Software Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	100	Introduction to Exploration	Science and engineering of Earth, solar system, and space exploration. Experimental design, engineering design; teaming; the professions of science and engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	CS	Prerequisite(s): Mathematics Placement Test with a score of 50% or higher or Pre- or corequisite(s): MAT 170 (or MAT 171, 210, 251, 265 or 270) with C or better if completed
SES	106	Habitable Worlds	Are we alone in the Universe? If so, why? If not, where are our cosmic cousins? Such questions, once the domain of science fiction, are on the verge of being answered with science facts. Astronomers are discovering planets around other stars. Planetary scientists are exploring the worlds in our solar system. Biologists are unlocking the secrets of metabolism and evolution. Geoscientists are determining how the Earth supports life. And as we struggle to build a sustainable future for ourselves, all of us are finding out how technologically advanced civilizations rise and how they might fall. This course surveys these topics. In the process, students master basic concepts from across the major areas of science and learn what makes the Earth a habitable world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4	SQ	
SES	111	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1		
SES	121	Earth, Solar System, and Universe I	Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth. Both SES 121 and SES 123 must be taken together to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	Prerequisite(s): Mathematics Placement Test with a score of 50% or higher or pre- or corequisite(s): MAT 170 (or MAT 171, 210, 251, 265 or 270) with C or better if completed
SES	122	Earth, Solar System, and Universe II	Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): SES 121 with C or better
SES	123	Earth, Solar System, and Universe Laboratory I	Studies astronomical and geological processes through observations and measurements. Requires field trips and evening telescopic observing. Both SES 121 and SES 123 must be taken together to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SQ	Pre/Corequisite(s): SES 121 with C or better if completed
SES	124	Earth, Solar System, and Universe Laboratory II	Studies astronomical and geological processes and life through observations and measurements. Requires field trips and evening telescopic observing.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): SES 123 with C or better. Pre- or corequisite(s): SES 122 with C or better if completed
SES	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
SES	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	311	Essentials of Astrobiology: Exploration for Life in the Universe	Origin and evolution of life on Earth. Strategies to explore for life in the cosmos. Possible field trips to explore regional geological analogues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): BIO 181 (188), CHM 113 or PHY 121; MAT 265 or 270

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SES	330	Practical Electronics and Instrumentation	Applied principles of electronics and mechanical design as used by the modern instrument builder, using a systematic approach to the design process: Identify a scientific problem, develop specifications necessary to solve the problem, develop a prototype solution, test solution for plausibility, break down problem into components, design and build the solution then test in a relevant environment. Builds on introduction to circuits and engineering concepts from prerequisite courses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4		Pre-requisites: PHY 131 and 132 with C or better
SES	350	Engineering Systems and Experimental Problem Solving	Introduces integration of scientific and engineering computational methods into scientific research and successful exploration. Provides an active, project-based environment for learning science and engineering by means of a common set of computational tools. Also provides a detailed overview of procedural and object-oriented programming with an emphasis on problem solving. Students solve problems by developing software in an interpreted language (Python). Problems may include visualizing data, interfacing with hardware, or solving numeric problems. Covers procedural programming concepts including data types, variables, control structures, arrays, and data I/O. Covers object-oriented programming concepts including object creation and use, object interaction, and the design of simple classes. Covers software engineering concepts including testing, incremental development, understanding requirements, and teamwork.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): MAT 267, 272 or 275; PHY 131 and 132 (or 151) with a grade of C or better
SES	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	405	Exploration Systems Engineering	Provides an introduction to systems engineering with an emphasis on the following topics: the systems engineering process, requirements, design fundamentals, subsystem fundamentals, trade studies, integration, technical reviews, case studies and ethics. Prepares the student for the capstone spacecraft/mission design course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): SES 330 and SES 350 with C or better
SES	410	Senior Exploration Project I	Design and development of an Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: ENG 101, ENG 105 or ENG 107; Senior standing
SES	411	Senior Exploration Project II	Continuation of SES 410. Development of Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: ENG 101, ENG 105 or ENG 107; SES 410
SES	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
SES	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Prerequisite(s): Barrett Honors student
SES	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
SES	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Prerequisite(s): minimum 45 hours
SES	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
SES	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SES	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SET	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		
SET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
SET	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		
SGS	101	Thinking Globally: The Individual and Authority	Examines the changing notions of the individual and authority over history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
SGS	107	Religion and Globalization	Explores how different religions interact with the various processes of globalization, including how the world's major religions have been transformed by economic, political, cultural, and technological aspects of globalization. Topics include religious terrorism, human rights, religion, and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & G	Credit is allowed for only REL 107, 194 (Religion and Globalization) or SGS 107
SGS	111	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H & G	Credit is allowed for only HST 101 or SGS 111
SGS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
SGS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	202	Technology and Nature in World Settings	Examines changing interactions among humans and nature, geographic systems, global demography, and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	G	
SGS	203	Contemporary Global Trends	Gives a grounding in patterns of international politics and global social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
SGS	204	Professional Global Career Development	Orients the student to working in global contexts and to thinking critically about careers in the global arena. Focuses on working in organizational settings distinctly global. Three modules: nation-state, corporations, and working international organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
SGS	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	(HU or SB) & G	Pre-requisites: Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
SGS	245	Introduction to South Asia	Provides an introduction to the history and major contemporary political, economic, social, religious and cultural features of the South Asia region at large and of selected South Asian nations in particular.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H & G	Pre-requisites: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only HST, REL, SGS 245 or REL 294 (Introduction to South Asia)
SGS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	301	Principles of Global Studies	Presents current debates about globalization and subjects these to critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102, 105 or 108 with C or better

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SGS	303	Global Trends	Analyzes the process of globalization across boundaries through the investigation of the determinants and ramifications of globalization from the vantage of modern social sciences. Students are expected to conduct and articulate independent critical analyses toward a more in-depth understanding of this social phenomena, global history, and particularly the global economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Pre-requisites: Minimum 30 hours; ENG 102 with C or better
SGS	305	Research Methods	Broad introduction to social science research methodology and design, particularly the methods used to analyze global problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	L	Pre-requisite: SGS 101 (or 301) with C or better; Credit is allowed for only POS 301 or SGS 305
SGS	310	Global Urban Systems	Comparative approach focuses on relationship between development of comparative urban systems and environmental impacts at local, regional, global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites:SGS 101 or 301 with C or better
SGS	311	Urbanization in China	Explores contemporary and future Chinese urbanization from economic, built form, and environmental perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102 with C or better
SGS	315	Energy Policy	Examines the regulation of energy production and consumption in the U.S. at the federal, state and local levels. Identifies energy stakeholders in the U.S. and examines how they have shaped U.S. policies around energy. Explains past and current U.S. energy policies and how energy needs have shaped U.S. relations with other countries. Compares U.S. energy policies to that of other countries in the world, as well as how Arizona's energy policies compare to other states within the U.S.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only PAF 394 (Energy Policy) or POS 394 (Energy Policy) or SGS 315 or SGS 394 (Energy Policy) or SOS 315 or SOS 394 (Energy Policy)
SGS	320	Mechanisms of Governance	One of the fundamental issues in the social sciences concerns the problematic attainment of social order, which is the principal aim of governance. Presents the five principal mechanisms purported to account for social order, and illustrates these by providing empirical examples of each; includes film clips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102 with C or better
SGS	321	International Institutions and Global Governance	Provides an in-depth examination as to how the international community organizes itself, through international institutions, to deal with serious international issues, and how the institutions of international governance can be improved. Studies diverse examples of international institutions primarily from the perspective of international relations (IR) theory and the role of international law (IL).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only SGS 321 or 394 (International Institutions)
SGS	325	Globalization and Socio-Economic Justice	Addresses a trend producing increasing interconnectedness of economies and societies, as well as creating new conflicts and divisions. Provides greater understanding of global forces, as well as the effect of these forces on global economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Minimum 2.00 GPA. Credit is allowed for only JUS 325 or SGS 325
SGS	330	Globalization and the Environment: Problems and Solutions	Assesses the impact of globalization on the earth's environment. Examines such issues as biodiversity loss to pollution to urbanization to climate change, among others, and assess how globalization has driven, impacted or improved these environmental problems. Emphasis on understanding the social, political and economic factors that have contributed to global environmental change and the degree to which globalization processes are something 'new', as well as on examining the ability of communities, nations and transnational institutions to manage these global problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102, 105 or 108 with C or better; 30 completed hours
SGS	340	Violence, Conflict and Human Rights	Interdisciplinary examination of the evolution and role of human rights in global society. Major themes include the political struggles over enforcement of human rights and curtailment of violence against individuals. Pays close attention to the role of non-governmental organizations and diplomacy in advancing human rights norms and also examines America's role in human rights, both at home and abroad. Focuses on the causes and effects of violence and human rights abuses in the context of torture, the "war on terror," and crimes against humanity.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: ENG 102, 105 or 108; SGS 101 (or 301); 30 minimum hours; Credit is allowed for only SGS 340 or 394 (Violence/Conflict/Human Right)
SGS	341	Humanitarian Crisis and International Intervention	Focuses on political, legal, and ethical issues raised by decision about military interventions in genocide and humanitarian crisis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
SGS	343	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only SGS 343 or REL 379

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SGS	344	Facing the Past: Truth, Memory, Denial After Atrocities	The past has never been so present as it is today. Over the last two decades, the world has shown an increasing interest in uncovering the hidden and forgotten histories of state-sponsored atrocities and acknowledging the fate of victims and survivors. Studies this movement for the recovery of truth, memory, and moral responsibility includes a wide range of actors and takes a number of different forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
SGS	350	Economic Development and Globalization	Major issues and models in economic development. Studies development policy and foreign aid practiced since the 1970s and recent critique of these practices. Analyzes the mistakes made in the last 40 years, and potential for improving the practice of foreign aid. Contemporary issues in development economics, including the impacts of bad governance, foreign aid, corruption, war, military intervention and democracy on economic growth with emphasis on policy evaluations in health, education, microfinance and monitoring corruption.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only SGS 350 or 394 (Prin of Econ Dev Global)
SGS	360	Cultural Aspects of Globalization	Cultural aspects of globalization, starting with a theoretical discussion of what culture is and then weaving this discussion into an empirical examination of UNESCO's World Heritage program as a practical means of studying the role of culture in globalization. A number of questions guide our inquiry: What is culture? What forms does it take? Can culture be preserved? If so, what are the consequences? How is the UNESCO World Heritage Program structured? How does it conceive culture? What is its understanding of the global and the role of the local in it?	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; SGS 101 or 301; Minimum 30 hours; Credit is allowed for only SGS 360 or 394 (Cultural Aspects of Globalization)
SGS	366	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 372 (or AFS 372) or REL 362 or SGS 366 or AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History)
SGS	381	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 391 or SGS 381
SGS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	441	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	L & G	Credit is allowed for only REL 480 or SGS 441
SGS	442	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AFR 480 (or AFS 480) or REL 461 or SGS 442
SGS	454	Gender, Culture, and Development	In-depth analysis of gender roles related to health, family, work, education and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	(L or SB) & G	Prerequisite(s): WST 100 or 300 or minimum 45 hours; Credit is allowed for only SGS 454 or SOS 447 or TCL 447 or WST 447 or TCL 598 (Gender, Culture & Development)
SGS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
SGS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Prerequisite(s): Barrett Honors student
SGS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Prerequisite(s): Barrett Honors student
SGS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
SGS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SGS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7		
SGS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
SGS	501	Global Theory	Examines theoretical and analytical frameworks employed by institutions to frame action related to increased global uncertainty including economic, sociological, psychological, decision theory, gaming and institutional behavior frameworks. Uses case studies in key global issue areas such as climate change/natural hazards, energy security, urbanization, food security, security, failed states.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SGS	502	Global Institutions and Actors	Examines key types of global institutions, (1) multinational businesses, e.g., Toyota, (2) international development organizations, e.g., the World Bank, and (3) voluntary organizations, e.g., the Red Cross/Crescent, in terms of the roles that they play in shaping localized outcomes. Using case studies, explores the impact of international actors in terms of the power and influence that they exert through international treaties, standards, information diffusion, influence on local governments and other organizations, dissemination of international "best practice."	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SGS	503	Methods: Global Decision Making Under Uncertainty	Examines and critically assesses approaches and methods used in decision making and planning under uncertainty in global contexts, e.g., scenarios, SWOT, risk analysis, contingency planning, gaming, economic forecasting, anticipation-foresight techniques, decision making under complex conditions, and rapid assessment techniques. Explores the strengths and weaknesses of different approaches under varying conditions, synergies achievable through application of multiple methodologies, and normative assumptions underlying various methodologies. Students gain "hands-on" experience in the use of a variety of techniques through assignments based on real-world situations.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): SGS 501; SGS 502; Pre- or corequisite(s): SGS 504
SGS	504	The Individual As Decision Maker in Cross-Cultural Global Contexts	Focuses on the role of the Individual decision maker in cross-cultural contexts, acting in the context of globally engaged institutions. The individual is virtually always embedded in an institutional environment whether as manager, planner, advocate, frequently acting as part of a team. It is recognized that the various agents/stakeholders involved in addressing an issue, negotiating a deal, in a global context, almost invariably hold significantly different worldviews, cultural norms and decision-making styles. Deals with the individual decision maker in both public and private decision-making milieus. Discusses modes of intervention and initiative. Addresses issues of leadership, reconciliation of different decision-making modes, and acting effectively in cross-cultural environments. Emphasizes decision making under high uncertainty, using case studies, e.g., pending nationalizations or privatization.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): SGS 501; SGS 502; Pre- or corequisite(s): SGS 503
SGS	505	Preparation for the Global Field Project	Prepares students for the global field project. In addition to scheduled classes, each student meets with her/his advisor at regular intervals during the semester to prepare for the Global Field Project. During the semester, students prepare a work plan for their Global Field Project, including objectives of the exercise, specifications of deliverables. Network building is an important secondary objective, and development of an esprit de corps among Global Studies masters students.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): SGS 501; SGS 502; Pre- or corequisite(s): SGS 503; SGS 504
SHS	101	American Sign Language I	Basic receptive/expressive conversational skills; basic grammar and syntax rules. Orientation to deafness and deaf culture.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		
SHS	102	American Sign Language II	Further development of receptive/expressive conversation skills in ASL; finger spelling. Continued exploration of deaf culture.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): SHS 101 with C or better; taken within the past two years
SHS	105	Introduction to Human Communication Disorders	Introduces hearing, language, and speech problems in children and adults.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-3		Prerequisite(s): Freshmen; maximum 25 earned hours
SHS	201	American Sign Language III	Continued development of fluency in ASL with emphasis on more abstract concepts and the ability to narrate events.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): SHS 102 with C or better and taken within the past two years

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SHS	202	American Sign Language IV	Further development of fluency in ASL with emphasis on literature, folklore, and signing narratives with multiple characters.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): SHS 201 with C or better and taken within the past two years
SHS	250	Introduction to Phonetics	Introduces English phonetics with emphasis on phonetic transcription, articulation, phonology, and disorders of speech.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		
SHS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-6		Prerequisite(s): Barrett Honors student
SHS	310	Anatomical and Physiological Bases of Speech	Noncadaveric study of anatomical systems that underlie human speech and language, including respiration, phonation, articulation, and related nervous system processes.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): BIO 201; PHY 101; Pre- or corequisite(s): SHS 250
SHS	311	Hearing Science	Studies the physical characteristics of sound and of the structure and function of the human auditory system.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): BIO 201; PHY101; SHS 105
SHS	350	Brain Memory and Language	Covers memory and language and their associated brain areas, and the resulting behavioral consequences of injury and disease.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	367	Language Science	Normative aspects and integration of language structure, comprehension, and production in children and adults.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3	SB	
SHS	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	375	Speech Science	Normative aspects of speech, hearing, and language.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 310; SHS 311; Pre- or corequisite(s): SHS 250
SHS	376	Psychoacoustics	Introduces acoustics, cochlear anatomy and physiology, and the perception of sound.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		
SHS	401	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 311; Credit is allowed for only SHS 401 or 501
SHS	402	Clinical Methods and Treatment of Communication Disorders	Principles and techniques for planning speech and language intervention, including observation experiences.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 250, 465
SHS	461	Accent Modification	Increases speech intelligibility in non-native English speakers by changing their English pronunciation skills. International students learn the pronunciation of American English vowels and consonants, intonation and stress patterns, and rhythm of speech. Conducts pre- and post-assessments of the students' intelligibility to determine the need for improvement on specific sounds and speech patterns.	Y	LEC	Y	YGB	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): minimum 45 hours
SHS	465	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3	SB	Pre- or corequisite(s): SHS 250; Credit is allowed for only SSH 465 or SHS 565
SHS	470	Developmental Speech and Language Disorders	Introduces the nature of speech and language disorders in children.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 465; Pre- or corequisite(s): SHS 250
SHS	473	Implementation of Treatment Plans for Individuals with Communication Disorders	Students will learn to follow written treatment plans, individual education programs, individual support plans or protocols developed by the supervising speech-language pathologist. Opportunities to learn methods for eliciting therapy targets and to apply critical thinking and problem solving during therapy will be provided.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science
SHS	483	Professional Issues and Ethical Considerations for the SLPA	Studies licensure laws, professional conduct, and ethical practice in the field of speech language pathology.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science
SHS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	485	Acquired Speech and Language Disorders	Introduces acquired speech and language disorders across the lifespan.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 310
SHS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-6		Prerequisite(s): Barrett Honors student

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SHS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-6	L	Prerequisite(s): Barrett Honors student
SHS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		
SHS	496	Aural Rehabilitation	Approaches to aural rehabilitation of children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 311, 375 and 401; Credit is allowed for only SHS 496 or 596
SHS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-6		Prerequisite(s): Barrett Honors student
SHS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-7		
SHS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-3		
SHS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		Prerequisite: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	501	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 311 with C or better; Credit is allowed for only SHS 401 or 501
SHS	502	Basic Audiometry	Covers the bases, purposes, rationales, and procedures for the core clinical tests of auditory function in adults and children.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	504	Amplification I	Operation, electroacoustic measurement, selection, and prescriptive fitting of amplification devices.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	505	Survival Sign Language	Facilitates effective manual and alternative methods of communication with deaf individuals in clinical settings.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	508	Pediatric Audiology	Emphasizes the principles and procedures for early identification and management of congenital and early-onset hearing loss.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	510	Amplification II	Verification and validation of hearing aid performance, benefit, and satisfaction. Fitting considerations for pediatric and geriatric populations.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	511	Auditory Perception by the Hearing Impaired	Psychophysical methods and behavioral aspects of hearing, with an emphasis on the perceptual consequences of sensorineural hearing loss.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	512	Topics in Management of Medical Aspects of Speech-Language Pathology	Focuses on varying topics in management of medically based speech and language disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	513	Neurophysiology of the Auditory System	Focuses on the neurophysiology of the normal auditory system and on changes associated with hearing loss.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	515	Instrumentation and Calibration	Electronic instruments used to produce, modify, and measure characteristics of sound. Measurement standards and methods for calibration of audiologic equipment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	516	Auditory Evoked Potentials	Electrophysiologic assessment of the peripheral and central auditory nervous system. Lecture, lab.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	517	Balance Assessment	Clinical analysis and treatment of balance disorders and dizziness.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	518	Auditory Rehabilitation	Study and clinical application of assistive technology and rehabilitative services for managing the effects of hearing impairment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student

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SHS	519	Auditory Pathologies and Disorders	Familiarizes students with major diseases, pathologies, and disorders of the human auditory system.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	520	Auditory Pathologies/Disorders and Otoneurologic Applications	Familiarizes students with major pathologies and disorders of the human auditory system. Examines advanced otologic, neurologic, and audiologic approaches in the differential diagnosis and treatment of peripheral and central disorders of the auditory system.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): Speech and Hearing Science graduate student
SHS	521	Auditory Aging	Focuses on aging and related effects on the auditory system and audition.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	522	Hearing Conservation/Instrumentation	Examines the prevention, identification, physiologic effects, and management of hearing loss due to noise exposure. Incorporates measurement standards and methods for calibration of electronic audiologic instruments used to produce, modify, and measure characteristics of sound.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Speech and Hearing Science graduate student
SHS	523	Advanced Audiometry	Discusses assessment and intervention procedures beyond the basic audiologic test battery and for special populations. Examines relevant new audiologic tests and procedures. Prerequisites: SHS 502, 513; SHS major.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS major; SHS 502 and SHS 513
SHS	524	Counseling in Communication Disorders	Theories of counseling emphasizing the psychological and emotional impact and management of individuals with communication disorders and their families.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	525	Audiology Practice Management	Business practice issues, quality assurance, and professional ethics for the practicing audiologist.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	526	Launch to Clinical Methods in Audiology	In Launch-to-Clinic, students rotate through on-campus observations and group orientation to the ASU Speech and Hearing Clinic. Students learn the policies and procedures of the ASU Speech and Hearing Clinic, software specific to the clinic operations, report writing, and clinical documentation with practice to develop the skills needed to succeed in subsequent clinical rotations both on and off campus.	N	LEL	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	1		Prerequisite(s): Audiology major. Credit is allowed for only SHS 580 (Audio Clinical Observation), and (Audiology Observation)
SHS	530	Development, Assessment, Intervention: Conception through 3 years	Covers development of children from conception to 3 years of age with a focus in early intervention. Includes child development of anatomical, neurophysiology, cognitive, motor, perceptual, speech, language and hearing aspects. Also addresses service delivery models in different contexts in children with atypical development in the different areas.	N	LEL	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	538	Clinical Methods in Speech-Language Pathology	Provides the knowledge and skills in clinical methods for treatment and diagnosis in speech-language pathology. Topics cover essential information to participate in screening and prevention opportunities, to structure and implement therapy goals and strategies, to apply for internships, and to administer and interpret informal and formal diagnostic tests.	Y	LEL	Y	GNA	College of Health Solutions	Department of Speech and Hearing Science	1		Prerequisite(s): MS Communication Disorders major.
SHS	539	Professional Issues in Speech-Language Pathology	Covers professional issues in speech-language pathology to ensure that students meet the professional knowledge requirements set forth in the American Speech-Language-Hearing Association (ASHA) certification standards. The topics cover essential information that the student needs to have in order to meet graduation requirements, comply with ASHA's ethical requirements, complete ASHA certification requirements, comply with Arizona state licensure requirements, prepare for a Clinical Fellowship Year and be involved in education and advocacy for the profession of Speech-Language Pathology.	N	LAB	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	1		Prerequisite(s): MS Communication Disorders major. Credit is allowed for only SHS 539 or SHS 580 (SLP Professional Issues)
SHS	540	Development, Assessment, Intervention: Preschool	Covers development, assessment and intervention of children from 3 years to 6 years of age, with a focus on preschool education. It includes child development of anatomical, neurophysiology, cognitive, motor, perceptual, speech, language and hearing aspects. Also it addresses service delivery models in different contexts in children with atypical development in the different areas.	N	LEL	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): SHS 530
SHS	550	Development, Assessment, Intervention: School-Age Children	Covers development, assessment and intervention of children from 6 years to 21 years of age, with a focus on school education. Includes child development of anatomical, neurophysiology, cognitive, motor, perceptual, speech, language, reading, writing and hearing aspects. Also addresses service delivery models in different contexts in children with atypical development in the different areas.	N	LEL	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	4		Pre-requisite: SHS 540
SHS	552	Physiological Measures of Auditory Function	Focuses on the measurement of otoacoustic emissions and acoustic immittance.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	555	Cochlear Implants	Covers the research and clinical aspects of cochlear implantation with a focus on the principles of speech coding strategies.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology, or PHD Speech and Hearing Science student

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SHS	560	Development, Aging, Assessment, Intervention in Adults	Covers development, aging, assessment and intervention in adults with a focus on the elderly and the contexts for their service delivery. Includes changes in the adults related to anatomy, neurophysiology, cognitive, motor, perceptual, speech, language, literacy and hearing aspects. Also addresses service delivery models in different contexts where elderly and young adults with acquired disabilities are served.	N	LEL	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	4		Pre-requisite: SHS 550
SHS	565	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Credit is allowed for only SHS 465 or SHS 565
SHS	567	Neural Bases of Communication Disorders	Neuroscience and its application to matters of normal and disordered communication.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	570	Communication Disorders and Multicultural Populations	Studies racial and ethnic biases and the communication behaviors and disorders in various cultural groups.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	571	Augmentative Communication and Language Programming	Focuses on individuals across the age span who are unable or who are at risk for being unable to communicate with spoken language.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	572	Language Assessment and Intervention in Infants and Toddlers	Focuses on the birth to 3-year-old population who are at risk for or who have communication and language disabilities.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	573	Language Assessment and Intervention with School-Age Populations	Focuses on later language development, linguistic demands of academic settings, assessment and intervention strategies for older children and adolescents.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	574	Management of Voice and Swallowing Disorders	Focuses on assessment and intervention of people with voice, swallowing, and craniofacial disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	575	Aphasia and Related Neurogenic Language Disorders	Assessment and treatment of acquired neurolinguistic impairment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2-3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	576	Neuromotor Speech Disorders	Evaluation and treatment of the dysarthrias and apraxia of speech. Emphasizes acquired adult disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2-3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	577	Communication Disorders in Autism	Addresses communication disorders in children and adults with autism, as well as evaluation and intervention across a variety of settings and theoretical frameworks.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	579	Feeding and Swallowing Disorders Across the Lifespan	Focuses on individuals across the age span who have feeding and/or swallowing disorders. Presents assessment and treatment strategies.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	580	Clinical Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-6		
SHS	581	Right Hemisphere Syndrome, Traumatic Brain Injury, and Dementia	Studies the nature, characteristics, and clinical management of cognitive and communicative impairments accompanying right hemisphere damage, TBI, and dementia.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SHS	582	Differential Diagnosis of Communication Disorders	Procedures for assessing speech/language disorders in children and adults.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	584	Clinical Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-6		
SHS	585	Articulation and Phonology: Assessment and Intervention	Assessment and treatment of developmental articulation and phonological disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2-3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	587	Language Assessment and Intervention with Preschool Populations	Focuses on preschool language disorders and assessment and intervention strategies for preschool children.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	588	Spanish Language Acquisition	Examines Spanish language acquisition in children and adults in the context of monolingual and bilingual language acquisition.	N	SEM	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); Credit is allowed for only SHS 588 or APL 588
SHS	589	Audiology Grand Rounds	Grand Rounds bridges clinical and academic knowledge through case studies, application of emerging research, and clinical workshops.	N	SEM	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1		
SHS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	Department of Speech and Hearing Science	1		
SHS	596	Aural Rehabilitation	Approaches to aural rehabilitation in children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Credit is allowed for only SHS 496 or 596
SHS	597	Bilingual Speech-Language Pathology	Reviews speech and language assessment and intervention practices with bilingual populations from infants to adults.	N	SEM	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		
SHS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SHS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-15		
SHS	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	Department of Speech and Hearing Science	1		
SHS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	Department of Speech and Hearing Science	1-15		
SLB	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		
SLB	510	Amateur Sports Law	Studies law, policy and problem solving in the amateur sports context, focusing primarily on interscholastic and intercollegiate athletics. Title IX and racial equality in sports.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-3		Prerequisite(s): College of Law student; Credit is allowed for only SLB 510 or LAW 791 (Amateur Sports Law)
SLB	511	Strategic Career Planning	Focuses on examining job opportunities in the sports industry and the development of strategies for obtaining a position suitable to the talents and abilities of individual students. Students refine their skills in terms of searching for a job. Students also develop a career plan, beginning with an entry-level position for those who have worked in the industry or a next-level position for students currently working in the area.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-2		Prerequisite(s): College of Law student; Credit is allowed for only SLB 511 or LAW 598 (Strategic Career Planning)
SLB	512	Professional Sports Law	Studies law, revenue, branding and problem solving in the professional sports context, focusing primarily on professional sports league governance and regulation, labor relations, representing and marketing players and coaches, and issues of equity and race. Also examines international issues related to professional sports.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-3		Prerequisite(s): College of Law student; Credit is allowed for only SLB 512 or LAW 691 (Professional Sports Law)
SLB	513	Sports Law and Business	Studies law, policy and problem solving in the context of the sports industry at all levels. Exposes professional, amateur and international sports law issues, examining those issues in a problem-focused manner.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	2-4		Prerequisite(s): College of Law student
SLB	514	Contracts: Negotiation and Drafting in the Sports Industry	Provides a working or basic knowledge of contract law, with in-depth instruction with regard to negotiating and drafting in the sports context. As their final project, students select a player, coach, university or club and then negotiate a contract. Negotiation sessions are held during class sessions and students evaluate each other, as well as receiving evaluation from the professor. Replicates the negotiation process in the sports industry.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	2-4		Prerequisite(s): College of Law student; Credit is allowed for only SLB 514 or LAW 598 (Contracts in the Sports Industry)
SLB	515	Sports Business Strategy and Industry Dynamics	Sports can involve a jog around campus or big business. Sports are interesting, important and a vivid context to learn about consumers, organizations, diverse stakeholders, media and entertainment, partnerships and sponsorship, highly competitive strategies in finance and marketing, managing community venues, big events, and other relevant business topics. Maintains a pragmatic, experiential, yet well-grounded focus, studying the role, nature and dynamics of sports business both in and around "sports industries" and in and around "conventional businesses." Builds and "tests" knowledge and exercise skills related to sports business analysis, decision making, communication and both strategy development and execution. Intellectually rigorous, yet fun. Develops a sophisticated, yet practical understanding of the nature, contexts and dynamics of sports business.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	2-4		Prerequisite(s): College of Law student; Credit is allowed for only SLB 515 or MKT 591 (Sports Business Strategy and Industry Dynamics)
SLB	516	Sports Business Development	Develops an appreciation for and understanding of the multiple stakeholders and diverse interests in and around sports business, and of their constantly changing and interactive impact on sports business practice and performance. Gives broad exposure to the major revenue generating domains in the sports industry. Explores the fundamentals of marketing and applies those fundamentals to the domains of sponsorship, endorsement, media, ticketing, merchandising and fundraising as means to create and maintain revenue streams.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-3		Prerequisite(s): College of Law student; Credit is allowed for only SLB 516 or MKT 591 (Sports Business Development)

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SLB	517	Marketing for Sports Organizations	Studies the role, nature and dynamics of sports business and builds knowledge and skills related to sports marketing analysis, decision making and strategy development and execution. Intellectually challenging and demanding, yet fun.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	2-4		Prerequisite(s): College of Law student; Credit is allowed for only SLB 517 or MKT 598 (Sports Marketing)
SLB	518	Sports Analytics	Develops and applies analytical skills that are useful in nearly every career. Although the course focuses on applications in the sports context and uses approaches that are rapidly becoming important in the business of sports analytics, this is not a survey course about issues in sports. Instead, this class is about curiosity, storytelling and logic. An understanding and interest in both sports and numbers make this class good. General curiosity makes it great.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-3		Prerequisite(s): College of Law student; Credit is allowed for only SLB 518 or MKT 591 (Sports Analytics)
SLB	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
SLB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic or writing a literature review of a topic.	Y	REC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SLB	591	Seminar	A small class emphasizing discussion, presentations by students and written research papers.	Y	SEM	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SLB	592	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
SLB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
SLB	598	Special Topics	Topical courses not offered in regular course rotation (e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand).	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
SLB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Law	Sandra Day O'Connor College of Law	1-12		
SLC	120	Introduction to Chinese Culture	Introduces geographical, historical, literary, and intellectual premises of Chinese culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: ENG 101, 105, or 107; credit is allowed for only CHI 120 or SLC 120
SLC	140	Greek and Latin Roots in Bioscientific Terminology	Introduces students to the ancient Greek and Latin root words most commonly used in biological, medical, and other scientific terminology, and gives practice identifying them in context. The knowledge of these root words enables students to memorize with greater ease and increased retention the bioscientific terminology they encounter in other coursework as well as in their medical or scientific profession.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SLC	142	Ancient Greek Civilization	Ancient Greek civilization and culture. Studies (in roughly equal parts) the art, archaeology, literature, culture and history of ancient Greece from prehistoric times until after the conquests of Alexander the Great (the Hellenistic Age).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H	Credit is allowed for only GRK 142, GRK 194 (Ancient Greek Civilization) or SLC 142
SLC	144	The Ancient Mediterranean	Provides a comprehensive introduction to the Mediterranean world, focusing on (but not limited to) the period of the classical Greeks and Romans. Provides some history of the area, but focuses on the classical world and its interaction with the cultures that surrounded it, including Semitic, Near Eastern, and North African cultures, as well as some of the lost cultures of the area such as the Minoans and Etruscans. Introduces the sources that provide information about these cultures (literary, art historical and archaeological sources), and teaches students to think critically and write persuasively about these sources.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101, 105, or 107 with C or better; Credit is allowed for only SLC 144 or SLC 194 (The Ancient Mediterranean)
SLC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: maximum 25 hours
SLC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	201	Introduction to Linguistics	Examines the nature and diversity of world languages, linguistic structures and functions of language, language variation, pragmatics, and language acquisition.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU or SB	
SLC	202	Introduction to Literary and Cultural Theory	Interdisciplinary approaches to understanding culture and cultural production (literature and critical theory, film, visual art, and performance, among others) in different cultures and regions. Classes are taught by a primary instructor aided by several guest lecturers in their area of academic specialization.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 102, 105, or 108 with C or better

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SLC	221	Survey of Ancient Greek Literature	Introductory survey of ancient Greek literature. Familiarizes students with the important literary genres, texts, and authors of the ancient Greeks from Homer to the Hellenistic period. All readings in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only GRK 221, SLC 221 or 294 (Ancient Greek Literature in Translation)
SLC	222	Survey of Roman Literature	Introductory survey of Roman literature. Familiarizes students with the literary genres, texts and authors of the Romans from the origins of the Latin language to the Silver age. All readings in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only LAT 222, SLC 222, LAT 294 (Roman Literature in Translation) or SLC 294 (Roman Literature in Translation)
SLC	223	Introduction to Greek and Roman Mythology	Familiarizes students with the characters and events of ancient Greek and Roman myths through their literary manifestations, and moves beyond mere narrative to consider the possible interpretations and functions of these myths, thus revealing the central concerns of ancient society and giving insights into the working of our own society and its literary and artistic traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only GRK 223, LAT 223, SLC 223, GRK 294 (Greek and Roman Mythology)
SLC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	321	Korean Literature in Translation	Introduces various genres of Korean literature written from the seventeenth century to the present in English translation. Aims to help students to understand the history of modern Korean literature in transnational and transdisciplinary contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only KOR 294 (Korean Lit in Translation), 321, 394 (Korean Lit in Translation) or SLC 321
SLC	323	Russian Literature and Revolution: The Twentieth Century	An in-depth study of 20th-Century Russian prose and poetry by Zinovieva-Annibal, Gorky, Bely, Babel, Mayakovsky, Platonov, Pasternak, Erofeev, Petrushevskaja, and other writers. Taught in English. An in-depth study of 20th-Century Russian prose and poetry by Zinovieva-Annibal, Gorky, Bely, Babel, Mayakovsky, Platonov, Pasternak, Erofeev, Petrushevskaja, and other writers. Taught in English.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Pre-requisites: ENG 102, 105, or 108; Credit for RUS 323 or SLC 323
SLC	333	China	Political, economic, social, and cultural history of the Chinese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 333, HST 383 or SLC 333
SLC	335	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only CHI 335, HPS 325, HST 385 or SLC 335
SLC	336	Interpreting China's Classics	Study of selected Confucian and/or Taoist classics and ways they have been read in both Asian and Western scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 336, HST 386 or SLC 336
SLC	344	Classics and Comics	Explores the connections between the classical tradition of Ancient Greek and Roman literature and the modern American superhero comic book tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GRK 344 or LAT 344 or SLC 344 or GRK/LAT/SLC 394 (Classics and Comics) or SLC 494 (Classics and Comics)
SLC	347	Modern Israeli Literature in Translation	Modern Hebrew, or Israeli Hebrew, started at the end of the 19th century in Europe and today it is the language of the State of Israel. During this short period modern Hebrew developed literature with its unique local characteristic, as well as universal ideas. Reads and examines four books against their social and historical background.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HEB 347 or JST 347 or SLC 347 or ENG/HEB/JST/SLC 394 (Modern Hebrew Literature in Translation)

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SLC	348	Israeli Society and Culture	Different partitions of the Israeli society, based on ethnic origin, by religious affiliation or by political association. Depicts how Israel is an absorbing immigration state. Israel is a welfare state and the course covers aspects of a welfare state, such as health, retirement, public transportation, art, higher education and more.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better. Credit is allowed for only HEB 348 or HEB 394 (Israeli Culture and Society) or JST 348 or REL 311 or SLC 348
SLC	360	Greece and Rome at War	Familiarizes students with the major battles, leaders and tactics of Classical Greece and Rome. Supplements lectures with student participation including study of original sources, group presentations, and gaming battle simulations. This multifaceted approach gives a greater sense of the evolution of the leaders, armies and tactical systems of the Greeks and Romans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 360, HST 397, LAT 360, SLC 360 or SLC 394 (Greece and Rome at War)
SLC	361	Roman Religion	Roman religion was never static, despite the best efforts of the Roman state to make it so. Understands the artifacts and procedures of Roman state cult from its earliest origins to the late empire, using ancient literary sources, archaeology throughout the ages and modern scholarly theories. Clarifies the forces that influenced development and change in Roman religion, both internal and external.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only LAT 361, REL 361, SLC 361 or SLC 394 (Roman Religion)
SLC	362	Ancient Greek Religion	Surveys ancient Greek religion, including its gods, ritual practices and festivals. Analyzes the development of the religion over time, and how both ancient and modern figures interpreted its meaning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; Credit is allowed for only GRK 362, REL 360, SLC 362 or SLC 394 (Ancient Greek Religion)
SLC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	401	Translation Theory and Practice	Translation theories and professional practices and ethics; bibliography, computer technology, and sample texts for natural and social sciences and humanities.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SLC	420	Foreign Literature in Translation	Not for language majors (except in Asian languages and Russian); open to language majors as a related-area course. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	
SLC	421	Japanese Literature in Translation	Readings selected by theme or genre or period from various works of Japanese literature in English translation. May be repeated when topics vary. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	
SLC	429	Studies in European Literature and Culture	Literary, cultural, and historical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better; Credit is allowed for only ENG, SLC or THE 429
SLC	439	Art in Exile: Vladimir Vladimirovich Nabokov	In English. The scandalous success of Lolita (1955) allowed Vladimir Nabokov to retire from teaching at Cornell University and move to Switzerland to devote himself to fiction, translation, criticism and lepidoptery. This was only one of the many metamorphoses that Nabokov, a Russian noble, underwent while in exile, moving from Russia to the Crimea, Cambridge UK, Berlin, Paris, Cambridge MA, Ithaca, Hollywood and finally Montreux. Examines the Russian roots of Nabokov's Russian (in translation) and American novels about exile: his first novel, Mary (1926). The Defense (1929), Glory (1932), and his tribute to 19th-century Russian literature, The Gift (1938), which he considered his greatest Russian novel. These are followed by Lolita (1955), Invitation to a Beheading (1957) and Pale Fire (1962), his memoirs, Speak, Memory (1966), and some essays and short stories. Films include Lolita by Stanley Kubrick (1962) and Adrian Lyne (1997).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only RUS 439 or SLC 439 or ENG/RUS/SLC 494 (Art in Exile: Vladimir Vladimirovich Nabokov)
SLC	440	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440

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SLC	441	Fairy Tales	Foundational fairy tale texts collected by the Brothers Grimm and written by Hans Christian Andersen and their modern permutations reflect basic human desires, fears and aspirations as well as the values of the period in which they are written. These stories and their variants in popular culture across the globe permit students to reflect critically on the functions of fairy tales in both past and present civilizations. Students perceive the ways in which ancient tales can be utilized for various purposes and understand the contemporary theoretical debate on the study of fairy tales and their role in popular culture. Course taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ENG 102, 105 or 108 with C or better; one other ENG or GER upper-division course with C or better. Credit is allowed for only GER 441, GER 494 Fairy Tales, or SLC 441
SLC	444	Heroes, Ancient and Modern	Explores the heroic literature of the ancient Greeks and Romans, then traces the classical tradition and reception of the classical hero in medieval and modern texts. Incorporates history, art history and material culture from the relevant societies to supplement study of the texts involved.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 444, LAT 444, SLC 444 or SLC 494 (Heroes: Ancient and Modern)
SLC	445	The Holocaust in German-Mediated Memory	Examines representations of the Holocaust from across different media (literature, film, architecture, memoir, photography) and from across multiple generations of German engagement with this period in history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only FMS 445 or GER 445 or JST 445 or SLC 445 or GER 494 (Holocaust and German Media or Holocaust and German Mediated Memory)
SLC	446	Weimar-Era German Film	Examines early film production in Germany during the period of the Weimar Republic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only FMS 446 or GER 446 or SLC 446 or GER 494 (Weimar German Cinema) or GER 494 (Studies in German Film)
SLC	447	German Modernism	Examines examples of modernism in literature, art and film from German-speaking Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only GER 447 or SLC 447 or GER 494 (German Modernism)
SLC	450	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200; one ENG 200-level literature course, or SLC 202 or FMS 100 and FMS 200; Credit is allowed for only ENG 447, FMS 442 or SLC 450
SLC	451	Chinese Cultural History I	China's classics in translation studied both for their intrinsic ideas and for the origins of Chinese thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(HU or SB) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 451, HST 451 or SLC 451
SLC	452	Chinese Cultural History II	Evolution of Confucian thought, its synthesis with Taoism and Buddhism, and modern reactions against, and uses of, Confucian traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & G & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 452 or HST 452 or SLC 452

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SLC	455	Multi-Kulti: Multiculturalism Through Film	Examines how ethnic identities are perceived, constructed and marketed as well as how they perceive themselves and the "others." Critically engages with such concepts as migration, assimilation, citizenship, hybridity and authenticity. Focuses on exemplary films, including comparisons with minority experiences in other countries. Through film and other material on the topic, will learn to contextualize recruitment of guest workers, xenophobia and racism, citizenship law, immigration and national identity, the institutions of multiculturalism, religion, the private sphere, multilingualism, popular culture and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GER 455 or SLC 455 or GER 494 (Multi-Kulti: Multiculturalism in Central Europe) or SLC 494 (Multi-Kulti: Multiculturalism in Central Europe)
SLC	479	Introduction to Teaching Foreign Languages	Introduces teaching methodologies, language learning, and current best practice in teaching foreign languages in U.S. middle and high schools.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SLC	480	Methods of Teaching Foreign Languages	Teaching foreign languages and literatures at secondary and college levels. Does not meet the Liberal Arts and Sciences General Studies requirement for humanities and fine arts. Required for admission to SED 478.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: SLC 479 with C or better
SLC	481	Technical and Scientific Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as engineering, architecture, agriculture, computer technology, electronics, and physical and biological sciences.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: SLC 401
SLC	482	Business and Financial Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as economics, finance, insurance, management, marketing, accounting, advertising, and real estate.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: SLC 401
SLC	483	Medical and Legal Translation	Resources and strategies for translation of professional texts in subjects such as medicine, nursing, public health, criminal justice, and international law.	N	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SLC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	491	Crossing Languages and Cultures	Interdisciplinary and cross-cultural study in two or more world languages or cultures.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: SLC 201 and 202 with C or better
SLC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SLC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
SLC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SLC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		Pre-requisite: minimum 56 hours
SLC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLC	515	Second-Language Acquisition	Discusses and applies theories of second-language acquisition.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: SLC 400
SLC	551	Global Approaches to Translation	Familiarize students with various approaches to translation practice. Examines issues related to the cultural role of translation. Students [re]pare a translation, justification of translation choices, and discussion of the complexities posed by the translation. Readings address a broad array of translation theories, with most focused on translation as a globally theorized phenomenon in the 20th and 21st centuries. Readings and discussions focus on how one translates, and on translation as a culture-making enterprise inextricably tied to the questions of who translates, in what context, for whom, and to what ends. Students understand translation theories from different eras and cultures; understand how translation is implicated in different forms of intercultural contact (colonialism, commerce, proselytization); gain experience translating texts from a source language into English; and can explain why they translated the way they did.	N	RSC	N	GNA	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SLC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SLC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
SLC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	602	Literary and Cultural Theory	Trains SILC Ph.D. students in understanding the central role of languages and literatures in the composition of culture. Employs a range of interdisciplinary approaches to various forms of cultural production, specifically as they relate to language, literature, film, visual art, and performance. Through exploration of primary works and foundational theoretical texts, shows students how to question the motivations, aesthetics, transmission, reception, and social control of a variety of works and media. At the center of this analysis stand the critical debates about the nature and definition of the term culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SLC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SLC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	304	Computational Linguistics of Slavic Languages	Information technology and Slavic languages, including Web design, digitalized resources, information retrieval, math/statistical analysis, and PERL.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	CS	
SLV	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	440	History of Slavic Languages	Comparative evolution of East Slavic, West Slavic, and South Slavic languages from the earliest record to the standardizing of national languages in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB	
SLV	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SLV	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
SLV	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SLV	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLV	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SMC	520	Methods and Tools in Applied Cognitive Science	Provides a hands-on approach to understanding and using advanced methodologies commonly implemented in the field of cognitive science.	N	SEM	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SMC	521	Methods and Tools in Simulation and Modeling	Introduces specific methods and tools used in the field of modeling and simulation, with computer-based experience through both writing and using simulation software.	N	SEM	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SMC	540	Foundations of Applied Cognitive Science	Provides a critical background in the theory and organization of the field of cognitive science.	N	SEM	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SMC	541	Foundations of Simulation and Modeling	Introduces a wide variety of methodologies utilized by and applications of the broad field of simulation and modeling.	N	SEM	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SMC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-15		
SMC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Human Systems Engineering	1		
SMC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-4		
SMC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-15		
SMC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Human Systems Engineering	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC		Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Credit is allowed for only SOC 101 or 301
SOC	101	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Credit is allowed for only SOC 101 or 301
SOC		Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only SOC 101 or 301

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SOC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		Pre-requisites: Freshmen; maximum 25 earned hours
SOC		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
SOC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
SOC		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SOC	210	Sociology of Murder	Sociological perspectives on various forms of murder and types of murderers. Also considers forms of punishment for murder.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only FOR 210 or SOC 210
SOC	220	Sport and Society	Examines sports in American society as a source of socialization and an institution where gender, race/ethnicity, and class interact.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC		Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
SOC	241	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC		Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SOC		Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only FAS 264 or SOC 264
SOC	264	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only FAS 264 or SOC 264
SOC		Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	
SOC	270	Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	
SOC		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
SOC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SOC	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
SOC		Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Credit is allowed for only SOC 101 or 301
SOC	301	Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only SOC 101 or 301
SOC	312	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: Minimum 24 hours; SOC 101, PSY 101(PGS 101), FAS 101 or FAS 330 with C or better; Credit is allowed for only CDE 312 or SOC 312
SOC		Courtship and Marriage	In-depth study of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	315	Courtship and Marriage	In-depth study of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC		Courtship and Marriage	In-depth study of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	321	Sociology of Work	Social and cultural analysis of industry. Occupational roles, status, and social participation of workers.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC		Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & H	Credit is allowed for only FAS 324 or SOC 324
SOC	324	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & H	Credit is allowed for only FAS 324 or SOC 324

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SOC	328	Migration and Culture	Examines migration and culture embedded in a transnational field of social, economic and political processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours. Credit is allowed for only ASB 340 or SOC 328
SOC	331	Environmental Sociology	Analyzes human organizational responses to population growth, technological change, and environmental stressors on both a national and global scale.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G	Prerequisite(s): minimum 45 hours
SOC		Environmental Sociology	Analyzes human organizational responses to population growth, technological change, and environmental stressors on both a national and global scale.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours
SOC	332	The Modern City	In-depth analysis of the growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC		The Modern City	In-depth analysis of the growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	333	Population	Global trends in population growth, composition, and distribution; theories, policies, and impact of population trends on environmental quality and development.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G	
SOC	334	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Pre-requisite: Minimum 45 hours; Credit is allowed for only ASB 344 or SOC 334
SOC		Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L or SB	Pre-requisite: Minimum 45 hours; Credit is allowed for only ASB 344 or SOC 334
SOC	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
SOC	340	The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisite: SOC 101 or 301
SOC		The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: SOC 101 or 301
SOC	342	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB, SBS or SOC 342
SOC	350	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
SOC	352	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G & H	
SOC		Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G & H	
SOC		Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G & H	
SOC	353	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the perspective of anthropology and allied disciplines. Uses a global, comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3-4	(HU or SB) & G	Pre-requisite: 45 earned credit hours; Students who have credit for ASB 353, may not enroll in SOC 353
SOC	356	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well. May be repeated once for credit.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	360	Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: Minimum 24 hours; SOC 101, PSY 101(PGS 101), FAS 101, or FAS 330 with C or better
SOC		Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: Minimum 24 hours; SOC 101, PSY 101(PGS 101), FAS 101, or FAS 330 with C or better
SOC	363	Men and Masculinity	Sociological analysis of how masculine identity is defined, negotiated, and variously constructed depending upon class, ethnicity, age, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	364	Popular Culture and Society	Studies the social approaches to popular culture, focusing on the function of various forms (literature, film, theatre, and music).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours
SOC	365	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
SOC		Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC		Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SOC	366	Film and Society	Studies the social approaches to film as an art form, mass medium, and ideological construct.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SOC	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with C or better; ASB 100 or 102, SOC 101, SOS 110, or SSH 100 with C or better. Credit is allowed for only ASB, SOC, SOS, or SSH 370
SOC	371	Inequality and Sustainability	Efforts to shift societies onto a sustainable trajectory are facing profound challenges from the degree and dynamics of global inequalities of income, wealth, and life chances. Data and ideas from a spectrum of disciplines are employed to examine, analyze, and criticize the prospects for redressing global inequalities in a sustainable manner.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ASB or SOC 371
SOC		Inequality and Sustainability	Efforts to shift societies onto a sustainable trajectory are facing profound challenges from the degree and dynamics of global inequalities of income, wealth, and life chances. Data and ideas from a spectrum of disciplines are employed to examine, analyze, and criticize the prospects for redressing global inequalities in a sustainable manner.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ASB or SOC 371
SOC	374	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only ASB 374, POS 374, SBS 374 or SOC 374
SOC	375	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	(HU or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST 318, REL 318 or SOC 375
SOC	378	Migration and Society	Application of social scientific theories and principles in order to understand the social and ethnic consequences of international migration with a focus on the United States. Students will communicate views formulated from empirical evidence and reasoned analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Prerequisite(s): ASB 102 or SOC 101 with C or better; 45 minimum hours
SOC	389	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis. May be repeated for credit when topics vary. Fieldwork practicum.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		
SOC	390	Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	CS	
SOC		Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	CS	Pre-requisite: MAT 142 or higher
SOC	391	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Prerequisite(s): SOC 101 or SOC 301 or CDE 232; SOC 390; Credit is allowed for only FAS 361 or SOC 391
SOC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
SOC		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SOC	400	Perspectives on Aging	Broad overview of gerontological issues; e.g., physical aging, retirement, living options, caregiving, theoretical background, death.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SOC	415	The Family	Family considered from the institutional viewpoint; in-depth look at its historical development and its adaptation to a changing culture; analysis of the family system in many cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: minimum 30 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	418	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & H	Pre-requisites: FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better; minimum 30 hours. Credit is allowed for only CDE 418 or SOC 418
SOC		Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & H	Pre-requisites: FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better; minimum 30 hours. Credit is allowed for only CDE 418 or SOC 418
SOC	419	Organizations and Technological Change	Explores the increasing impact of information technology on corporate, governmental, and private organizations. May involve fieldwork.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	
SOC	420	Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L or SB	
SOC		Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	
SOC	421	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
SOC		Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	424	Women and Health	Women as healthcare workers and an in-depth analysis of issues of health, illness, and healthcare for women	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: minimum 30 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	426	Social Inequality	Examines stability and change in social inequality based on class, race and gender, and in the context of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC		Social Inequality	Examines stability and change in social inequality based on class, race and gender, and in the context of globalization.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SOC	427	Sociology of Health and Illness	Social aspects of illness and sociological analysis of the healthcare system and its practitioners.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Prerequisite(s): minimum 45 hours
SOC		Sociology of Health and Illness	Social aspects of illness and sociological analysis of the healthcare system and its practitioners.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours
SOC	433	Applied Demography	Science of population analysis. Covers techniques for measuring fertility, mortality, migration, and population composition.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	435	Advanced Marriage and Family Relationships	In-depth examination of research, issues, and trends relating to marriage and family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Pre-requisites: Minimum 30 hours; FAS 101, 331, PSY 101(PGS 101) or SOC 101 with C or better; Credit is allowed for only FAS 435 or SOC 435
SOC	443	Sociology of Corporations	Examines corporations as social institutions and the implications of their status as a legal person on politics, culture, and economy.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
SOC	445	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
SOC	448	Epidemics and Society	How epidemics occur; how they are perceived in society; how epidemics affect society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G	
SOC	451	Comparative Sociology	Cross-cultural study of basic social institutions; the methodology of cross-cultural research.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G	
SOC	456	Political Sociology	Social factors associated with voting; nature and structure of the electorate and political parties and the nature of national and international power structure.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		

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SOC	457	Global Social Movements	Examines how groups mobilize across borders to pursue social goals, including equality, justice, peace, and salvation in a global context.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
SOC	460	Leadership, Research, and Collaboration in Community Change	First course in Community Action Research Experience (CARE) sequence. Students develop a project proposal in collaboration with a community-based organization.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: Minimum 60 hours; Credit is allowed for only FAS 460, SOC 460 or FAS 498 (Leadership Research & Collaboration in Change)
SOC	461	Community Action Research Experience Research Internship	Second course in Community Action Research Experience (CARE) sequence. Students apply leadership, professional collaboration, project management and research skills in conducting an approved community action research project.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: FAS 460 (or SOC 460); Minimum 60 hours. Credit is allowed for only FAS 461 or SOC 461
SOC	483	History of Social Thought	Social thought in human culture. Background of modern sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Prerequisite(s): minimum 45 hours
SOC	483	History of Social Thought	Social thought in human culture. Background of modern sociology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours
SOC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
SOC	486	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: SOC 101 or 301
SOC	486	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: SOC 101 or 301
SOC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
SOC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
SOC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6	L	Prerequisite(s): Barrett Honors student
SOC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
SOC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
SOC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SOC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
SOC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-7		
SOC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-7		
SOC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		
SOC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		

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SOC		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
SOC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	501	Social Statistics	Understands and uses statistics for applications in the social sciences.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only CDE 501, SOC 501 or SOC 598 (Statistics for Social Sciences)
SOC	505	Applied Regression Analysis	Multiple linear regression topics relevant to social science data analysis. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 505; Graduate students only (degree and non-degree)
SOC	507	Categorical Data Analysis	Logistic regression and related topics relevant to categorical data analysis in social sciences. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 507; Graduate students only (degree and non-degree)
SOC	508	Structural Equation Analysis for the Social Sciences	Theory and application of structural equation modeling. Path analysis and latent variable models such as CFA, multiple group analysis and models for longitudinal data. Projects involve conducting analyses and writing results.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 508; Graduate students only (degree and non-degree)
SOC	509	Event History Analysis	Proportional hazards models and other methods for analyzing longitudinal data and establishing hazard rates of events for exploratory variables.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 509; Graduate students only (degree or non-degree)
SOC	512	Secondary Data Analysis	Works with existing data to produce a publishable article.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 512; Graduate students only (degree or non -degree)
SOC	515	Studies of the Family	Current developments in the study of marriage and the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	516	Family Demography	Current developments in the study of family demography.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
SOC	523	Social Stratification	Overviews significant themes, issues, and bodies of work in the field of social stratification, a fundamental topic of sociological inquiry.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
SOC	533	Demographic Methods	Emphasizes methods and techniques in demographic analyses such as life tables.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
SOC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	585	Sociological Theory	Analyzes major sociological theories, from classical to contemporary.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	586	Capstone I	Professional exploration and goal specification for non-thesis capstone project.	N	PRA	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): 3 hours in any CDE, FAS or SOC 500-level course with C or better; Credit is allowed for only FAS 586 or SOC 586
SOC	587	Capstone II	Develops professional expertise and area of focused interest.	N	RSC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): FAS 586 or SOC 586. Credit is allowed for only FAS 587 or SOC 587

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SOC	588	Capstone III	Applies developed expertise and knowledge to professional goal.	N	PRA	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): CDE 501 or SOC 501; CDE 531 or SOC 585; FAS 500 or SOC 500; FAS 587 or SOC 587; 12 additional graduate-level hours in CDE, FAS, and/or SOC; Credit is allowed for only FAS 588 or SOC 588
SOC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC		Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC		Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC		Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
SOC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC		Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
SOC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	603	Perspectives in Sociological Inquiry	Provides an overview of core theoretical frameworks and associated analytic approaches in sociology. Taught by faculty members from across the university with sociological training or research interests, providing students with foundational and advanced research tools as well as introducing them to ongoing research at ASU, the distinctive contributions of sociological perspectives to inter- and transdisciplinary projects, and potential opportunities for research residency.	N	SEM	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	685	Applied Social Theory	Overviews main classical and contemporary theoretical paradigms and concepts in sociology and provides advanced training on using them to build empirical analytic models. Students identify theoretical perspectives appropriate for research questions, build corresponding conceptual frameworks, and formulates testable hypotheses. Seminar format and therefore students' active participation is expected.	N	SEM	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		

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SOC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	100	Introduction to Sustainability	Introduces basic concepts, global trends, and local responses, philosophical, ethical, and cultural dimensions.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	G	Pre-requisites: Not open to Sustainability majors or majors with a Sustainability concentration
SOS		Introduction to Sustainability	Introduces basic concepts, global trends, and local responses, philosophical, ethical, and cultural dimensions.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	G	Pre-requisites: Not open to Sustainability majors or majors with a Sustainability concentration
SOS	101	Introduction to Applied Mathematics for the Life and Social Sciences	Introduces quantitative techniques as applied to problems in the life and social sciences. Includes challenges like understanding the complexities of the human genome or the implications of globalization for infectious disease, human health, and economic stability.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	MA	Prerequisite(s): MAT 117 with C or better (or MAT 194: EFM with skills mastered for MAT 142 if completed) OR Mathematics Placement Test with a score of 32% or higher; Credit is allowed for only AML 100 or SOS 101
SOS	110	Sustainable World	Lays the groundwork for understanding the fundamental geological, biological, and social processes that gave rise to the world we live in and continue to maintain its viability for human life.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SB	
SOS		Sustainable World	Lays the groundwork for understanding the fundamental geological, biological, and social processes that gave rise to the world we live in and continue to maintain its viability for human life.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	SB	
SOS	111	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	(HU or SB) & G	Credit is allowed for only PUP 190 or SOS 111
SOS		Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(HU or SB) & G	Credit is allowed for only PUP 190 or SOS 111
SOS		Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	(HU or SB) & G	Credit is allowed for only PUP 190 or SOS 111
SOS	117	Food System Sustainability	Food systems are particularly important for human societies to sustain and are also particularly vulnerable to multiple threats related to the interconnected sustainability challenges we face. Introduces the concepts and issues involved in food systems sustainability. Divided into four modules, the first three of which address the other systems with which food systems interact--socio-ecological, socio-cultural and socio-technical systems. The final module addresses the future of food systems. Teaches students about the main issues in food system sustainability and allows students to enhance their critical thinking skills by applying them to the many sustainability challenges associated food system activities via solutions-based learning including the social, ecological, economic and institutional dimensions.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		

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SOS	171	The Thread of Energy	Follows the thread of energy through every aspect of our lives. Discusses the technical, social, legal, and policy contexts of all energy resources, including present and unconventional fossil fuels, nuclear power, and renewable resources. Addresses energy use throughout history, the influence of energy on quality of life, the role it plays in political strategies and environmental quality, how it shapes our neighborhoods and cities, its contribution to our personal comfort and national security, and how its importance is reflected in the worlds of business and the humanities. Its dual role is as a stand-alone introduction to energy, and as a first step to more advanced studies of energy in the natural, technical, and social sciences.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3	SB & G	Credit is allowed for only GCU or SOS 171
SOS	181	Technological, Social, and Sustainable Systems	Introduces the importance and role of technological, social, and sustainable systems in the modern world. Provides a framework for the theory and practice of sustainable engineering.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	HU	Credit is allowed for only SOS, FSE or CEE 181
SOS	182	Water Planet	Overview of the processes that control water supply to natural ecosystems and human civilizations. Part I introduces the basic science that helps us understand the water planet, including the hydrologic cycle, glaciers and ice; rivers, oceans, and natural hazards associated with water such as flooding, landsliding and tsunamis. Part II covers some of the management and resource allocation topics that face humanity today, including droughts, groundwater contamination, impacts on fisheries, conflicts over water, patterns of water use, and effects of global climate change on future water supplies. Uses water issues facing Arizona and California as examples.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	4	SQ	Credit is allowed for only GLG 108 or SOS 182
SOS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	GRD	School of Sustainability	School of Sustainability	1-3		
SOS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		
SOS	201	Introduction to ASU and Sustainability	Introduces all ASU transfer students to the unique elements, culture, challenges and opportunities of the university.	N	LEC	N	YGB	School of Sustainability	School of Sustainability	1		Pre-requisites: Sustainability major; Minimum 24 hours
SOS	210	Mathematical Tools and Modeling for the Life and Social Sciences	Introduces the evaluation and construction of mathematical models used in the life and social sciences. Includes the basic steps in developing a model, analyzing it, and testing it with actual data. Covers the first steps concerning how to use formal mathematical techniques including developing equation-based relationships, plotting graphs, linear regression, and solving equations using computer software.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite: AML 100 or SOS 101 with C or better (with B or better if Sustainability major). Credit is allowed for only AML 253, SOS 210 or 294 (Intro to Math Tools & Modeling)
SOS	211	Calculus and Probability for the Life and Social Sciences	Introduces two of the most important and useful mathematical frameworks used to study natural and social phenomena: probability and calculus. Probability is used to describe an attitude of mind toward some proposition whose truth is not certain. Calculus is the branch of mathematics used to study the behavior and dynamics of functions: calculus is the mathematical study of change. Students gain the basic competence needed for applying probability and calculus when thinking about and research problems in sustainability. Focuses on and discusses applications, the meaning of important concepts, the origins of the rules of derivation and integration, and logic behind why the methods work.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3	MA	Pre-requisite: AML 100 or SOS 101 with B or better
SOS	220	Systems Thinking	Introduces systems thinking and complexity science, with an emphasis on analytical relevance for thinking about a myriad of issues involved in sustainability. Hones students' abilities to read critically, articulate their views clearly, and think about the many systems that shape their lives.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	230	Professional skills in Sustainability	Builds interpersonal competence, which is a key competence in sustainability. Students work on a small hands-on sustainability project in order to practice professional skills in four domains: teamwork, project management, self-directed and continuous learning, and stakeholder engagement. Students learn how to effectively collaborate in teams, use project management tools to achieve quality products in time, innovate their ways of learning, and create productive dialogue with stakeholders.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	1		Pre-requisites: PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	231	Careers in Sustainability	Aids in career exploration and development for School of Sustainability majors. Explores values, motivations and career options. Students learn how to approach the job search and how to communicate sustainability to employers; also how to prepare a quality résumé, cover letter, and gain a better understanding of the benefits of networking.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	1		Pre-requisites: BA or BS Sustainability major; Minimum 45 hours; PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	272	Environmental Justice	Surveys key environmental justice issues and movements. Uses interdisciplinary social science perspectives to review and analyze U.S. and international case studies.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3	SB	Credit is allowed for only ASB 272 or SOS 272

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SOS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: SOS 101 or AML 100 with C or better
SOS	300	Advanced Concepts and Integrated Approaches in Sustainability	Integrates disciplinary contributions to sustainability, teaches advanced concepts in sustainability, and explores methods for identifying sustainability challenges and generating solutions. Focuses on diversity of sustainability research, and integrates specialized approaches in sustainability. Advanced concepts in sustainability, including systems-thinking, complexity, nonlinearity, cascading effects, coupled natural-human systems, governance, future thinking, unintended consequences, normative concerns, transformation, power, participation, and equity.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisite: Sust minor with SOS 100 (or 110 or SOS 111/PUP 190) with C or better; 6 hrs from two Sust themes OR Civil and Environ Engineering major with a Sust conc OR Tourism major with a Sust Tourism conc OR Interdisc Studies major with a Sust conc
SOS	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301
SOS	309	History and Philosophy of Sustainability	Examines sustainability issues in a broadly interdisciplinary way, but with a special emphasis on humanities perspectives, focusing on human ideas, values and institutions as they have evolved over time.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours; Credit is allowed for only HST 308 or PHI 322 or SOS 309 or BIO/HST/PHI/SOS 394 (History & Philosophy of Sustainability)
SOS	310	Equity, Justice and Sustainability	Introduces the "social justice" aspects of sustainability science and practice. Sustainability problems are a special class of problems arising from a complex set of issues spread across time, space and institutional scales. These problems can threaten underlying social, economic and ecological systems which are highly intertwined and interdependent. Explore these issues through study of both theory and practice.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	311	Future Thinking and Strategies	Offers a critical introduction to future-oriented theories and methods. Explores anticipation in contemporary society through a series of cases studies that probe real-world sustainability issues and how the future is created and contested. By characterizing and critiquing future-oriented practices across governmental, academic and private sectors, offers a critical perspective on different methodological approaches and the implications of their use.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	314	Basic Energy Science	Explains the concepts of the science of energy for those without a background in engineering. Allows non-engineering students to better grapple with the issues that surround sustainable energy issues. Covers the most common methods of electricity generation as well as renewable technologies and fuels.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only SOS 314 or SOS 394 (Basic Energy Science)
SOS	315	Energy Policy	Examines the regulation of energy production and consumption in the U.S. at the federal, state and local levels. Identifies energy stakeholders in the U.S. and examines how they have shaped U.S. policies around energy. Explains past and current U.S. energy policies and how energy needs have shaped U.S. relations with other countries. Compares U.S. energy policies to that of other countries in the world, as well as how Arizona's energy policies compare to other states within the U.S.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only PAF 394 (Energy Policy) or POS 394 (Energy Policy) or SGS 315 or SGS 394 (Energy Policy) or SOS 315 or SOS 394 (Energy Policy)
SOS	320	Society and Sustainability	Establishes an understanding of the human, social, and cultural dimensions of sustainability from multi- and interdisciplinary perspectives and at a variety of spatial and temporal scales.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	L or SB	Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better

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SOS	321	Policy and Governance in Sustainable Systems	Explores the wide array of political questions that are raised when we view the Earth's environment as an integrated, global system.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	322	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Sustainability or Business (Sustainability) major; SOS 110 and 111 (or PUP 190) with C or better OR Non-Sustainability major with 2 courses with C or better: SOS 100, 110, 111 (PUP 190), SOS 300
SOS	323	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	324	Sustainable Energy, Materials, and Technology	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	325	The Economics of Sustainability	Applies economic principles to the allocation of environmental goods and services, external environmental effects, and environmental public goods; decision-making under uncertainty, adaptation to and mitigation of environmental change.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	326	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning, and the provisioning of ecosystem services; use of economic and other social science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better

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SOS	327	Sustainable Food and Farms	Food systems and sustainability. Theories of food security, rural livelihood sustainability, and food sovereignty. Critically examines the social, ecological, economic, and institutional dimensions of the many sustainability challenges associated food system activities (production, processing, distribution, consumption, waste). Students develop a food system framework and apply knowledge to an assessment of the sustainability of one aspect of the local food system.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	328	Sustainability and Enterprise	Examines the evolving interface between sustainability and human enterprise. Explores and reviews key fundamental concepts in the sustainability arena, including economic and scientific drivers and select historical and structural aspects that create the current context for the enterprise and sustainability interface found today. Delves into more specific case studies of attempts by current businesses to become "greener" and "more sustainable," exploring challenges and opportunities that are commonly found as well as how decisions are often made in today's business settings and by whom. Explores alternative enterprise models and examples of businesses that are using the current context to redefine the sustainability and enterprise. Given the emergent nature of this effort, uses timely and "real-world" examples from current events where possible. Explores and applies an integrated approach to sustainability and enterprise. Readings include popular texts, original research articles and current events.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisite: Sustainability or Business (Sustain) major; SOS 110 and 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 courses: SOS 100, 110, 111 (PUP 190), SOS 300 with C or better; Credit for only SOS 328 or 394 (Sustain and Enterprise)
SOS	353	Perspectives on the Western Diet: Food, Health and Sustainability	Hybrid course covering political, ethical, social and cultural issues inherent in the U.S. food system. Topics include examination of U.S. food guidance; the food system and food environment; the history of food and farm policy; food security and aspects of sustainability in relation to food system impacts on the health of humans, society and the environment.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only NTR 353 or NTR 394 (The Western Diet: Food, Health, & Sustainability) or SOS 353
SOS	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	L or SB	Pre-requisites: ENG 102 (or ENG 105/108) with C or better; ASB 100 (or 102), SOC 101, SOS 110 or SSH 100 with C or better; Credit is allowed for only ASB, SOC, SOS or SSH 370
SOS	371	Inequality and Sustainability	Efforts to shift societies onto a sustainable trajectory are facing profound challenges from the degree and dynamics of global inequalities of income, wealth, and life chances. Data and ideas from a spectrum of disciplines are employed to examine, analyze, and criticize the prospects for redressing global inequalities in a sustainable manner.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: ENG 101, 105 or 107 with C or better; Minimum 45 hours completed; Credit is allowed for only ASB or SOS 371; Students who have received credit for ASB or SOS 394 (Inequality and Sustainability) may not enroll in SOC 371
SOS	372	Earth Science in Arizona and the Southwest	Place-based application of geology and allied Earth system sciences to explore and interpret the landscapes, rocks, geologic history, climate, resources, and natural hazards of Arizona and the Southwest. Integrates case studies of the interactions of Southwest cultures and societies (past and present) with Earth systems, and inquiry into the future sustainability of Southwestern communities and lifeways.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; GLG 101 (or GLG 102 or 110 or GPH 111 or SES 121); MAT 117 or higher. Credit is allowed for only GLG 301 or GLG 394 (Earth Sci in AZ & SW) or SOS 372
SOS	373	Minerals, Energy, and Society	Studies the science and technology of the minerals and energy industries, how these industries interact with society, and how these interactions may change in the future.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: ENG 101 (or 105 or 107) with C or better; GLG 101 (or 102 or 110) or GPH 111 or SES 121 or Junior standing; Credit is allowed for only GLG 304, 394 (Minerals, Energy & Society) or SOS 373

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SOS	374	Earth's Critical Zone	The Earth's near surface environment (the "critical zone") supports most life and is the dynamic interface between the solid Earth and its fluid envelopes where much of the geologic record is produced. We now know that we face rapid climate change and the consequences of changes in land use, water resources, and ecosystems. Critical to planning a response to, or mitigation of, environmental change is understanding how the Earth surface works. Focuses on how changes to the environment manifest themselves in the critical zone--in the form and function of the Earth's surface (landforms, water resources, soils, ecosystems). Offers a quantitative introduction to the form and function of the processes impacting the Earth's critical zone to build an understanding of the interactions of physical, chemical and biotic processes in shaping the surface and determining fluid, solute and sediment fluxes.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisites with C or better: GLG 101 & 103 or SES 121 & 123; MAT 170 or 171 or 210 or 251 or 265 or 270; PHY 101 or 111 or 121 or 150 or CHM 101 or 107 or 113 or 114 or BIO 100 or 181 or 182 or 281 or 282. Credit is allowed for only GLG 327 or SOS 374
SOS	375	Humans and the Environment: What's the Connection?	How do diverse human groups across global ecosystems (desert, tropics, arctic, alpine, urban) interact with and adapt to their environments and how are these relationships changing in response to globalization, climate change and other social, historical and political-economic drivers? Cultures situated in landscapes are the basis for an incredible global diversity of worldviews and behaviors that in turn affect how humans experience and "use" their environments. This course will provide an introduction to current and benchmark literature and methods in environmental and ecological anthropology that address people-environment interactions.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	(L or SB) & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 375 or SOS 375 or ASB 394 (People: Environment Connections in Anthropology) or ASB 494 (Ecological and Environmental Anthropology)
SOS	385	Business & Sustainability I	Focuses on sustainability practices at the organizational level. Describes how business and consumer products impact our physical environment and the communities that they interact with, and identifies ways to measure and improve the sustainability of products and the supply chains that deliver them. Students will examine organizational practices with regard to sustainability, evaluate the impact of products and services on the environment, and explore a business case for sustainability.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: Minimum 60 hours; SCM 300 or SOS 110 with C or better. Credit is allowed for only SCM 385 or SOS 385
SOS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	414	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3	SB	Prerequisite(s): ASB 100, 102, 222, 223, AML 100, ASM 104 or SSH 100 with C or better; minimum 45 hours; Credit is allowed for only ASM 414 or SOS 414 or SSH 414
SOS	421	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): BIO 320 with C or better. Credit is allowed for only BIO 421 or BIO 521 or SOS 421 or SOS 521
SOS	424	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	4		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit allowed for only ASM, BIO or SOS 424

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOS	429	Human Impacts on Ecosystem Functioning	Explores our current understanding of how humans are impacting the functioning of ecosystems and how changes in ecosystems would affect provisioning of ecosystem services and ultimately human well-being. The two primary drivers of ecosystem change are growth of the human population and increased consumption per capita. These drivers affect the Earth's cycles of carbon, nitrogen and water, as well as regional and global-scale changes in biodiversity and climate. Includes an in-depth discussion of scenarios for the next 50 and 100 years, which articulate costs and benefits of alternative development pathways in terms of climate change, food production, clean water and biodiversity. Scenarios of change in biodiversity lead to the topic of the consequences of biodiversity change for the functioning of ecosystems from the point of view of their productivity and stability. Human activities have disrupted several biogeochemical cycles including nitrogen and carbon cycles.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): BIO 320 (or SOS 326); Credit is allowed for only BIO 429, BIO 528, SOS 429, SOS 528, or SOS 494/598 (Human Impacts on Ecosystem Functioning), or BIO 494/598 (Human Impacts on Ecosystem Functioning)
SOS	433	Sustainable Water Use	A clustered learning network on the problem of water scarce regions, includes insights from hydrology, engineering, biology, economics and public policy. May be repeated once for credit.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3		
SOS	434	People and Nature: Ecosystem Services	Explores the drivers of biodiversity change and the consequences they have for human wellbeing, taking both an ecological and an economic perspective.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: MAT 117 or SOS 101; junior standing. Credit is allowed for only BIO 434, SOS 434, or BIO 494 (Ecosys Servcs:People&Nature)
SOS	435	U.S. Energy: Pathways to Sustainability	Organized around four mores of energy and environmental policy: energy supply, technology for efficiency, environmental sustainability and infrastructure. Also incorporates the wider context of energy and the environment in the society in which we live, taking into account our historic past and future potential life experience with energy availability and use. Through critical examination and analysis of these mores, students apply knowledge to the creation of a comprehensive energy and environmental policy plan that addresses past conditions, present states and future possibilities.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Credit is allowed for only SOS 435 or SOS 494 (Energy and Environmental Policy) or SOS 494 (US Energy: Pathways to Sustainability) or SOS 555 or SOS 594 (Energy & Environmental Policy)
SOS	441	Mathematical Concepts and Tools in Sustainability	Explores various mathematical analysis and models pertinent to sustainability science drawn from both social and natural sciences and introduced in a problem-based context. Demonstrates basic concepts from game theory such as pure-strategy and mixed-strategy Nash equilibriums in such classic games as prisoner's dilemma, hawk-dove, coordination. Explores the evolutionary dynamics of these games through the replicator equations. Studies important concepts of stability and regime shift for selected problems. Also discusses some basic solution concepts in cooperative game theory (depending on interest and time).	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s) with C or better: AML 253, or SOS 210(or SOS 294 Intro to Math Tools & Modeling). Credit is allowed for only AML 441 or 494 (Math Concepts & Tools in Sustainability) or SOS 441 or 494 (Mathematical Concepts and Tools in Sustainability)
SOS	442	Sustainability Indicators	Measures of sustainability (or sustainable development), focusing on sustainability indicators and indices (SIIs). Discusses key conceptual and methodological issues on gauging sustainability and examines a wide range of sustainability indicators and indices that have been commonly used at global, regional and local scales.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only SOS 442, 494 (Sustainability Indicators and Indices), 542 or 598 (Sustainability Indicators and Indices)
SOS	447	Gender, Culture, and Development	In-depth analysis of gender roles related to health, family, work, education and politics in developing countries.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	(L or SB) & G	Prerequisite(s): WST 100 or 300 or minimum 45 hours; Credit is allowed for only SGS 454 or SOS 447 or TCL 447 or WST 447 or TCL 598 (Gender, Culture & Development)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOS	456	Human Rights and Sustainability	Addresses the connections between human rights and environmental sustainability. Legal and scholarly approaches linking these areas present new perspectives for addressing some of the greatest challenges of our time, given the important resource dimensions of economic and social rights and the human dimensions of sustainability. Yet human rights demands and environmental concerns are not always in harmony. Explores these tensions and opportunities by examining three substantive areas: urban ecology and human rights, the human right to food, and the human rights implications of extractive industries such as oil and mining. Following an introduction to the key concepts of human rights and sustainability, explores the substantive areas through theoretical and empirical readings on each; grassroots accounts of struggles over environment-related human rights; and selections from literature and film that illustrate the environmental justice issues at stake.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3	(L or SB) & G	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 36 hours. Credit is allowed for only JUS 456, SOS 456, JUS 394 (Human Rights & Sustainability), or JUS 497 (Seminar in Human Rights)
SOS	463	Political Ecology of the Border	Using a political ecology approach, focuses on the creation of border communities of Southwest North America.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	SB & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 463 or SOS 463 or TCL 443
SOS	465	Sustainable Urbanism	History, theory, principles and practice of New Urbanism, including current critiques and counter-critiques of both movements.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s) with C or better: Sustainability major in a sustainability concentration: SOS 110, 111 (or PUP 190); minimum 45 hours. All other majors: PUP 301. Credit is allowed for only PUP 465 or PUP 565 or SOS 465
SOS	474	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 464 or MGT 464 or SOS 474
SOS	475	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 465 or IND 465 or MGT 465 or SOS 475
SOS	480	Achieving Career Success in Sustainability	The need for sustainability-minded workers and leaders has never been more important than right now. Yet sustainability as a career track is still very new and means different things to different people. Challenges students to explore their own ambitions and "personal brands," to shape their work personas, to model the behaviors and competencies that build long-term career success, and to uncover the sustainability potential of any job, whether or not "sustainability" is in the job title.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Pre/Co-requisite: SOS 110, 111, PUP 190 with C or better if completed; Credit is allowed for only SOS 480 or 494 (Achieving Career Success in Sustainability)
SOS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	485	Business and Sustainability II	Exposes students to a variety of ideas, concepts, theories, and models concerning sustainable technologies. Students learn to apply a systematic research process in order to assess a technology with potentially positive sustainability attributes; perform hotspot analysis on a technology in order to understand key environmental and social issues; forecast the future of a sustainable technology through application of technology forecasting models; predict how sustainable technologies are likely to get successfully adopted and diffused.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: SCM 385 or SOS 385 with C or better. Credit is allowed for only SCM 485, SCM 494 (Business and Sustainability II) or SOS 485
SOS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	School of Sustainability	School of Sustainability	1-6		Prerequisite(s): Barrett Honors student
SOS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	School of Sustainability	School of Sustainability	1-6	L	Prerequisite(s): Barrett Honors student
SOS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: SOS 110, and SOS 111 (or PUP 190), with C or better

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SOS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-7		Pre-requisites: Sustainability major; Minimum 9 hours of SOS 320, 321, 322, 323, 324, 325, 326, 327, 328 (or SOS 394 ST: Sustainability and Enterprise), 465 (or PUP 465)
SOS	499	Individualized Instruction		Y	SEM	Y	Z1	School of Sustainability	School of Sustainability	1-3		
SOS	501	Foundations of Sustainability	Provides a knowledge base to help students to succeed in the online MSL program. Supports MSL students in the four learning threads of the program, which include communications and sustainability, global context, strategic sustainability and sustainability leadership.	N	LEC	N	YGB	School of Sustainability	School of Sustainability	1		Prerequisite(s): Sustainability Leadership MSL student; Corequisite(s): EMS 502; EMS 503
SOS	502	Tools and Techniques for Sustainability	Forthcoming federal legislation and Executive Orders will set new standards for operational efficiencies, energy and water conservation, use of renewable energy sources, and waste minimization in the Army and Army National Guard. Tools and Techniques for Sustainability presents a systems approach to meet those standards by integrating principles of sustainability into existing Army policies, procedures, and reporting systems. The course features the Framework for Sustainable Strategic Development as an organizing framework to analyze systems and develop strategic plans to move toward sustainability.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Global Sustainability Leadership certificate student; Pre-or co-requisite: SOS 501
SOS	503	Operationalizing Sustainability	Sustainability is a means to addressing the significant physical, statutory, and regulatory requirements that affect and can encumber the Army's ability to train Soldiers at ranges and maneuver areas across the United States. With hundreds of imperiled species proposed for federal protection in the next few years, threatened and endangered species and sensitive habitat will continue to be a concern. Participants in Operationalizing Sustainability will explore how innovative training practices, improved land and natural resource management practices, and enhanced community relationships can ensure continued access to the land and water assets needed to maintain readiness and can help to 'win hearts and minds.' Proactive approaches to promoting well-being for soldiers, families, civilians, neighbors, and communities, both at installations and downrange, are stressed.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Sustainability Leadership certificate student; SOS 501; SOS 502
SOS	504	Energy and the Built Environment	Provides practical approaches to applying sustainability principles and practices to public works activities, housing, facilities operations and management, military construction, master planning, and energy management. Presents approaches to implement high-performance sustainable building design, construction, operation and management, maintenance, and deconstruction. Also covers cost-effective, innovative strategies, such as highly reflective and vegetated roofs, to minimize consumption of energy, water, and materials.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Sustainability Leadership certificate student; SOS 501; SOS 502
SOS	505	Sustainable Military Acquisition and Logistics	Sustainable Military Acquisition and Logistics provides practical approaches to applying sustainability principles and practices to all areas of procurement, acquisition, and logistics. Through weapon systems acquisition or procurement of installation goods and services, the Army hopes to drive innovation and promote sustainability while reducing costs. The inclusions of energy and resource efficiency and other sustainability criteria in acquisition and procurement decisions can reduce long-term operation and maintenance costs, conserve resources, and continue to expand innovation throughout the supply chain. This course introduces the application of sustainability principles to procurement and acquisition, transportation, and materiel. The use of life cycle analysis and multicriteria assessment for all 10 classes of supply is also featured significantly in the course.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Sustainability Leadership certificate student; SOS 501; SOS 502
SOS	510	Perspectives on Sustainability	University-wide course covering basic perspectives on sustainability. Uses case studies; faculty and students from engineering, architecture, social sciences, and natural sciences exchange ideas on the major challenges faced in forming a sustainable future at the local, national, and global levels.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): School of Sustainability graduate students

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SOS	511	Transformational Sustainability Research	Enables students to describe, position, compare, and evaluate the key features, strengths, and weaknesses of sustainability research and problem-solving methods. Introduces an integrated methodological framework for sustainability research and problem solving that maps and structures families of methods from description/analysis to strategy building. Addresses all major families of sustainability methods, critically evaluating their specific function, structure, underlying assumptions, validity, reliability, strengths and weaknesses against this overall framework. The method families include not only scientific methods but also practical problem-solving techniques. Integrates two training programs, one on teamwork skills, the other on participatory collaboration with stakeholders.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): School of Sustainability graduate students
SOS	512	Sustainable Resource Allocation	Microeconomic principles of resource allocation applied to environmental goods and services, external environmental effects and environmental public goods; decision making under uncertainty, adaptation to and mitigation of environmental change.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	513	Science for Sustainability	Carbon cycle, nutrient cycles, carbon and nutrients in the oceans, climate change, oxygen and ozone, solid waste pollution, urban air pollution.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	514	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GCU or SOS 514
SOS	515	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		
SOS	516	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 515 or GLG 547 or HSD 515 or PAF 547 or SOS 516
SOS	517	Sustainability and Enterprise	Examines the evolving interface between sustainability and human enterprise. Explores and reviews key fundamental concepts in the sustainability arena, including economic and scientific drivers and select historical and structural aspects that create the current context for the enterprise and sustainability interface found today.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SOS 517 or SOS 591 (Sustainability and Enterprise)
SOS	518	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
SOS	520	Research Design and Methods for Sustainability	Provides skills and knowledge that help students design their own research and place it in the context of other disciplines or bodies of work. Not a "methods" class because no specific method is taught in depth. Instead, it is an initial introduction to the research design process and is intended as a platform through which students develop the skills to appreciate and contextualize the approaches taken (and methods used) by others, and during which they can identify the types of specific training they require as they define their own research.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre- or corequisite(s): SOS 510; Credit is allowed for only SOS 520 or SOS 598 (Intro Design/Mthds)
SOS	521	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 421 or BIO 521 or SOS 421 or SOS 521

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SOS	525	Social-Ecological-Technical Systems (SETS): Domains and interfaces	Guide students in developing an integrated approach and framework for thinking about complex systems in a sustainability context. Presents overviews of content, theories and methods from each of the SETS domains (Social, Ecological and Technical Systems); primarily focuses on how to bring these domains together. Explores the SETS interfaces (intersections) from an integrated perspective and equips students to make those linkages in their research and in subsequent elective courses. Each semester students use a sustainability problem or theme to explore the concepts presented in the course.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	527	Environmental Ethics and Policy Goals	Advanced seminar in applied environmental ethics, focusing on the most influential and policy-relevant approaches in the field of environmental ethics. Core topics include the historical and philosophical foundations of alternative understandings of environmental responsibility; the debate over utility and preservation in environmental policy argument; and the interplay of ethical principles, scientific knowledge and societal priorities in environmental decision making. Consideration of the ethical and value dimensions of biodiversity conservation, wilderness protection, environmental valuation, environmental activism, climate change and sustainability, among other challenges.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BIO 527 or SOS 527 or BIO 591 (Environ Ethics & Policy Goals)
SOS	528	Human Impacts on Ecosystem Functioning	Explores our current understanding of how humans are impacting the functioning of ecosystems and how changes in ecosystems would affect provisioning of ecosystem services and ultimately human well-being. The two primary drivers of ecosystem change are growth of the human population and increased consumption per capita. These drivers affect the Earth's cycles of carbon, nitrogen and water, as well as regional and global-scale changes in biodiversity and climate. Includes an in-depth discussion of scenarios for the next 50 and 100 years, which articulate costs and benefits of alternative development pathways in terms of climate change, food production, clean water and biodiversity. Scenarios of change in biodiversity lead to the topic of the consequences of biodiversity change for the functioning of ecosystems from the point of view of their productivity and stability. Human activities have disrupted several biogeochemical cycles including nitrogen and carbon cycles.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only BIO 429, BIO 528, SOS 429, SOS 528, or SOS 494/598 (Human Impacts on Ecosystem Functioning), or BIO 494/598 (Human Impacts on Ecosystem Functioning)
SOS	530	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	531	Achieving Career Success in Sustainability	The need for sustainability-minded workers and leaders has never been more important than right now. Yet sustainability as a career track is still very new and means different things to different people. Students explore their own ambitions and "personal brands," to shape their work personas, to model the behaviors and competencies that build long-term career success, and to uncover the sustainability potential of any job, whether or not "sustainability" is in the job title.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	1		Prerequisite(s): SOS 510; Credit is allowed for only SOS 531 or SOS 598 (Achieving Career Success in Sustainability)
SOS	532	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): (degree- or nondegree-seeking graduate student; Credit is allowed for only ASB 533 or SOS 532
SOS	533	Sustainable Water	Hydrological, legal, political, and ecological implications of alternative water management strategies; effect of institutional and regulatory frameworks; changes in water demand and supply due to human (population growth, economic changes) and natural (drought, climate change) factors	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	534	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	535	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning and the provisioning of ecosystem services; use of economic and other social-science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ELS 535 or SOS 535

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SOS	536	Food System Sustainability	Broad view of food systems and the sustainability of such systems. Concepts, theory, methods and empirical analyses from diverse disciplines, including agro-ecology, agronomy, political science, agricultural economics, geography, anthropology, and food and nutrition studies. Students choose a theme that is a core concern to food system sustainability and pursue that theme in diverse course activities and through engaging in the broader food system we are embedded in as residents in the Phoenix area. Culminates with a term paper/project that synthesizes experience and knowledge, providing a unique perspective on their role in food systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	540	Statistical Modeling for Sustainability	Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to begin conducting empirical analyses in their domains of interest; bring students to a high level of competency in using a cutting-edge statistical software package (Stata) for data management and data analysis tasks; expose students to applications of statistical methods in the economics/policy/social science sustainability literatures in order to develop an understanding for how statistical tools are operationalized in the research world; and develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations and command of statistical tools that constitute quality empirical research.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	4		Prerequisite(s): degree- or non-degree-seeking graduate student; Credit allowed for only AML, ESS or SOS 540
SOS	541	Mathematical Concepts and Tools in Sustainability	Explores various mathematical analysis and models pertinent to sustainability science drawn from both social and natural sciences and introduced in a problem-based context. Demonstrates basic concepts from game theory such as pure-strategy and mixed-strategy Nash equilibriums in such classic games as prisoner's dilemma, hawk-dove, coordination. Explores the evolutionary dynamics of these games through the replicator equations. Studies important concepts of stability and regime shift for selected problems. Also discusses some basic solution concepts in cooperative game theory (depending on interest and time).	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit allowed for only AML 494 (Math Concepts & Tools in Sustainability), AML 541, SOS 494 (Math Concepts & Tools in Sustainability), SOS 541 or SOS 598 (Math Concepts & Tools in Sustainability)
SOS	542	Sustainability Indicators	Measures of sustainability (or sustainable development), focusing on sustainability indicators and indices (SIs). Discusses key conceptual and methodological issues on gauging sustainability and examines a wide range of sustainability indicators and indices that have been commonly used at global, regional and local scales.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only SOS 442, 494 (Sustainability Indicators and Indices), 542 or 598 (Sustainability Indicators and Indices)
SOS	545	Organizations, Sustainability & Public Policy	Sustainability concerns are fast becoming a strategic issue for organizations in all sectors. In the last ten years, numerous organizations have completely redefined their business strategies in line with principles of sustainability by balancing the requirements for economic development, environmental quality and social justice, and governments worldwide are developing programs and policies that encourage these activities. Explores the connections between organization strategy--especially within the private sector, sustainability and public policy. Through a combination of practical cases, readings and lectures, class sessions engage students in discussions aimed at developing sustainability assessment models. Additionally, students apply new strategy tools that incorporate principles of proactive environmental management and social responsibility designed to enhance the public good.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only PAF or SOS 545
SOS	546	Life Cycle Assessment for Civil Systems	Covers fundamental and advanced concepts of the life cycle assessment framework exploring products, services, activities and infrastructure systems. Examines key concepts for system boundary selection, functional unit selection, inventoring, impact assessment and interpretation stages with a focus on energy and environmental assessment. Advanced concepts include allocation of effects, problem formulation for assessing footprints versus decisions or policies, and assessment of infrastructure interdependencies and supply chains. Exposes tools and data sources and presents approaches for evaluation of sensitivity and uncertainty of results. Encourages students with broad sustainability interests to enroll and explore how life cycle assessment can aid their work by shifting their views from direct to cradle-to-grave effects.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CEE 506 or CEE 598 (Lifecycle Assessment) or SOS 546 or SOS 598 (Lifecycle Assessment)

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SOS	547	Urban Infrastructure Anatomy and Sustainable Development	Understanding how built environment infrastructure systems interact with ecosystem services is critical for policies and decisions directing urban sustainability. Brings together students from several disciplines to develop a semester-long research project focused on a particular urban sustainability problem in Phoenix. During the semester, students are given background on how infrastructure systems work and are interdependent, and explore tools and methods for urban sustainability assessment with peers from several disciplines. As a class, students evaluate a particular urban sustainability problem for Phoenix, interact with local policy and decision makers in developing solutions, and present their findings at the end of the semester to the ASU community.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree-or nondegree-seeking graduate. Credit for only CEE 507 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or PUP553 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or SOS547 or SOS598 (Urban Infrastruct Anatomy & Sustain Dev)
SOS	552	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Credit is allowed for only CEE 581 or SOS 552
SOS	553	Ecological Anthropology	Focuses on the theories and methods that environmental anthropology (EA) can bring to bear on human-environmental questions across a variety of social-ecological systems. Explores how environmental anthropologists approach these complex challenges, and considers the role of EA within larger interdisciplinary approaches for understanding development, adaptation, vulnerability, and change.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 530 or SOS 553
SOS	555	US Energy: Pathways to Sustainability	Organized around four mores of energy and environmental policy: energy supply, technology for efficiency, environmental sustainability and infrastructure. Also incorporates the wider context of energy and the environment in the society in which we live, taking into account our historic past and future potential life experience with energy availability and use. Through critical examination and analysis of these mores, students apply knowledge to the creation of a comprehensive energy and environmental policy plan that addresses past conditions, present states and future possibilities.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree-or nondegree-seeking graduate. Credit for only SOS 435,SOS 494 (Energy & Environ Policy) or SOS 494- US Energy: Pathways-to Sustain or SOS 555 or 594 (US Energy: Pathways to Sustainability) or SOS 594 (Energy & Environmntl Policy)
SOS	570	Fundamentals of CAS Science	Many phenomena of critical relevance to human society are dynamic systems that change over individual and evolutionary time scales, and are highly interactive, both within and between systems. That is, they are complex adaptive systems (CAS), and thus share isomorphic properties like near-decomposability, hierarchical organization, scale-free networks, self-organized criticality, and emergence. Fundamentals of CAS science explores the diverse, interdisciplinary applications of a complex adaptive systems across the social, behavioral, and life sciences.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ASM, BIO, or SOS 570
SOS	577	Interdisciplinary Writing Seminar	If you want your work to make a difference in the world, you need to be able to communicate your ideas to diverse audiences in a way that is interesting and accessible. Teaches students to write clearly, persuasively, and ethically to people in your discipline, in other disciplines, and outside academia. Approaches writing as a way to think critically and refine ideas, as well as to communicate them to others.	N	SEM	Y	GNA	School of Sustainability	School of Sustainability	2		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is only allowed for ESS 577 or SOS 577 or SOS 598 (Interdisciplinary Writing) or SOS 598 (Writing Seminar)
SOS	578	Writing Papers for Publication	Students produce a draft of a research paper for submission to a peer-reviewed journal. Analysis of exemplary published papers and narrative strategies, along with peer review, support the writing process.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	2		Prerequisite(s): SOS 577 or SOS 598 (Interdisciplinary Writing Seminar). Credit is allowed for only SOS 578 or SOS 598 (Writing Papers for Publication)
SOS	579	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		
SOS	581	Synthesis for Sustainability Research	Engages students in inter- and transdisciplinary problem solving after they have gained depth of training in content areas, integrative approaches and methods. Students link their own research to the broader field of sustainability. Research.	N	RSC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): SOS 510; 520; 525; 579; Co-requisite(s): SOS 596 or SOS 599
SOS	582	Project Management for Sustainability	Provides exposure to the tasks and challenges facing project managers, i.e., those people responsible for the vital function of managing complex projects in sustainability in today's environment. Successful project managers have the abilities and skills to simultaneously manage people, schedules, risks, and resources while delivering successful outcomes. This course is a prerequisite for the MSUS culminating experience.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): Graduate Sustainability major; SOS 510. Pre- or corequisite: SOS 511
SOS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		

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SOS	589	Community of Graduate Student Scholars	Provides the opportunity to develop new skills, to foster cohort building, to interact with other students and faculty, and to network and build support with the alumni network. Overseen by a faculty member but is primarily directed by the students. All MA or MS students take this course each semester. Although there is an overall structure as demonstrated in the course schedule, the specific content of the course varies each semester depending on the needs and interests of the students.	N	LEC	Y	YGB	School of Sustainability	School of Sustainability	1		Prerequisite(s): School of Sustainability graduate students
SOS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	School of Sustainability	School of Sustainability	1		
SOS	596	Scientific Paper	MA/MS students are required to devote six hours to conducting research and writing a scientific paper of publishable quality based on the research. The paper topic, the research methodology, and the written format must be approved by the supervisory committee. Students must decide if they will complete the paper on their own or as a group.	N	RSC	Y	GNA	School of Sustainability	School of Sustainability	1-6		Prerequisite(s): Sustainability MA or MS student; SOS 510; SOS 579
SOS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	656	Human Rights and Sustainability	Addresses the connections between human rights and environmental sustainability. Legal and scholarly approaches linking these areas present new perspectives for addressing some of the greatest challenges of our time, given the important resource dimensions of economic and social rights and the human dimensions of sustainability. Yet human rights demands and environmental concerns are not always in harmony. Explores these tensions and opportunities by examining three substantive areas: urban ecology and human rights, the human right to food, and the human rights implications of extractive industries such as oil and mining. Following an introduction to the key concepts of human rights and sustainability, explores the substantive areas through theoretical and empirical readings on each, grassroots accounts of struggles over environment-related human rights, and selections from literature and film that illustrate the environmental justice issues at stake.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only JUS 656 or SOS 656 or JUS 691 (Human Rights & Sustainability)
SOS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	School of Sustainability	School of Sustainability	1		
SOS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		
SPA		Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEL	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Students with credit for SPA 102, 111, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325 or 412 may not enroll in SPA 101
SPA	101	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Students with credit for SPA 102, 111, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325 or 412 may not enroll in SPA 101
SPA		Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Students with credit for SPA 102, 111, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325 or 412 may not enroll in SPA 101
SPA		Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Students with credit for SPA 111 or higher may not enroll in SPA 102
SPA	102	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Students with credit for SPA 111 or higher may not enroll in SPA 102
SPA		Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Students with credit for SPA 111 or higher may not enroll in SPA 102
SPA	110	Intensive Spanish I	First-semester intensive course for students who (1) have never taken Spanish language courses before, or (2) have studied Spanish for one year at the high school level, or (3) have authorization from the Spanish section. This six-hour course meets on Mondays, Tuesdays, Wednesdays and Thursdays for 75 minutes in the classroom. To achieve the maximum level of proficiency, the course focuses on the development of speaking and written skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		
SPA		Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study.	N	LEL	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4		Students may not enroll in SPA 111 if credit earned in SPA101, 102, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	111	Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Students may not enroll in SPA 111 if credit earned in SPA101, 102, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	118	Basic Spanish for Health Care Professionals	Introductory Spanish course that focuses on helping students develop basic oral Spanish skills that allows them to interact with patients in the health care settings. Health care-related vocabulary, simple medical scenarios and basic grammar form the majority of the course curriculum. Students are responsible for completing virtual oral dialogues with a partner each week.	N	LEL	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Students may not enroll in SPA 118 if credit earned in SPA 194 (Basic Spanish for Health Care Professionals), SPA 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisite: Maximum 25 hours
SPA		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
SPA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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SPA		Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	G	Students may not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	201	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA		Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4	G	Students may not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA		Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	College of Letters & Sciences	College of Letters and Sciences	4	G	May not enroll in SPA 202 if received credit in SPA 204, 311-316, 325 or 412
SPA	202	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	May not enroll in SPA 202 if received credit in SPA 204, 311-316, 325 or 412
SPA		Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4	G	May not enroll in SPA 202 if received credit in SPA 204, 311-316, 325 or 412
SPA	203	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 201. Composition, literature, conversation, grammar fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in SPA 203 if they have received credit in SPA201, 202, 204, 311, 312,313,314,315,316,325, 412
SPA	204	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 202. Composition, literature, conversation, grammar fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	May not enroll in SPA 204 if credit received in SPA 202, 311,312,313,314,315,316, 325, or 412
SPA	210	Intensive Spanish II	Second-semester intensive course for students who have authorization from the Spanish section. This six-hour course that meets on Mondays, Tuesdays, Wednesdays and Thursdays for 75 minutes in the classroom. To achieve the maximum level of proficiency, the course is focused on the development of speaking and written skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		Prerequisite(s): SPA 110 with C or better
SPA	218	Intermediate Spanish for Health Care Providers	Intermediate Spanish course that focuses on helping students develop oral Spanish skills that allow them to interact with patients in the health care settings. Health care-related vocabulary, the impact of culture on health care, medical scenarios and intermediate grammar form the majority of the course curriculum. Students are responsible for completing virtual oral dialogues with a partner each week.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Students may not enroll in SPA 218 if credit earned in SPA 294 (Intermediate Spanish for Health Care Providers), SPA 311, 312, 313, 314, 315, 316, 325, or 412
SPA		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
SPA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
SPA	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SPA		Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	G	Pre-requisites: SPA 202 with C or better; May not enroll in SPA 313 if credit received in SPA 314, 315, 316, 325 or 412
SPA	313	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: SPA 202 with C or better; May not enroll in SPA 313 if credit received in SPA 314, 315, 316, 325 or 412

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SPA		Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors. SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G	Pre-requisites: SPA 202 with C or better; May not enroll in SPA 313 if credit received in SPA 314, 315, 316, 325 or 412
SPA		Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	G	Prerequisite(s): SPA 313 or 315 with C or better; Students may not enroll in SPA 314 if they have received a C or better in SPA 412
SPA	314	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): SPA 313 or 315 with C or better; Students may not enroll in SPA 314 if they have received a C or better in SPA 412
SPA		Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G	Prerequisite(s): SPA 313 or 315 with C or better; Students may not enroll in SPA 314 if they have received a C or better in SPA 412
SPA	315	Spanish Conversation and Composition for Bilinguals	Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		May not enroll in SPA 315 if credit received in SPA 313, 314, 316, or 412
SPA		Spanish Conversation and Composition for Bilinguals	Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		May not enroll in SPA 315 if credit received in SPA 313, 314, 316, or 412
SPA	316	Spanish Conversation and Composition for Bilinguals	See SPA 315.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: SPA 315; Students who have credit for SPA 314 or SPA 412 may not enroll in SPA 316
SPA		Spanish Conversation and Composition for Bilinguals	See SPA 315.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: SPA 315; Students who have credit for SPA 314 or SPA 412 may not enroll in SPA 316
SPA	317	Spanish for the Professions	Advanced-level course that serves as an introduction to the Spanish for the Professions minor or certificate. Develops oral and written skills that prepares students to use their Spanish in their careers and/or professional fields of interest. Also covers several cultural points that facilitate effective interaction with Spanish speakers in the professional world and global community.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: SPA 314 or 316
SPA	318	Advanced Spanish for Health Care Professionals	Advanced Spanish course that focuses on helping students develop oral Spanish skills that allow them to interact with patients in the health care settings. Health care-related vocabulary, the impact of culture on health care, medical scenarios and advanced grammatical structures form the majority of the course curriculum. Students are responsible for completing virtual oral dialogues with a partner each week.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Students may not enroll in SPA 318 if credit earned in SPA 394 (Advanced Spanish for Health Care Professionals) or SPA 412
SPA	319	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisite: SPA 314 or 316
SPA	325	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: SPA 313, 314, 315, 316, 412 or 413 with C or better
SPA		Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: SPA 313, 314, 315, 316, 412 or 413 with C or better
SPA		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
SPA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
SPA	400	Introduction to Spanish Linguistics	Introduces the discipline and methods of linguistics through the study of Spanish data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre/co-requisite: SPA 412 or 413; Students who have credit for SPA 400 may not enroll in SPA 539

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SPA	401	Spanish Oral Communication for the Professions	Students practice their Spanish oral communication skills in the context of serving U.S. Latino clients in the community (e.g., schools, government agencies, social work settings, medical settings) or reporting on issues of interest to the Hispanic community. Students gain practice in speaking varieties of Spanish that would assist their communication with monolingual Spanish-speaking Latino clients in formal (professional) and informal contexts in the public sector. Students gain experience in giving public talks, reporting on cultural events and issues in the Hispanic community, participating in simulated workplace exercises requiring the ability to carry out various language functions appropriately in different contexts.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Spanish Oral Comm. for Profes) may not enroll in SPA 401
SPA	402	Written Communication for the Professions	Students hone their Spanish literacy (reading and writing) skills in the context of serving U.S. Latino clients in the community (e.g., schools, government agencies, social work settings, medical settings) or reporting on issues of interest to the Hispanic community. Students read and understand documents in Spanish that they would come across in the process of assisting monolingual Spanish-speakers in the public sector or doing research on the Hispanic community (e.g., birth certificates, academic transcripts, medical reports, criminology documents, newspaper or magazine articles). Students gain practice in creating written documents in Spanish that would assist their communication with Latino clients in formal (professional) and informal contexts or that would allow them to report intelligently on issues of interest to the Hispanic community.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Spanish Written Communication) may not enroll in SPA 402
SPA	403	Spanish Grammar and Stylistics for the Professions	Students raise their level of awareness of appropriate grammatical, lexical and stylistic forms to use in their oral and written communication with U.S. Latino clients in formal (professional) and informal contexts in the community (e.g., schools, government agencies, social work settings, medical settings) or for reporting on issues of interest to the Hispanic community. Students enhance their analytical skills by analyzing and comparing Spanish oral and written discourse for genre-appropriate features (stylistics), grammaticality, mechanics, coherence and for a logical flow of ideas in public documents and oral discourses meant for a U.S. Latino audience.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Span Gram & Stylistics for Pro) may not enroll in SPA 403
SPA	404	Spanish in U. S. Professional Communities	Students investigate linguistic issues that impact the U.S. Latino community's interaction with professionals (e.g., interaction with service providers in schools, government agencies, social work settings, medical settings; language planning at state and local levels; Spanish spoken in different regions in the U.S.; Spanish language assessment of public sector employees; creation of Spanish for Professional Purposes courses). Students also learn to report on issues of interest to the Hispanic community.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	C	Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Spanish in the Community) may not enroll in SPA 404
SPA	405	Latino Cultural Perspectives for the Professions	Requires students to investigate the Latino cultural perspectives that underlie and affect communication in the professional world. Students come to understand the historical context that has affected the lives of Latino community in the U.S. and take a critical look at values traditionally associated with Latino culture (e.g., the importance of family ties, fatalism, honor, respecting elders, machismo or marianismo), which provide background information for professionals in the public sector who need to serve the needs of the Hispanic community.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	C	Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Latino/a Cultural Perspect Pro) may not enroll in SPA 405
SPA	406	Introduction to Spanish/English Medical Interpretation	Provides an introduction to interpretation theory and practice with a specific focus on interpretation for medical fields. Constitutes an academic introduction to the field and does not certify students to be medical interpreters. Students who enroll in this course should have an advanced level of conversational Spanish.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): SPA 314, SPA 316, or SPA 394 (Introduction to Spanish for the Professions); Credit is allowed for only SPA 406 or SPA 494 (Interpretation for Medical/Law Enforcement Personnel) or SPA 494 (Intro to Spanish/English Medical & Legal Interp)
SPA	412	Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: SPA 314, 316 or 413 with C or better
SPA		Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G	Pre-requisites: SPA 314, 316 or 413 with C or better
SPA	413	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: SPA 314, 316 or 412 with C or better

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SPA	413	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G	Pre-requisites: SPA 314, 316 or 412 with C or better
SPA	414	Spanish for Sustainability and Environmental Studies	Provides language skills to engage in meaningful communication and official transactions in sustainability and environmental studies with an intermediate to high level of Spanish speaking, reading and writing competence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 314 or SPA 316 with C or better; Credit is allowed for only SPA 394 (Spanish for Sustainability) or SPA 414
SPA	417	Spanish Phonetics and Phonology	Introduces the theory and practice of Spanish phonetics and phonology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: SPA 412 or 413 with C or better
SPA	418	Spanish Syntax	Introduces the syntax of the Spanish language by analyzing different word categories, their groupings in phrases, and the structure of both simple and complex sentences. Advanced course that requires some previous knowledge of basic structures of the language and their internal structure.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 412 or SPA 413 with C or better
SPA	419	Language Variations of Spanish	Spanish dialectology and variationist/quantitative sociolinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre- or corequisite(s): SPA 417 and 418 with C or better if completed; Credit is allowed for only SPA 419 or SPA 494 (Language Variations of Spanish)
SPA	420	Applied Spanish Linguistics	Applies linguistic principles to the teaching of Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L	Pre-requisites: SLC 201 or SPA 400 with C or better; SPA 413
SPA	421	Spanish in the Southwest	Discussion and linguistic analysis of Southwest Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or SB) & C	Pre-requisites: SPA 412 with C or better
SPA	422	Spanish Lexicology and Lexicography	Explores the linguistic theory and methodology related to the defining of meanings of words in Spanish dictionaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: SPA 412
SPA	425	Spanish Literature	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): SPA 325
SPA		Spanish Literature	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): SPA 325
SPA	426	Spanish Literature	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): SPA 325
SPA		Spanish Literature	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): SPA 325
SPA	427	Spanish American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): SPA 325
SPA		Spanish American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): SPA 325
SPA	428	Spanish American Literature	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Prerequisite(s): SPA 325
SPA		Spanish American Literature	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): SPA 325
SPA	429	Mexican Literature	Selected readings from pre-Columbian writers/poets (e.g., Macuixochitl) through the novel of the Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Prerequisite(s): SPA 325
SPA		Mexican Literature	Selected readings from pre-Columbian writers/poets (e.g., Macuixochitl) through the novel of the Revolution to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): SPA 325
SPA	431	Prose of Golden Age	Focuses on a number of books of canonical prose of 16th- and 17th-century Spain. Spanish Golden Age prose is considered one of the most important bodies of literature both in the Spanish-speaking world and in early modern studies. An astonishing number of works of fiction and nonfiction were written in the period, inspiring artists and intellectuals all over Europe. All readings are representative of genres that, in addition to enjoying popularity in Spain, were extensively translated into other languages throughout Europe. Through a wide readership, Carcel de Amor, el Lazanillo, La Celestina, El Abencerraje, the Novelas ejemplares, and Desenganos amorosos, influenced the system of literary genres. They established a model for successful genres such as the sentimental novel, the picaresque and the Moorish novel, and promoted the reacceptance of the Italian novella in Spain.	N	LEC	N	OP6	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): SPA 325
SPA	434	Drama of the Golden Age	Dramatic works of Lope de Vega, Calderon de la Barca, and their contemporaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325
SPA		Drama of the Golden Age	Dramatic works of Lope de Vega, Calderon de la Barca, and their contemporaries.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): SPA 325
SPA	435	Cervantes-Don Quijote	Don Quijote and the development of the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & H	Prerequisite(s): SPA 325
SPA	454	19th-Century Spanish American Narrative	Principal works in the novel, short story, narrative fiction, and narrative (Gauchesque) poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325
SPA	456	20th-Century Spanish American Fiction	Major works and movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325

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SPA	460	20th-Century Spanish American Fiction	Major works and movements.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): SPA 325
SPA	464	Mexican American Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(HU or SB) & C	Prerequisite(s): SPA 325
SPA		Mexican American Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C	Prerequisite(s): SPA 325
SPA	471	Civilization of the Spanish Southwest	Political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & C	Pre-requisites: SPA 314 or 316
SPA	472	Spanish American Civilization	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Pre-requisites: SPA 314 or 316
SPA		Spanish American Civilization	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H & G	Pre-requisites: SPA 314 or 316
SPA	473	Spanish Civilization	Political, intellectual, social, economic, and artistic development of the Spanish nation from its origin to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(HU or SB) & G	Pre-requisites: SPA 314 or 316
SPA		Spanish Civilization	Political, intellectual, social, economic, and artistic development of the Spanish nation from its origin to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & G	Pre-requisites: SPA 314 or 316
SPA	474	Mexican Culture	Examines diverse aspects of Mexican culture since the 1910 Revolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Prerequisite(s): SPA 325
SPA		Mexican Culture	Examines diverse aspects of Mexican culture since the 1910 Revolution.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): SPA 325
SPA	481	Dictatorships and Dirty Wars: Latin American Cinema from Resistance to Reconciliation	Examines aspects of Latin American politics and culture of and through the optic of social unrest. Examines films focusing on the period(s) of recent Latin American history in which there have been social upheavals, dictatorships and state repression, "dirty wars"; understood as clandestine wars waged on the citizenry by the government, social movements from below.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s) with C or better: LAS 205, 206, 330. Credit is allowed for only LAS 481 or SPA 481 or ENG 494 (Dictatorships/Dirty Wars:Lat Am Cinema) or SPA 494 (Dictatorships/Dirty Wars:Lat Am Cinema)
SPA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		
SPA		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
SPA	485	Mexican American Short Story	Critical study of contemporary short stories by Mexican American authors, with emphasis on their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L & C	Prerequisite(s): SPA 325
SPA	486	Mexican American Novel	Social and literary contexts of representative novelists, emphasizing their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325
SPA	487	Mexican American Drama	Representative dramatic works, with emphasis on the history and development of this genre from its regional origins to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325
SPA		Mexican American Drama	Representative dramatic works, with emphasis on the history and development of this genre from its regional origins to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): SPA 325
SPA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6		Prerequisite(s): Barrett Honors student
SPA		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SPA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6	L	Prerequisite(s): Barrett Honors student
SPA		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
SPA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
SPA		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
SPA	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SPA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SPA		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		

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SPA		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		
SPA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SPA		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
SPA	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	520	Preparing for Professional Careers	Professional training of graduate students who pursue an academic job. Guides these students through their career and provides the tools they need to navigate their new and demanding academic life, not only as current students but also as future faculty. Among others topics, covers the following: research, publishing, surfing the Internet and the library for articles and books, bibliographical matters, conferences and presentations, professional ethics, choosing a dissertation director, writing and publishing the dissertation, first job search, differences among institutions, cover letters, CVs, tenure issues, and balance of personal and professional life. Explores all the practicalities of the academic profession to direct students to the right track from the first day of graduate school.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPA	534	Spanish Drama of the Golden Age	Analyzes principal works and figures of Golden Age Drama (Cervantes, Lope de Vega, Calderón, Tirso de Molina, Moreto, Ruiz de Alarcón) with current theater theory and comedia performance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	536	Generation of 1898	Works of Unamuno, Baroja, Azorín, and their contemporaries, studied against the ideological background of the turn of century in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	537	Women in Spanish Literature	Major female writers and their texts from Spanish literature (María de Zayas, Ángela Grassi, Concepción Arenal, Emilia Pardo Bazán, Carmen Laforet, Paloma Pedrero) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	538	Mexican American Women Writers	Major female figures and works in Spanish or translation by contemporary writers (Zamora, Castillo, Corpi, Anzaldúa, L.D. Cervantes, D. Chávez, Duarte, Cisneros) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	539	General Spanish Linguistics	Introductory course to the study of the linguistic structure of the Spanish language and its various sub fields, such as phonetics, phonology, syntax, morphology and the history of the language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: graduate student; students who have credit for SPA 400, may not enroll in SPA 539
SPA	540	History of the Spanish Language	Analyzes and discusses the development of Spanish from Vulgar Latin to the present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	541	Spanish Language in America	Discusses and analyzes various regional and social varieties of Spanish in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	542	Studies in the Spanish of the Southwest	Examines bilingualism and the social and regional dialects of Spanish in the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	543	Structure of Spanish	Analyzes and discusses data on selected topics in Spanish morphology, semantics, and syntax.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	544	Spanish Phonology	Surveys problems of Spanish phonology within the context of recent phonological theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	545	Concepts of Literary Criticism	Aims and methods of modern literary scholarship. Discusses major theories of literary analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	547	Spanish Pragmatics	Studies the theoretical aspects of pragmatics and their incorporation to the analysis of talk in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: SPA 400 or SPA 539
SPA	552	Studies in Mexican American Film	Major figures and films by contemporary filmmakers (Sylvia Morales, Cheech Marin, Gregory Nava, Lourdes Portillo, Roberto Rodríguez, Evelina Fernández) interpreted via critical film theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		

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SPA	553	Latin American Feminist Film	Examines Latin American feminist films in the context of contemporary Latin American culture; films viewed analyzed as casework examples.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only SPA 553 or 583 (Feminist Filmmaking)
SPA	555	Spanish American Modernism	Principal works and figures of literary modernism, 1880-1920, with emphasis on international literary context of the movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	557	Contemporary Spanish American Poetry	Major works and problems in contemporary poetry and poetics, with emphasis on Paz, Parra, Cardenal, and new poetry since 1960.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	560	Medieval Spanish Literature	Major figures and works of the Middle Ages in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	564	19th-Century Spanish Prose Fiction	Principal figures and works of realism in the 19th-century novel, with emphasis on Galdós.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	565	20th-Century Spanish Drama	Principal figures and works of Spanish dramatic literature from the Generation of 1898 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	566	Generation of 1927	Major poets of the Generation of 1927, with emphasis on works of Lorca, Guillen, Salinas, and Aleixandre.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	567	Contemporary Spanish Novel	Major works of post-Civil War Spanish fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	568	Cervantes	Extensive analysis of the prose and theater of Cervantes as a key figure of the Spanish Golden Age.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	569	Studies in Spanish Film	Examines major figures and films in Spanish cinema. Critically interprets films through current film theory, history, and critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	572	Spanish American Drama	Major contributions of Spanish American drama, with emphasis on contemporary dramatists.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	573	Spanish American Essay	Major works of the essay, within the framework of intellectual history and literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	574	Spanish American Vanguard Poetry	Examines poetic developments, 1920-1940, with emphasis on Huidobro, Vallejo, Neruda, and the international context of their works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	575	Contemporary Spanish American Novel	Principal novels of the <i>Nueva Narrativa Hispanoamericana</i> within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	576	Contemporary Spanish American Short Story	Principal short stories of the <i>Nueva Narrativa Hispanoamericana</i> within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	577	Regional Spanish American Literature	Figures and works of major national (Peru, Argentina, Chile, and Mexico) and regional (Caribbean) literatures. Topics offered on a rotating basis. May be repeated when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	582	Studies in Latin American Film	Examines the role of film in contemporary Latin American culture; films viewed and analyzed as casebook examples.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	585	Mexican American Short Story	Major collections and figures in Spanish or translation by contemporary Chicano short story writers (Újica, Suárez, Ulibarri, Soto, Aguilar, P. Martín, Alarcón, R. Sánchez, N. Cantú, J. Sagel, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	586	Mexican American Novel	Major novels and figures in Spanish or translation by contemporary Chicano novelists (Hinojosa-S., Méndez, Morales, Cota-Cárdenas, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	587	Mexican American Drama	Major works of Mexican American drama, with emphasis on contemporary playwrights (Valdez, Portillo-T., Morton, Moraga, Gómez-Peña) interpreted via current critical drama theory or other methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	588	Mexican American Essay	Major figures and essays in Spanish or translation by contemporary essayists (Rendón, Anzaldúa, Villanueva, Rodríguez, Mora, Stavans) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	589	Mexican American Poetry	Major figures and works in Spanish or translation by contemporary poets (Gonzales, Alurista, L.D. Cervantes, B. Zamora, R. Sánchez, Baca, G. Valdés, J. Montoya, G. Velázquez, T. Villanueva, J.F. Herrera, A. Villanueva) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA		Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
SPA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
SPA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
SPA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
SPA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	601	Latin American Feminist Cultural Production	Latin American feminist theory and studies as viewed through cultural production such as literature, film, photography, art.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
SPA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	791	Seminar		Y	LEC	Y	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		

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SPA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
SPA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
SPE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPE	222	Orientation to Education of Exceptional Children	Legal aspects of special education; legislation, education and community services to meet the needs of students with special education needs. Examines the nature and characteristics of students with developmental disabilities, autism, communication disorders, emotional or behavioral disorders, learning disabilities, sensory impairments, orthopedic impairments, other health impairments, and children with gifts and talents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB & C	Credit is allowed for only SPE 222 or SPE 311
SPE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPE	310	Professional Practices and Foundations in Special Education	Foundational themes and issues in special education. Discusses each disability within the mild cross-categorical area in relation to foundational themes and issues relating to professional practices in special education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program
SPE	316	Introduction to Physical Disabilities and Other Health Impairments	Introduces various physical disabilities and other health impairments with an emphasis on service delivery in schools and communities.	N	LEC	N	OPT	Institute & Grad Sch Education	Division of Curriculum and Instruction	3		
SPE	317	Special Education for Culturally and Linguistically Diverse Children and Youth	General issues and practical applications regarding the education of culturally and linguistically diverse students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Admission to Professional Teacher Preparation Program
SPE	320	Assessment and Evaluation of Children with Special Needs	Norm-referenced, criterion-referenced, and formative evaluation to determine eligibility, plan individualized programs, and monitor progress of students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Prerequisite(s): admission to Professional Teacher Preparation Program
SPE	321	Classroom and SPE Assessment	Norm-referenced and criterion-referenced assessment and evaluation of student learning to determine eligibility, plan individualized programs and monitor progress of students with disabilities. Includes academic, language disorders and transition assessments. Emphasizes integration and adaptation of curriculum, instruction and evaluation for all students.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
SPE	322	Behavior Management and Consultation	Analysis, intervention, and consultation strategies for effective management of classroom and social behavior for students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program
SPE	323	Behavioral Strategies for All Students	Focuses on behavior analysis and classroom management intervention and consultation strategies in general education and special education settings.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
SPE	325	Language Literacy 1 in Elementary Schools	Theoretical knowledge and pedagogical skills for implementing a high-quality reading program. Course objectives and topics are aligned to standards for reading and research from the International Reading Association (IRA), Arizona College and Career Ready Standards (ACCRS), Interstate Teacher Assessment and Support Consortium (InTASC) standards, and the National Reading Panel Report (2000). Focuses on emergent literacy, phonemic awareness, phonics, fluency, vocabulary and comprehension. Presents strategies and assessments to support students of a variety of ability levels and cultural backgrounds with a specific focus on the struggling readers and English language learners. For education majors only.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program; Credit is allowed for only RDG 322 or SPE 325
SPE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): minimum 45 hours
SPE	396	Clinical Experience I	Applies course content while working with students with disabilities in inclusive settings. Emphasizes classroom and behavior management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Prerequisite(s): admission to Professional Teacher Preparation Program

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SPE	397	Field Experience II	Develops knowledge and skills for effective classroom management, establishing a positive classroom environment, and effective lesson delivery. Continues use of the TAP instructional rubric, the college professionalism rubric, and strategies for co-teaching. Provides opportunities for students to engage as a teacher and learner in a pre-K-12 classroom setting. Emphasizes focused observation; co-planning with a placement teacher; and co-teaching lessons to a whole group, small group, and individual student.	N	PRA	Y	YGB	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Pre-requisite: EED 396
SPE	410	Mathematics in Elementary Schools	Methods of teaching mathematics to all students at the K-8 level, instructional planning and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 412 or MTE 412 or SPE 410
SPE	411	Parent Involvement and Regulatory Issues	Emphasizes parent and school relations through effective communication and state and federal regulations impacting services for the handicapped.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing OR enrolled in Early Childhood minor
SPE	416	Quality Practices in the Collaborative Classroom	Develops skills, strategies, and a knowledge base for preservice teachers in building collaborative partnerships with special educators.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): Admission to Professional Teacher Preparation Program
SPE	417	Inclusion Practices at the Secondary Level	Applies curricular practice and how preservice teachers work with students with special needs in middle and secondary levels.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
SPE	422	Methods and Technology for High-Incidence Disabilities	Assessment and instructional methods for students with high-incidence disabilities including mild intellectual disabilities, learning disabilities, emotional disabilities, and physical/health impairments.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): senior standing
SPE	423	Methods of Cross-Categorical Special Education I	Focuses on implementing research-based strategies in reading, language arts, math and language for students with mild/moderate special needs. Includes using data from all stakeholders in the development of the IEP, making instructional decisions using assessment data, monitoring student progress and developing lesson plans.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program
SPE	424	Methods of Cross-Categorical Special Education II	Emphasizing pedagogy, content knowledge and evidence-based strategies, focuses on assessment, curriculum development and instruction across content areas (e.g., reading, language, writing, mathematics, science, social studies) for students with low-incidence disabilities or intensive support needs (e.g., significant intellectual disabilities, multiple disabilities, orthopedic impairments [OI], and other health impairments [OHI]). Particular focus includes access to the general curriculum, inclusion, instructional and assistive technologies, communication and language development and disorders, and transition for this population.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program
SPE	430	Professional Practices, Foundations, and Collaborative Teaching in Special Education	Foundations of special education; effective collaboration and communication skills and co-teaching models that promote inclusive practices.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program
SPE	431	Collaborative Teaching Methods for General Education Classroom Environments	Methods and issues in cooperative teaching for special education students in general education classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program
SPE	478	Student Teaching in Special Education	Supervised student teaching in the delivery of special education services. Synthesized experience in curriculum, instruction, classroom management and collaboration.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	8		Prerequisite(s): admission to Professional Teacher Preparation Program
SPE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): admission to Professional Teacher Preparation Program
SPE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
SPE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPE	495	Student Teaching in Early Childhood Special Education	Supervised teaching in the early childhood special education classroom setting. Synthesizes experience in curriculum, instruction, classroom organization, and guidance of young children.	N	PRA	N	YGB	MaryLouFulton Teachers College	Division of Teacher Preparation	6		Prerequisite(s): senior standing

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SPE	496	Field Experience III	Applies course content in a special education setting. Emphasizes observation pupil management, planning and delivering instruction, and assessment.	N	PRA	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): admission to Professional Teacher Preparation Program
SPE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-7		Prerequisite(s): admission to Professional Teacher Preparation Program
SPE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): admission to Professional Teacher Preparation Program
SPE	501	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
SPE	512	Individuals with Intellectual Disability	Etiology, diagnosis and management of individuals with intellectual disability. Current trends in prevention, programming and teacher preparation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking). Credit is allowed for only SPE 312 or SPE 512
SPE	520	Reading and Communication Strategies for Individuals with Autism	Understands and applies reading and communication strategies with individuals with autism and related disorders. Includes historical, diagnostic, and identification issues.	N	REC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	521	Foundations of Autism Spectrum Disorders	Increases the understanding of characteristics of individuals with autism.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	524	Effective Classroom Behavior Management	Organization and delivery of instruction including formative evaluation and techniques of academic behavior management for exceptional children. Requires practicum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	531	Methods of Applied Behavior Analysis for Exceptional Populations	Methods based on the principles and concepts of applied behavior analysis. Students learn to operationally define problem behavior, conduct functional behavior assessment and generate recommendations for the development of behavior analytic interventions. Students gain knowledge and understanding of specific scientifically valid behavior change procedures. Discusses and applies their corresponding literature base.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	534	Assessment and Evaluation for Children with Special Needs	Discusses assessment practices related to student eligibility and program planning. Emphasizes authentic, individualized, interdisciplinary practices.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	535	Curricula, Methods, Technology, and Adaptations in Special Education	Develops strategies for effective adaptation of special education and general education curriculum through use of technology. Includes methods for addressing special needs in reading, math and language disorders.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	536	Characteristics of Children with Behavioral Disorders	Variables contributing to behavior patterns of behaviorally disordered children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	538	Language and Literacy I	Focuses on the theoretical knowledge and pedagogical skills necessary to equip future teachers to plan and implement high-quality reading and writing instruction in a classroom setting. Course objectives and topics are aligned to standards for reading and research from the International Reading Association (IRA), Arizona College and Career Ready Standards (ACCRS), Interstate Teacher Assessment and Support Consortium (InTASC) standards, and the National Reading Panel Report (2000). Focuses on reading readiness, language development, phonemic awareness, phonics, fluency, vocabulary and comprehension. Presents strategies and assessments to support struggling readers as well as a variety of ability levels and cultural and linguistic backgrounds to include English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Teachers College graduate student; Credit is allowed for only RDG 531 or SPE 538
SPE	540	Family-Centered Practices	Provides definitions, models, activities and exploration in the various roles in collaboration, consultation and teamwork in the field of special education. In-depth exploration of connections with families, professionals and support personnel across disciplines and agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SPE	541	Consultation Frameworks and Issues	Models, activities, and roles of educational consultants working with families, professionals, and support personnel across disciplines and agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	548	Cross-Categorical Foundations: LD, ED, MR, & PI/OHI	Foundations course compares cognitive, motor, and affective developmental and educational issues across LD, ED, MR, and PI/OHI.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	555	Inclusive Practices for Diverse Learners	Adapting instruction and assessment to meet the needs of all learners in inclusive settings. Includes the creation of plans to address challenging classroom behaviors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	559	Methods for Teaching Diverse Learners	Apprentice teachers select a specific population, based on placement (mild to moderate or moderate to severe), for individualized investigation. Utilizes practical strategies for curriculum development and IEP implementation. Gains a deeper understanding of their practice by analyzing and reflecting for the purposes of monitoring and adjusting instruction.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: MEd Special Education (Teacher Certification) major
SPE	561	Characteristics/Diagnosis of Learning Disabilities	Theories related to learning disabilities, including identification and characteristics.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	565	Behavior Change Systems	Focuses on applied behavior analysis-based behavior change systems and procedures. Students learn to identify, implement, manage and supervise interventions based on fundamental elements of behavior change. Addresses behavior change considerations, including ethical use of behavior change systems and ongoing data collection for fidelity and progress monitoring.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): SPE 531; SPE 566; degree- or nondegree-seeking graduate
SPE	566	Applied Behavior Analysis in Inclusive Settings	Examines definitions, characteristics, assumptions and basic principles of applied behavior analysis. Describes and applies fundamental elements of behavior change, including reinforcement schedules, modeling, shaping, chaining and other behavior change procedures. Activities center on the design and delivery of social skill interventions with individuals with special needs in inclusive settings.	N	REC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	567	Ethics of Applied Behavior Analysis	Addresses knowledge and application of the Behavior Analyst Certification Board Guidelines for Responsible Conduct for Behavior Analysts. Examines and resolves ethical dilemmas which may be encountered by behavior analysts. Addresses roles and responsibilities of members of a multidisciplinary treatment team comprised of educators, behavior analysts, parents, learners and other professionals. Students conduct risk-benefit analysis of evidence-based treatment approaches and develop declarations of professional practices and procedures for behavior analysts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	568	Behavior Assessment	Focuses on critical aspects of applied behavior analysis, experimental design and the identification and implementation of effective assessment methodologies. Addresses client-centered responsibilities of the behavior analyst including problem identification, measurement, assessment, data collection and analysis. Students gain experience conducting functional behavior assessment and stimulus preference assessment to inform intervention design. Emphasizes measuring and ensuring treatment integrity.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): SPE 531; SPE 566; degree- or nondegree-seeking graduate. Credit is allowed for only SPE 568 or SPE 598 (Behavioral Assessment)
SPE	569	Research Methods in Applied Behavior Analysis	Students gain expertise and practical experience in the interpretation and application of experimental design to inform decision making. Focuses on evaluation of the effectiveness of interventions through use of behavior analytic technologies in clinical and applied settings. Students learn to interpret and describe behavior in behavior analytic terms and explain concepts and approaches in everyday language. Students research and evaluate skill assessment approaches through strategic review of the behavior analytic literature. Course addresses single-subject methodologies to inform design and delivery of effective instruction and clinical interventions.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); SPE 531; SPE 566; Credit is allowed for only SPE 569 or SPE 598 (Research Methods Applied Behavioral Analysis)
SPE	572	Testing and Measurement in Gifted Education: Methods	Covers current and historical aspects of testing and measurement in the field of gifted education. Topics include: the history and purposes of IQ testing, definitions of various types of tests, purposes of testing for gifted education services, ability tests and achievement measures, how tests are used in Arizona in programs for gifted learners.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only SPE 572 or 591 (Testing&Measurement Gifted Ed)
SPE	573	Differentiating Instruction for Gifted Learners: Teaching Methods	Explores the design of differentiated curriculum and instruction for gifted learners in elementary and secondary education	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only SPE 573 or 591 (Diff Curriculum Gifted Child)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	575	Survey, Issues, and Foundations for the Exceptional Student	Explores the foundations of special education through characteristics and eligibility of exceptional students. Analyzes historical, political, social, and legal factors impacting special education services for exceptional students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	576	Clinical Experience	Applies course content in special education classrooms: observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): Valid copy of AZ DPS fingerprint card on file at ASU; MED in Special Education major
SPE	578	Student Teaching in Special Education	Supervised teaching for graduate students. Synthesized experience in classroom management, curriculum, instruction and assessment.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	579	Apprentice Teaching in Special Education	Apprentice teaching in special education setting. Synthesized experience in classroom management, curriculum, instruction and assessment. Must be taken four times for a total of 12 semester hours.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	585	Creativity: Foundations of Research and Development in Gifted Education	Explores nature of creativity in terms of philosophical underpinnings, empirical evidence, human development, self-actualization, and the ecology surrounding the creative event.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	586	Advising the Gifted Learner: Social and Emotional Needs	Focuses on educational planning and guidance, social and emotional development, and family problem solving regarding needs of gifted children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	587	Special Populations in Gifted Education	In-depth analysis of major controversies in educating the gifted, including nature/nurture, the role of mental tests, and sex differences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	588	The Gifted Learner: Foundations of Identification, Education and Development	Gifted children's characteristics, identification, needs, school and home environments, definitions, and misunderstandings. Research by Pressey, Stanley, Terman, and others.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	589	Teaching the Gifted Learner: Models, Methods, and Programs	Methods in teaching elementary and secondary school gifted children, including individualized and computer-assisted instruction, team teaching.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Special Education Graduate student
SPE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: postbaccalaureate undergraduate or graduate student (degree seeking or nondegree seeking)
SPE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Special Education Graduate student
SPE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Special Education Graduate student
SPE	597	Capstone	Applies theoretical and practical information presented through coursework in a real-world setting.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Special Education Graduate student
SPE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Special Education Graduate student
SPE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Special Education Graduate student
SPE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Special Education Doctoral student
SPE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Special Education Doctoral student
SPF	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
SPF	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPF	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPF	301	Culture and Schooling	For the professional teacher preparation program. Overview of the cultural, social, and political milieu in which formal schooling takes place in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Pre-requisites: ENG 102, 105 or 108 with C or better
SPF	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPF	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
SPF	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPF	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
SPF	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPF	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPF	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-7		
SPF	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
SPF	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPF	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPF	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SSH	100	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; comparative health systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Credit is allowed for only ASB or SSH 100
SSH	194	Covers topics of immediate or special interest to a faculty member and students.	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	201	Epidemics and Outbreaks	Covers epidemiologic methods for the control of conditions such as infectious and chronic diseases, mental disorders, community and environmental health hazards, and unintentional injuries. Other topics include quantitative aspects of epidemiology, including data sources, measures of morbidity and mortality, evaluation of association and causality, and study design. A background in basic biology and a basic understanding of the principles of human diseases helpful in succeeding in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Credit is allowed for only ASM 201, SSH 201 or 294 (Introduction to Epidemiology)

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SSH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	300	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & C	Pre-requisite: ENG 101, 105, 107, or ENG 111; Credit is allowed for only ASB or SSH 300
SSH	301	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	Pre-requisites: SSH 100, ASB 100, HST 100, or HST 101 with C or better; Credit is allowed for only ASB, HST or SSH 301.
SSH	314	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only MIC 314 or SSH 314
SSH	355	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	HU or SB	Credit is allowed for only ASB or SSH 355
SSH	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with C or better; ASB 100 (or 102), SOC 101, SOS 110, or SSH 100 with C or better; Credit is allowed for only ASB, SOC, SOS or SSH 370
SSH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	400	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 410 or SSH 400 or WST 410 or JHR 598 (Poverty, Social Justice, & Global Health) or MAS 598 (Poverty, Social Justice, & Global Health)
SSH	401	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4		Pre-requisites: ASB 100 (or ASM 104); SSH 100; Credit is allowed for only ASM or SSH 401
SSH	402	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites: Minimum 45 credit hours; SSH 100 or ASB 100; Credit is allowed for only ASB 452 or SSH 402
SSH	403	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	(L or SB) & G	Pre-requisites: SSH 100 or ASB 100; Credit is allowed for only ASB 443 or SSH 403
SSH	404	Medical Anthropology: Culture and Health groups.	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & C	Credit is allowed for only ASB 462 or SSH 404
SSH	405	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Global Health major; Minimum 87 hours; SSH 100 or ASB 100 and SSH 403 or ASB 443 with C or better; Credit is allowed for only ASB 455 or SSH 405

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SSH	414	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): ASB 100, 102, 222, 223, AML 100, ASM 104 or SSH 100 with C or better; minimum 45 hours; Credit is allowed for only ASM 414 or SOS 414 or SSH 414
SSH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
SSH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
SSH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Prerequisite(s): Barrett Honors student
SSH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
SSH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
SSH	502	Professional Seminar in Global Health	Focuses on skills, ideas, and practice related to the Global Health MA and PhD at Arizona State University. Seminar. Prerequisite: Must be a graduate student in the Global Health degree program.	N	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Pre-requisite: Must be a graduate student in the Global Health degree program
SSH	503	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	510	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	512	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Pre-requisites: ASB 511 or SSH 511; Graduate (degree or nondegree) student
SSH	514	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		
SSH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
SSH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SSH	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		
SST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	220	Introduction to Social Transformation	Introduces key concepts in the study of social change, social innovation, and social transformation. Studies examples of social movements, social activism, community organizing, and coalition building and how such efforts have transformed society and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only APA 220 or JUS 220 or SST 220
SST	235	Disability, Justice and Advocacy	Overarching history of the disability rights movement and how it is similar to and different from other civil and rights movements. Examines how policies and activism are interconnected within this movement, in addition to looking at other human categories related to disabilities such as gender, sexuality, race and socioeconomic status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only COM 235, JUS 235, SST 235, WST 235 or SST 294 (Disability Justice and Advocacy)
SST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
SST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	428	Critical Race Theory	In-depth analysis of the ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only AFR, APA, JUS or SST 428
SST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
SST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7		
SST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
SST	501	Foundations of Social Transformation	Introduces the foundations of social transformation and social change. Looks at social transformation through an interdisciplinary lens and explores the connections between the objective and subjective factors that enable or inhibit social transformation in different contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SST	510	Social and Cultural Pedagogy: Theoretical and Practical Issues	Engages students with the academic literature and scholarly debates on social and cultural pedagogy, reviews practical lessons from the field, and provides an overview of different areas of intervention and professional practice. Considers the historical, local, and international dimensions of social and cultural pedagogy, illustrating them with selected case studies. Encourages the study of social and cultural pedagogy using a critical and interdisciplinary perspective.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
SST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		
SST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
STC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	505	Theories of Social Technology	Examines key theories of social technologies from social and behavioral perspectives. Examines the political dimensions of technologies; technology's role in constructing social structures; and how mobile technologies encourage, structure and delimit social interaction.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	510	Applied Social Technology	Provides participants with a foundation for understanding how technological systems, large and small, relate to organizational and social change. Case-based approach focuses on how to assess and recommend changes to a variety of types of organizations and communities.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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STC	520	Advocacy and Social Technology	Examines the potential for social technology in advocating for social change.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	525	Politics and Social Technology	Concerns the political implications of social technology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	530	Technology and Collaboration	Examines the analysis, design, implementation and implications of systems intended to support collaboration.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	535	Networked Social Technology	Surveys human and social behaviors from the perspective of networks, with an emphasis on social technology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	537	Community Informatics	Examines the ways in which communities form, manage themselves, and improve through the use of networked technologies.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	540	Critical/Cultural Approaches to Social Technology	Examines critical and cultural studies approaches to social technologies. Explains a critical/cultural studies approach to social issues and the cultural and social dimensions of technologies. Explores how social technologies both shape and are shaped by power and how cultural understandings of technology contribute to the shaping of everyday life.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	545	Games as Social Technology	Explores how games as networked and collaborative technologies facilitate community formation, interaction and development.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
STM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
STM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
STM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
STM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
STM	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
STP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Prerequisite: Freshman status; Maximum 25 earned hours
STP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		

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STP	220	Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		
STP		Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		
STP		Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	CS	Prerequisite(s): MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better or completed the Mathematics Placement Test with a score of 50% or higher
STP	226	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Prerequisite(s): MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better or completed the Mathematics Placement Test with a score of 50% or higher
STP		Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s): MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better or completed the Mathematics Placement Test with a score of 50% or higher
STP	231	Statistics for Life Science	Concepts and methods of statistics; display and summary of data, interval estimation, hypothesis testing, correlation, regression. Applications to biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Prerequisite(s): MAT 117 or 142 with C or better or completed the Mathematics Placement Test with a score of 50% or higher
STP	280	Probability and Statistics for Researchers	Methods for data summary, numerical summary measures, probability concepts, discrete and continuous probability distributions, expected values, statistics, sampling distributions, point estimation, and introduction to statistical inference for a single parameter.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 251, 265, or 270
STP	281	Statistical Analysis for Researchers	Confidence intervals, hypothesis testing, one- and two-factor analysis of variance, simple linear regression, multiple regression, chi-square tests, and introduction to statistical quality control.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 266 (or 271); STP 280
STP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
STP	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
STP		Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
STP	310	Design and Analysis of Experiments	Factorial and nested designs, randomized designs, randomized complete block designs, Latin squares, fixed and random effects, expected mean squares, multiple comparisons, and analysis of covariance.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: MAT 266 (or MAT 271); STP 281
STP	311	Regression and Time Series Analyses	Simple linear regression, multiple linear regression, indicator variables, influence diagnostics, stepwise selection, logistic regression, introduction to time series models, autocorrelation, and some ARIMA models.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 266 (or 271); STP 281
STP	315	Statistical Computing	Statistical techniques using a professional statistical programming language (e.g., SAS, R). Emphasizes correct methods, writing and presentation of results	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: STP 281; STP 310 (or STP 311)
STP	326	Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only ACT 415 or STP 326
STP		Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only ACT 415 or STP 326

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
STP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
STP		Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	CS	Prerequisite(s): MAT 210 (or MAT 251, 265 or 270) with C or better
STP	420	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Prerequisite(s): MAT 210 (or MAT 251, 265 or 270) with C or better
STP		Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s): MAT 210 (or MAT 251, 265 or 270) with C or better
STP		Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisites: MAT 272 or 267 with C or better
STP	421	Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisites: MAT 272 or 267 with C or better
STP	425	Stochastic Processes	Markov chains, stationary distributions, pure jump processes, 2-D order processes, and other topics in stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisites: MAT 342 (or 343); STP 421 with C or better.
STP		Mathematical Statistics	Limiting distributions, interval estimation, point estimation, sufficient statistics, and tests of hypotheses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: ACT 415 or STP 421; STP 281 or 420
STP	427	Mathematical Statistics	Limiting distributions, interval estimation, point estimation, sufficient statistics, and tests of hypotheses.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: ACT 415 or STP 421; STP 281 or 420
STP	429	Experimental Statistics	Statistical inference for controlled experimentation. Multiple regression, correlation, analysis of variance, multiple comparisons, and nonparametric procedures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: STP 420 with C or better
STP	450	Nonparametric Statistics	Rank- and order-based tests and estimation procedures for 1 sample and 2 or more related or independent samples, measures of correlation, and introduction to resampling methods, including bootstrap and randomization tests.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: STP 310
STP	451	Quality Improvement	In-depth concentration on statistical process control for attribute and variables data, process capability analysis and measurement systems analysis.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): STP 281
STP	452	Multivariate Statistics	Statistical analysis of multivariate data including methods for preparation and presentation of multivariate data, MANOVA, discriminant analysis, principal component analysis, factor analysis, cluster analysis, random forests and classification trees.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: STP 311; MAT 343
STP		Categorical Data Analysis	Statistical methods for the analysis of categorical (discrete, count) data. Topics include exact and approximate tests and confidence intervals for one- and two-binomial proportions, contingency tables, generalized linear models, logistic regression and loglinear models.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): STP 310, 311; MAT 272
STP	460	Categorical Data Analysis	Statistical methods for the analysis of categorical (discrete, count) data. Topics include exact and approximate tests and confidence intervals for one- and two-binomial proportions, contingency tables, generalized linear models, logistic regression and loglinear models.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): STP 310, 311; MAT 272
STP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
STP	485	Statistics Capstone	Students work in a team and partner with a client to solve a real-world problem requiring statistical analyses. Emphasizes problem development, integration of technical skills, teamwork and communication among the students and with the client. Requires regular meetings and presentations with team, client and faculty advisor.	N	LEL	N	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: Senior standing; STP 310, 311, 6 additional hours of upper-division STP excluding STP 492, 493, 498, 499
STP		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
STP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
STP		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Prerequisite(s): Barrett Honors student
STP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Prerequisite(s): Barrett Honors student

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STP		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
STP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
STP	495	Undergraduate Research	Supervised research in statistical or probability studies.	N	RSC	Y	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): minimum 45 hours. Credit is allowed for only MAT 494 (UG Research in Math) or STP 495
STP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
STP		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7		
STP		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		
STP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
STP		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
STP	501	Theory of Statistics I: Distribution Theory 3	Introduces rigorous probability theory, including distributions and expectations of random variables, transformations of random variables and order statistics, generating functions and basic limit concepts. Supplements the understanding of applied statistics with a firm grasp of the probabilistic underpinnings of theoretical statistics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking); Credit is allowed for only STP 501 or STP 598, Theory of Statistics I
STP	502	Theory of Statistics II: Inference	Presents techniques and basic results of mathematical statistics at a rigorous level. Develops the structure of statistical inference procedures, including the principles of data reduction, theory of estimation, confidence sets, hypothesis testing, and prediction for common parametric models.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): STP 501 with B- or better; Credit is allowed for only STP 502 or STP 598, Theory of Statistics II
STP	526	Theory of Statistical Linear Models	Multinomial distribution, distribution of quadratic forms, full and nonfull rank models, generalized inverses, unbalanced data, variance components, and the large sample theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	527	Statistical Large Sample Theory	Types of convergence, central limit theorems, theory of maximum likelihood estimation, efficiency, robustness, influence functions, theory of bootstrap methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	530	Applied Regression Analysis	Method of least squares, simple and multiple linear regression, polynomial regression, analysis of residuals, dummy variables, and model building.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	531	Applied Analysis of Variance	Factorial designs, balanced and unbalanced data, fixed and random effects, randomized blocks, Latin squares, analysis of covariance, and multiple comparisons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	532	Applied Nonparametric Statistics	One-sample test, tests of 2 or more related or independent samples, measures of correlation, and tests of trend and dependence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	533	Applied Multivariate Analysis	Discriminant analysis, principal components, factor analysis, cluster analysis, and canonical correlation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	535	Applied Sampling Methodology	Simple random, stratified, cluster sampling; variance estimation in complex surveys; nonparametric superpopulation approaches; nonresponse models; computational methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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STP	581	Statistical Consulting Clinic	Provides practical experience in the application of statistical theory and methods to problems from a wide variety of disciplines, exposing students to a diverse range of data types and clients. Develops nontechnical consulting skills, for example explaining statistical concepts to non-statisticians, writing reports, and making oral presentations.	N	PRA	Y	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with B or better: STP 530, 531; Credit is allowed for only STP 581 or 598 (Statistical Consulting)
STP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP		Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
STP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
STP		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STP	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		
STP	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STS	101	Introduction to Science, Technology, and Society	Overview of the basic issues, definitions, and literature involved in the study of science, technology, and human systems. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
STS	110	Global Technology and Development	Introduces awareness and understanding of how technology, processes of globalization, and society influence one another. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	Credit is allowed for only STS 110 or 317
STS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
STS	202	Science, Technology, and Diversity	Examines the concept and meaning of the "technology gap" and its implications of the global impact of scientific and technological advances.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		

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STS	235	Technology and Urban Systems	Focuses on the relationship between technology and urbanization, especially on how technological innovation and change impact all aspects of urban systems, including urban social and economic development, sustainability, governance, environmental, and community change.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		
STS	250	Science, Society, and Global Warming	Addresses global warming and its implications for society, including evidence and components of warming, measurement of warming and global change, and the social and political aspects of change.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Students who have credit for STS 294 (Society and Global Warming) may not enroll in STS 250
STS	260	Politics of Science and Technology	Explores the relationship among government, politics, science, and technology, especially the interdependence of public policy and science and technological pursuits.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
STS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
STS	301	Research in Science and Technology Studies	Examines methods of inquiry in the social sciences with emphasis on STS, including both qualitative and quantitative approaches, philosophy of science, and scientific revolutions.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
STS	302	Philosophy of Science and Technology	Focuses on the nature and implications of science as a body of knowledge, set of practices, specific methods, and how these differ from other human enterprises and activities.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Prerequisite(s): minimum 45 hours
STS	303	History of Science and Technology	Examines the history of technology within social, cultural, political, and economic contexts and the critical relationship between society and technology.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	H	Prerequisite(s): minimum 45 hours
STS	304	Science, Technology, and Society	Overview of the major issues associated with the study of science, technology, and human systems, including theoretical approaches. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
STS	305	Science and Social Theory	Explores the different theoretical traditions that inform social interpretations of science, including awareness of the historical traditions that define these interpretations.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
STS	306	Social Effects of Science and Technology	Examines the effects of science and technology on social life and the contexts in which those effects manifest.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
STS	317	Science, Technology, and Global Engagement	Overview of international issues associated with both the development and deployment of technologies, including matters concerning international relations. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	Credit is allowed for only STS 110 or 317
STS	318	Science, Technology, and Government	Examines the foundations of the interrelationship of science, technology, and democratic governance, with emphasis on the American political system.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
STS	325	Science, Technology, and Public Policy	Examines the interaction of science and technology with American domestic policy.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
STS	328	Science, Technology, and Culture	Overview of technology and international cultures, including cultural definitions of science and technology. May intersect issues of culture and religion.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
STS	329	Cultivating Technology in Newly Industrializing Countries	Covers specific issues relating to building technological capability in newly industrializing countries.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	
STS	330	Information Technology and Globalization	Examines the intersection of advances in information technology and globalization and the impact of these processes on human systems.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	
STS	331	Ethical Issues in Science and Technology	Examines the interconnections between values and science and technology by examining such topics as computers and privacy, medical malpractice, reproductive technologies, patents, and hazardous facilities.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
STS	332	Global Issues in Science and Technology	Examines contemporary international debates in science and technology and how those issues impact globalization.	N	SEM	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & G	
STS	364	Science, Technology, and National Security	Examines how changing technologies impact all aspects of national security policy in the United States.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	Prerequisite(s): minimum 45 hours
STS	385	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		
STS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
STS	401	Statistics in Science and Technology Studies	Introduces statistical techniques for the social sciences, including the role and rationale of statistics, descriptive measures, associational measures, and inferential statistics.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	CS	Pre-requisites: MA general studies requirement satisfied
STS	425	Law, Values, Science, and Technology	Examines the interconnections of law, values, and science and technology with a view to establishing their reciprocal relationships.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB	
STS	480	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		
STS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		
STS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
STS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
STS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		
SWG	501	Micro Human Behavior in the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre/Co-requisite: masters or doctoral in Social Work major
SWG	502	Macro Human Behavior in the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspective in a macro context.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite: MSW or DSW student
SWG	510	Foundation Practice I	Basic social work methods with emphasis on the problem-solving process as it pertains to individuals, families, and small groups.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Must be Master or Doctor Social Work student.
SWG	511	Foundation Practice II	Theory and methods of direct practice with groups and selected practice models.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Master or Doctor Social Work student; SWG 510 with C or better
SWG	514	Bridge Seminar I	Professional social work practice at the master's level.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major. Corequisite(s): SWG 516
SWG	515	Bridge Seminar II	Generalist practice problem-solving skills with diverse individuals, groups, families and systems at the master's level.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Adm and Community Practice) major. Corequisite(s): SWG 516. Pre- or corequisite(s): SWG 514. Credit is allowed for only SWG 515 or SWG 598 (Bridge Seminar II)
SWG	516	Social Work Skills Seminar	Focuses on the acquisition of practice skills for advanced interaction with individuals, families, groups and communities.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major. Corequisite(s): SWG 514, 515
SWG	519	Research Methods in Social Work	Conceptual foundations and methods of nomothetic research in social work. Includes problem identification, hypothesis formulation, measurement, sampling, and experimental design.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Master or Doctor Social Work student.
SWG	526	Mental Health for Sentencing	Helps justice system professionals understand mental health diagnoses, the DSM-5, and how specific DSM-5 categories are associated with specific types of crime.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	527	Mitigation of Death and Life Cases	Issues and skills for practicing as a mitigation specialist in cases of death and life without parole.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	528	Presentence Investigations	Examines the functions and objectives of presentence investigation reports and prepares students to perform different types of investigations for limited and general jurisdiction courts for local, state and federal courts.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	529	Alternatives Penal Sanctions	Prepares individuals to practice as sentencing advocates on defense teams, as consultants to problem-solving courts, or as private presentence investigators hired by the defense to advocate for alternatives to incarceration.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	531	Social Policy and Services	Conceptual, analytical, and historical perspectives on the social welfare institution. Emphasizes poverty and inequality. Principles of policy analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Masters or Doctoral of Social Work student
SWG	533	Diversity and Oppression in a Social Work Context	Explores issues of social inequality related to disability, ethnicity, gender, race, and sexual orientation. Emphasizes populations of the Southwest.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Masters or Doctoral Social Work student.

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SWG	541	Field Practicum I	With SWG 542, two consecutive semesters (480 hours) of supervised social work practice in an approved placement.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Master or Doctor Social Work student; Pre/Co-requisite: SWG 510 with C or better if completed
SWG	542	Field Practicum II	See SWG 541	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Master or Doctor of Social Work major; SWG 510 and 541 with C or better Pre- or corequisite(s): SWG 511 with C or better if completed
SWG	554	Substance Abuse	Psychological and sociocultural determinants of substance abuse. Overview of social policies and treatment approaches.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	556	Immigrants and Refugees	Provides basic conceptual approach to understanding immigrant and refugee issues and how these factors influence social work practice with immigrant and refugee populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only SWU 456, 556 or 591 (Immigrants and Refugees)
SWG	557	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Credit is allowed for only SWG 557 or SWU 457
SWG	558	Introduction to Behavioral Health Services	Explores mental health. Develops a basic understanding of mental health and co-occurring conditions. Gains an understanding of public- and employer-financed contemporary behavioral health services with a focus on Arizona models.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only SWU 458, 591 (Introduction to Behavioral Health Services) or 558
SWG	559	Spirituality and the Helping Professions	Provides a framework for spiritually and culturally competent practice with diverse populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only SWU 459, 591 (Spirituality & Helping Profession), 598 (Spirituality and the Helping Professions) or 559
SWG	560	Legal Issues in Social Work	How the law relates to social work practice, administration and policy.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWU 460 or SWG 560 or SWG 591 (Legal Issues in Social Work)
SWG	561	Lesbian, Gay Bisexual, Transgender, and Queer Issues	Historical, socio-cultural introduction to lesbian, gay, bisexual and transgender communities and their resilience to challenges and barriers.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only SWU 461, 498 (Lesbian and Gay Issues) or 561
SWG	562	Global Social Welfare	Analyzes social work's response to international social issues and human need from the perspectives of globalization, development and human rights.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 562 or SWG 591 (International Social Work) or SWU 462 or SWU 498 (International Social Work)
SWG	570	Aging: A Biopsychosocialspiritual Perspective	Biopsychosocialspiritual perspectives on aging, including intergenerational matters, international trends, policies, programs, services and issues unique to populations of the Southwest.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 570 or SWG 591 (Aging Soc Wk Perspective)

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SWG	571	Mental Health Aspects of Aging	Older adult mental health assessment, treatment, planning, policy and service delivery from a cross-cultural, interprofessional, intergenerational, international and continuum-of-care perspective.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 571 or SWG 591 (Mental Health & Aging)
SWG	572	Interprofessional Approaches to Healthy Aging	In-depth examination of healthy aging, interprofessional practice and interprofessional practice approaches designed to foster healthy aging for older adults.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	577	Traumatic Death: Theory, Counseling and Practice	Explores the various experiences of grief, trauma and bereavement through a phenomenological perspective and using creativity, art, literature, poetry, indigenous wisdom and evidence-based research. Practice techniques and psychosocial care to the traumatically bereaved. Examines the micro, mezzo and macro aspects of death and grief in contemporary society. Theory, philosophy and direct practice with individuals, families and groups experiencing traumatic death and grief.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only SWG 577, 591 (Trauma & Death Counseling) or 598 (Trauma&Death: Counseling, Theory, &Practice Issues)
SWG	579	Critical Incident Stress Management	Theory and research behind coping strategies and mechanisms commonly experienced by Emergency Management Teams (EMT) and DHS. Explores topics of stress, trauma, vicarious trauma and mass trauma as experienced by the individual and large populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Masters or Doctoral Social Work student
SWG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	585	Macro Social Work Practice	Examines communities and human service organizations as social systems. Introduces strategies for initiating planned change.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Masters or Doctoral Social Work student
SWG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Social Work	1		Pre-requisite: Master or Doctor Social Work student.
SWG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4		Pre-requisites: Master Social Work student
SWG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		
SWG	600	Foundation for Advanced Practice	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisites: Master Social Work student.
SWG	603	Social Work Practice in Health/Behavioral Health Settings	Advanced social work practice in health and behavioral health settings, focusing on enhancement of client functioning and quality of life.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	604	Advanced Social Work Practice in Health	Addresses the crucial social work practice issues of health and healthcare in the new millennium.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 603 with C- or better

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SWG	606	Assessment of Mental Disorders	Theories and concepts of mental health and illness. Attention to classification systems and nomenclature used in assessing mental disorders.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 502 with C or better or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	608	Ecological Approach to Practice with Children, Youth, and Families	Provides a theoretical and practical orientation to working with children, youth, and families from an ecological strengths perspective.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 542 with Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	609	Advanced Social Work Practice with Child Welfare Families	Focuses on substance abuse, family violence, and serious mental illness in practice with families and children in the child welfare system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 608 with C or better
SWG	610	Advanced Social Work Practice III	Assists students in advanced theoretical understanding and practice with families, groups, and communities.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: MSW or MSW Adv Standing student; Co-Requirement: SWG 693 and 645
SWG	611	Social Work with Families	Theory, concepts, and skills for working with diverse family populations. Emphasizes a systems and integrative approach.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	612	Social Work with Groups	Practices applications of knowledge and skill to social work with groups.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	613	Advanced Social Work Practice in Behavioral Health	Treatment of prevalent disorders encountered by social workers, selected from the following: anxiety disorders, personality disorders, depression, and schizophrenia.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 603 with C or better
SWG	614	Advanced Generalist Social Work Practice IV	Integrates a multilevel approach to practice with critical choice theories and interventions. Focus on groups, organizations, and communities and their impact on social work practice. Completion of the foundation courses or advance standing in the MSW program, or instructor approval, is required for all 600- level SWG courses.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Master or Doctor Social Work student; SWG611 with a grade of C or better
SWG	617	Advanced Social Work Practice with Children and Adolescents	Theory, research, and intervention that focus on children and adolescents.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 608 with C or better
SWG	618	Advanced Practice in Domestic Violence	Theory, research, intervention, and prevention strategies relevant to child maltreatment, partner abuse, and elder abuse.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	619	Practice-Oriented Research	Accelerated course in application of scholarly and scientific principles to field practice, problem formulation, interventional procedures, and impact assessment.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 519 with C or better or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major

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SWG	621	Integrative Seminar	Explores the fit between theoretical frameworks and practice with clients. Requires presentation of empirical studies with clients.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s) with C or better: SWG 603 or SWG 608, 619. Pre- or corequisite(s): SWG 604, 606, 609, 613, 617 with C or better if completed; SWG 641 with Y if completed
SWG	623	Program Evaluation	Research design techniques and data collection in human service agencies and communities. Analysis for program evaluation and needs assessment.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 519 with C or better, SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major. Corequisite(s): SWG 685
SWG	626	Crisis Intervention and Short-Term Treatment	Comprehensive analysis of crisis and solution-focused brief intervention strategies and approaches used in advanced social work practice.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	630	Brief Social Work Intervention	Concepts and techniques of solution-focused, systematic, and strategic approaches to therapy in the context of brief therapy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major
SWG	632	Policy Practice	Develops advanced knowledge and skills in social welfare policy analysis, policy formulation, and advocacy and intervention for policy change.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 531 with C or better or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	633	Child Welfare Services	Examines, using ecological and system theories, services that supplement, support, and substitute for parental care of children.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	641	Advanced Practicum: Direct Practice I	With SWG 642, two consecutive semesters (480 hours) of supervised social work practice in an approved placement related to the student's career goal.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) major. Pre- or corequisite(s): SWG 603 (or SWG 608) with C or better if completed)
SWG	642	Advanced Practicum: Direct Practice II	With SWG 641, two consecutive semesters (480 hours) of supervised social work practice in an approved placement related to the student's career goal.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 603 or 608 with C or better; SWG 641 with Y; Pre or Co-requisite: SWG 604, 609, 613 or 617 (with C or better if completed)
SWG	643	Advanced Practicum: Planning, Social Work Administration, and Community Practice I	With SWG 644, two consecutive semesters (480 hours) in social work practice in an approved placement related to the student's career goal.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Planning, Administration and Community Practice) major. Pre- or corequisite(s): SWG 623, 685 with C or better if completed

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SWG	644	Advanced Practicum: Planning, Social Work Administration, and Community Practice II	See SWG 643.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Masters or Doctoral Social Work student; SWG 623 with C or better; Prerequisite(s): SWG 623, 685 with C or better, SWG 643 with grade of Y. Pre- or corequisite(s): SWG 681, 682 with C or better if completed
SWG	645	The Professional Experience III	240 hours of supervised social work practice. Provides opportunities to apply classroom learning in the field setting. Y/E grade only.	N	PRA	N	YGB	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: MSW student; SWG 542 with Y grade OR MSW Advanced Standing student; Co-requisite: SWG 610 and SWG 693
SWG	646	The Professional Experience IV	240 hours of supervised social work practice. Provides opportunities to apply classroom learning in the field setting. Y/E grade only.	N	PRA	N	YGB	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Standard MSW or MSW Adv Standing student; SWG 645 with Y grade; Co-requisite: SWG 614; SWG 693
SWG	654	Introduction to Sexual Abuse	Develops general knowledge and skills for working with persons who have been impacted by sexual abuse.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	655	Quality of Life	Addresses key elements of a healthy life style contributing to wellness and disease through experiential learning and evidenced-based research.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major or Assessment of Integrative Health Modalities certificate
SWG	656	Treating the Whole Person	Addresses treating the "whole person's" physical and behavioral health through interviewing, intervention, and treatment within the context of an interdisciplinary model.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major or Assessment of Integrative Health Modalities (certificate)
SWG	657	Ancient Healing Traditions	Historical development and research of the ancient healing teachings of traditional Chinese medicine, Ayurvedic medicine, homeopathic, naturopathic, and indigenous medicine and how they are used in today's health systems.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	660	Clinical Supervision in Social Work.	Examines and practices the knowledge, skills, and values of becoming a social work supervisor in human service agencies.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		
SWG	661	Cognitive Behavior Therapy Across the Lifespan	Knowledge and skills to understand and apply cognitive-behavioral approaches to treatment (CBT), including diagnostic information and empirically supported interventions targeted to individuals, families and groups across the lifespan.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y OR MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major; Credit is allowed for only SWG 591 (Cognitive Behavior Therapy Across Lifespan) or 661

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SWG	662	Social Work Practice With Adolescents	Advanced elective focuses on working with adolescents in a variety of intervention settings (e.g., mental health agencies and schools).	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y OR MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major; Credit is allowed for only SWG 591 (Social Work Practice With Adolescents) or 662
SWG	663	Clinical Trauma Treatment	Explores the assessment and treatment of PTSD in people throughout the lifespan.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y OR MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major; Credit is allowed for only SWG 591 (Clinical Trauma Treatment) or 663
SWG	664	Evidence-Based Approaches to Treatment of Substance Use Disorders	Knowledge and skills to understand substance abuse disorders, including diagnostic information and evidence-based interventions targeted to individuals, families and groups.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y OR MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major; Credit is allowed for only SWG 591 (Treatment Substance Use Disorders) or 664
SWG	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	IND	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisites: Masters or Doctoral Social Work student; SWG 681 or SWG 682 with C or better; Pre/ Co-requisite: SWG 623 with C or better if completed
SWG	681	Social Work Administration	Administrative skill building and theory application within human service nonprofit social work settings.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 623 with C or better, SWG 685 with C or better; Co-requisite: SWG 682
SWG	682	Community Participation Strategies	Reviews strategies to involve citizens and the consumers of social and human services in community decision-making systems. Participation is viewed as a means to facilitate the empowerment of oppressed peoples.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 623 with C or better; SWG 685 with C or better; Co-requisite: SWG 681
SWG	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	685	Program Planning in Social Services	Social services planning process; includes needs assessment, goals and objectives, program design, budgeting, management information systems, and program evaluation.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y; SWG 585 with C or better OR MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major; Corequisite(s): SWG 623
SWG	686	Developing Grants and Fund Raising	Identifies potential funding sources, technical and interpersonal/political aspects of proposal development and fund raising.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SWG	687	Public Policy and Advocacy	Covers public policy at the federal level, including administrative, legislative and judicial policy. Students understand how to develop congressional policy and methods to engage in advocacy at the federal level to impact macro social work practice.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 687 or SWG 591 (Advocacy and Public Policy)
SWG	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisites: MSW or MSW Advanced Standing student
SWG	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		
SWG	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		
SWG	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Col of Pub Serv & Comm Solutns	School of Social Work	1		Pre-requisites: MSW, MSW Adv Standing, or PhD student
SWG	700	Research Methods	Course on research methods in a specific discipline.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	718	Qualitative Research Methods	Provides comprehensive qualitative research methods training for doctoral students to complement their quantitative survey research methods knowledge.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Doctoral student; Credit is allowed for only SWG 718 or 791 (Qualitative Research Methods)
SWG	719	Quantitative Research Methods	Provides the tools for independently designing and conducting methodologically sound, ethical, quantitative research that advances social work and social welfare knowledge.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Doctoral student
SWG	720	Philosophy of Science Issues in Social Work	Critical examination of social science, social work practice, and policy in terms of philosophical assumptions and varying frames of reference.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Master or Doctor Social Work student.
SWG	721	Statistics	Logic and application of statistical methods for analyzing social welfare-based data pertaining to social work. Includes ethical issues concerning the appropriate application, interpretation and use of social research, as well as the potential limitations and biases of applications that fail to adequately consider issues of population diversity. Students learn to independently design a research project from start to finish employing statistical analysis of primary data.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: doctoral major
SWG	722	Pedagogy in Social Work	Prepares doctoral students to teach for the profession of social work. Provides an opportunity for students to develop or enhance their philosophy of teaching, their attitudes toward learning, teaching and students, and the knowledge and skills necessary to teach effectively. Explores teaching to the diverse students present in social work programs, the challenges that teaching presents and the responsibilities that come with social work education.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Doctoral student; Credit is allowed for only SWG 722 or SWG 791 (Pedagogy in Social Work)
SWG	723	Proposal Development	Provides an opportunity for doctoral students to formulate a dissertation proposal or a research plan for a three-paper option. Provides a forum for presenting ideas, receiving feedback and defending one's proposal.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Doctoral student; Credit is allowed for only SWG 723 or 791 (Proposal Development)
SWG	731	Welfare State	Examines the evolution of the welfare state as a problem of political economy.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Doctoral student; Credit is allowed for only SWG 731 or 791 (Welfare State)
SWG	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.

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SWG	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWG	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Col of Pub Serv & Comm Solutns	School of Social Work	1		
SWG	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Col of Pub Serv & Comm Solutns	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWU	171	Introduction to Social Work	Descriptive and historical perspectives of social problems, social justice issues and society's response to them.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB & H	
SWU	180	Introduction to Lesbian, Gay, Bisexual and Transgender (LGBT) Studies	A historical, socio-cultural introduction to lesbian, gay, bisexual, transgender, transsexual, and intersexed communities and their resilience to challenges and barriers.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB & C	Credit is allowed for only SWU 180 or 194 (Introduction to LGBT Studies)
SWU	181	Economics: A Social Issues Perspective	Introduces economic principles through the lens of contemporary social issues for social work and related fields.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Credit is allowed for only SWU 181 or 194 (Economic and Social Issues in Perspective)
SWU	182	Social Services Perspective of Government	Explores levels of government and policy practice in advancing social and economic justice and effective social services within the Southwest.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB	Credit is allowed for only SWU 182 or 194 (AZ/National Government: Social Work Perspective)
SWU	183	Introductory Ethics: A Social Issues Perspectives	Introductory exploration of ethics from a historical and multicultural perspective viewed through the lens of contemporary social issues.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Credit is allowed for only SWU 183 or 194 (Intro Ethics: Social Issues Perspective)
SWU	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4		
SWU	250	Stress Management Tools I	Helps students develop an understanding and behaviors to create a healthy balance in their lives by studying the bio/psycho/social aspects of wellness.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB	
SWU	291	Social Service Delivery Systems	Federal, state, private not-for-profit and for-profit social service delivery system's purpose, structure, and professional roles. Includes 40 volunteer hours.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: PSY 100, PSY 101, SOC 101 or SOC 301; Pre/Co-requisites: SWU 171 with a C or better if completed
SWU	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4	SB	
SWU	295	Foundations of Social Work Practice	Theoretical foundation and skill base for effective culturally competent communication and interviewing with individuals, families, small groups, and larger systems.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB & C	Pre-requisites: PSY 101, SOC 101 or SOC 301; Pre/Co-requisites: SWU171 or 271 and SWU 291 with a C or better if completed
SWU	302	Human Biology for Social Workers	Overview of human anatomy and physiology, and the reciprocal relationship between physical and social environments. May be repeated for credit.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		
SWU	303	Micro Human Behavior and the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	L or SB	Prerequisite(s): PSY 101; SOC 101 or 301; Pre- or corequisite(s): SWU 171, 291, 295 with C or better if completed, OR Community Advocacy and Social Policy major
SWU	306	Ethics in Social Services	Focuses on following the NASW Code of Ethics in making ethical decisions in social service settings.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; PHI 101 or 105 or 306 or SWU 183; SWU 291; lower-division (L) course

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SWU	310	Social Work Practice I	Introduces social work methods, emphasizing the following skills: relationship development, cross-cultural interviewing, communication patterns, and case-recording.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWU 171 or SWU 271 with C or better; SWU 291 with C or better; SWU 295 with C or better; Pre or Co-requisite: SWU 303 (with C or better if completed)
SWU	311	Integrative Social Work Practice	Social work practice skills emphasizing cross-cultural interviewing, assessment and professional recording.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWU 171; SWU 291; SWU 295; Corequisite(s): SWU 312; Pre- or corequisite(s): SWU 306
SWU	312	Integrative Social Work Practice Skills	Applies social work content from SWU 311 focusing on practice skills and professional behavior.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWU 171; SWU 291; SWU 295; Corequisite(s): SWU 311; Pre- or corequisite(s): SWU 306
SWU	320	Research Methods in Social Work	Applies scientific principles to field practice, problem formulation, intervention procedures, and impact assessment in social work.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre- or corequisite(s): SWU 310 with C or better if completed, or Community Advocacy and Social Policy major
SWU	321	Statistics for Social Workers	Teaches social work students how to use and interpret descriptive and inferential statistics in social work practice. May be repeated for credit.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	CS	Pre-requisites: MAT 142 or an MA general studies course
SWU	332	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Community Advocacy and Social Policy major; POS 110 or POS 310 or SWU 182
SWU	340	Macro Human Behavior and the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspectives in a macro context	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB	Prerequisite(s): SWU 303 with C or better; Pre- or corequisite(s): SWU 310 with C or better if completed OR Community Advocacy and Social Policy major
SWU	349	Stress Management Tools II	Developing mindful strategies toward managing stress, developing instinct awareness; healthy decisions in nutrition, relationship with self, others and creating a personal carbon footprint.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Credit is allowed for only SWU 349 or SWU 294 (Stress Management Tools II)
SWU	350	Whole Person Health Across the Lifespan	Development of mindful strategies toward managing stress and identification, implementation and integration of skills and knowledge for well-being across the lifespan.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
SWU	351	Sustainable Living, Mindful Eating	Addresses issues related to foods we eat, how we eat, and impacts of choices on health, the environment, locally and globally.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
SWU	374	Diversity and Oppression in a Social Work Context	Issues of social inequality related to race, ethnicity, gender, sexual orientation, and disability. Emphasizes populations of the Southwest.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Pre- or corequisite(s): SWU 310 with C or better if completed, or Community Advocacy and Social Policy major
SWU	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4		Pre-requisite: Master of Social Work student
SWU	410	Social Work Practice II	Knowledge and skills in social work practice with individuals and families.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWU 310 with C or better; PHI 101 (or PHI 105, 306 or SWU 183); BSW Social Work major. Corequisite(s): SWU 412, 413
SWU	411	Social Work Practice III	Knowledge and skills in social work practice with groups, communities, and organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWU 410, 412, or 413 with C or better or Co-requisites: Social Work student with SWU 414; SWU 415
SWU	412	Field Instruction I	16 hours a week of supervised practice in an approved placement. "Y/E" grade only.	N	PRA	N	YGB	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Social Work student; SWU 310 with C or better; Co-requisite: SWU 410; SWU 413

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SWU	413	Field Instruction Seminar	Field-focused seminar, including practice evaluation.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Social Work student; SWU 310 with C or better; Co-requisite: SWU 410; SWU 412
SWU	414	Field Instruction II	16 hours a week of supervised practice in an approved placement. Y/E grade only.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Social Work student; SWU 410, SWU 412 or SWU 413 with C or better; Co-requisites: SWU 411 and SWU 415
SWU	415	Integrative Field Seminar	Field-focused seminar to help students integrate practice and theory.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Social Work student; SWU 410, SWU 412 or SWU 413 with C or better; Corequisite(s): SWU 411 and SWU 414
SWU	432	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): ECN 211 (or SWU 181); POS 110 (or POS 310 or SWU 182); SWU 310 with C or better; Social Work major. Corequisite(s): SWU 410, 412, 413
SWU	442	Introduction to Practice with Children and Families in Child Welfare	Focuses on the characteristics, strengths, and service needs of families and children in the Child Welfare System.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Social Work student; SWU 410 with C or better; SWU 412 with C or better; SWU 413 with C or better
SWU	450	Mastering Mindfulness	Facilitates mastering mindfulness practice. Students teach a lesson and develop a training proposal that will be implemented and evaluated.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre- or corequisite(s): SWU 350; SWU 351
SWU	456	Immigrants and Refugees	Provides basic conceptual approach to understanding immigrant and refugee issues and how these factors influence social work practice with immigrant and refugee populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Pre-requisite: Junior standing; Credit is allowed for only SWU 456, 498 (Immigrants & Refugees) or 556
SWU	457	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Pre-requisite: Credit is allowed for only SWG 557 or SWU 457
SWU	458	Behavioral Health Services	Behavioral health conditions; their impact on the individual, family and community; and historical and contemporary service models.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Junior standing; Credit is allowed for only SWU 458, 498 (Behavioral Health Services) or 558
SWU	459	Spirituality and the Helping Professions	Provides a framework for spiritually and culturally competent practice with diverse populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Junior standing; Credit is allowed for only SWU 459, 494 (Spirituality and the Helping Professions), 498 (Spirituality & Helping Profession) or 559
SWU	460	Legal Issues in Social Work	How the law relates to social work practice, administration and policy.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Junior standing; Credit is allowed for only SWU 460, 498 (Legal Issues in Social Work) or 560
SWU	461	Lesbian, Gay, Bisexual, Transgender, and Queer Issues	Historical, socio-cultural introduction to lesbian, gay, bisexual and transgender communities and their resilience to challenges and barriers.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Pre-requisite: Junior standing; Credit is allowed for only SWU 461, 498 (Lesbian/Gay Issues) or 561
SWU	462	Global Social Welfare	Analyzes social work's response to international social issues and human need from the perspectives of globalization, development and human rights.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): junior standing; Credit is allowed for only SWG 562 or SWU 462 or SWU 498 (International Social Work)
SWU	474	Ethnic/Cultural Variables in Social Work	Basic conceptual approach to understanding ethnic and cultural variables of southwestern ethnic minorities and how these factors influence social work practice.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Pre-requisite: SWU 310 with C or better
SWU	488	Advocacy Strategies	Comprehensive advocacy approach that spans administrative, legislative and community strategies.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWU 320; SWU 332; SWU 340; SWU 374; senior standing

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SWU	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-6		Prerequisite(s): Barrett Honors student
SWU	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-6	L	Prerequisite(s): Barrett Honors student
SWU	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4		
SWU	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-7		
SWU	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-3		Pre-requisite: Bachelor of Social Work student
TCL	101	Introduction to Transborder Chicana/o and Latina/o Studies	Historical and contemporary issues in Chicana/o and Latina/o communities; focuses on the diverse economic, sociological, cultural, and political status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	111	Introduction to Transborder Chicana/o and Latina/o Culture	Interdisciplinary analysis of customs, values, belief systems, and cultural symbols; special attention is given to cultural continuity and change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-3		
TCL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	201	Transborder Society and Culture I: Interdisciplinary Approaches	Intensive overview of Mexican origin and Latina/o populations through various sociological, historical, anthropological, economic, political, cultural, literary, and analytical lenses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	202	Transborder Society and Culture II: Contemporary Issues	Examines contemporary transborder belief systems, ideologies of health, gender, familial structures, and community development within a transnational context.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	
TCL	210	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	C	Credit is allowed for only AFR 212 (or AFS 210) or APA 210 or JUS 210 or TCL 210
TCL	211	Transborder Chicano/a and Latino/a Poetry	Writing seminar on Chicana and Chicano poetics and intensive creative writing workshop.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	220	Transborder Latina/o Expressive Culture	Examines media, literature, performance, and visual art grounded in the historical experiences of transborder Latina/o communities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU or SB) & C	Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
TCL	230	The Expressive Culture of Latin America and the Caribbean: A Transborder Perspective	Interdisciplinary social science introduction to various forms of cultural expressions found throughout Latin America and the Caribbean region and in Latina/o communities within the United States. Uses a transborder perspective to examine how migration, race, ethnicity, gender, power, history and identity shape and influence different aspects of Latina/o culture and identity. Focuses on the study of a wide array of expressive practices including music, dance, verbal arts, myths and folktales, festivals, sports and food in Mexico, the Spanish Caribbean and their counterpart Latina/o communities in the United States. Class lectures and readings introduce basic concepts such as ethnography, ethnomusicology, culture, representation and globalization.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU or SB) & C	Credit is allowed for only ASB 220 or TCL 230
TCL	270	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	Credit is allowed for only FMS 270 or TCL 270
TCL	275	Culture, Language and Learning	Examines the dynamic and complex interplay of language, culture and learning within and across individuals, groups, institutions and cultures in diverse multicultural, multilingual and transborder contexts.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Credit is allowed for only ASB 275 or TCL 275
TCL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	303	Transborder Theory	Studies historical, cultural, and economic theories contributing to understanding the emergence of Mexican and Latina/o origin populations in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB	
TCL	304	Transborder Research Methods	Emphasizes critical skills: quantitative/qualitative, spatial, archival, and reflexive methodologies, including ethnographic, biographical, historical, and mapping.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	
TCL	305	Transborder Practicum and Field Research.	Field work with faculty incorporating practical experience while honing research skills and ability.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Pre or Co-requisites: TCL 303 and TCL 304 with C or better if completed

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TCL	310	Transborder Chicano/a and Latino/a Folklore of Southwest North America	Analyzes Chicana and Chicano folk beliefs, traditions, and practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	314	Transborder Regional Immigration and Economy	Historical/contemporary overview of Mexican immigration into and within the U.S.; factors affecting population movement, settlement patterns, and migrants' incorporation into society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or SB) & H & C	
TCL	315	Chicana/o and Latina/o Family Structures	Traditional and changing family relationships; emphasis on gender and intergenerational relations and impact of modern society on traditional family values.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB	
TCL	321	Transborder Community Development and Health	Emphasizes core concepts and practices relevant to regional community development and health, including demographic health indicators, individual, and community models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	323	Latino Health Issues	Health issues among Chicanos and other U.S. Latinos; interplay among political economy, health, family, culture, and community.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	4	SB & C	
TCL	326	Health of Chicanas and Latinas	Examines gender, ethnicity, and health; critical issues affecting health status of Chicanas and Latinas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	327	Health and Migration	Focuses on health status among various immigrants; health trajectories following migrations, adaptive behaviors, health practices, and the role of policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB	Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	328	U.S. Latino Religion and Culture	U.S. Latino and Latin American religious history with special attention to what have become Hispanic mestizo hybrid cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	Pre-requisites: Minimum 24 earned hours; ENG 102, 105, or 108 with C or better; Credit allowed for only REL 326 or TCL 328
TCL	331	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & H & C	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST or TCL 331
TCL	332	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & H & C	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST or TCL 332
TCL	335	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Pre-requisites: ENG 101 & ENG 102 with C or better. Credit is allowed for only AFR 335, HST 323 or TCL 335
TCL	340	Chicana/o and Latina/o Politics and Policy	Historical/contemporary analysis of Chicana and Chicano political ideologies, attitudes, strategies, and movements; relations with governmental agencies; and public policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L & C	
TCL	341	Policy Issues in Chicana/o and Latina/o Urban Settings	Historical, demographic, and sociological overview of the status of Chicanas and Chicanos in urban settings as well as the public policy relevance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	C	
TCL	342	Social Demographics of Latino Populations	Provides an introduction to social demography of Latinos in the U.S. from the 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	
TCL	350	Transborder Mexican and Chicano/a Artistic Production	Overview of Mexican and Mexican American artistic production from colonial times to present; emphasis on religious and folk art.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C & G	
TCL	351	Transborder Chicano/a and Latino/a Art	Intensive analysis of contemporary Chicana and Chicano art movement as appraised within the context of contemporary American art and the art of Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	352	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	C	
TCL	353	Race, Space and the Production of Inequality	Explores how the relationship between race and space has been important to the development of broad patterns of social inequality in the United States. Through a variety of readings, films and other material, examines how ideas of race and space have been important to the making and maintenance of national boundaries, citizenship, regional histories and spatial typologies such as border, ghetto, suburb and prison.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	Prerequisite(s): APA 200 or 210; minimum 45 hours; Credit is allowed for only AFR 352 (or AFS 352) or APA 352 or JUS 353 or TCL 353 or APA 394 (Race, Space and the Production of Inequality)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TCL	360	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
TCL	363	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only ENG 363 or TCL 363
TCL	364	Transborder Mexican Literature Before 1917	Offers a historical panoramic view of the political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest. May be taught in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L	Prerequisite(s): minimum 45 hours
TCL	370	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU	Credit is allowed for only FMS 370 or TCL 370
TCL	373	Latina/Chicana Issues	Critical examination of the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States and along the border.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 30 hours. Credit is allowed for only TCL 373 or WST 373
TCL	378	McGlobalization: Migration, Mass Media and McDonald's	Explores the impact of globalization on local societies and cultures by focusing on the international migration of peoples, the global expansion of capitalism and global mass media and popular culture. Examines both the socioeconomic causes and consequences of globalization, as well as how local peoples around the world have been affected by, participated in and resisted the forces of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or SB) & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 378 or TCL 378
TCL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	410	Race, Medicine, and the Body	Explores how body and embodiment and race and ethnicity are constructed within and by biomedical sciences and technology development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L	Prerequisite(s): ENG 101, 105 or 107 with C or better; minimum 45 hours
TCL	422	U.S.-Mexico Border Health	Focuses on identifying health issues affecting Latino/Mexican families in the U.S.-Mexico borderlands using basic epidemiological techniques to analyze regional data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Pre-requisites: TCL 321 with C or better
TCL	424	Theory and Practice of Community Development and Health	Foundations of methodology of community mapping and establishment of community diagnosis, media literacy and advocacy applications for community-based public health.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB	Pre-requisites: TCL 321 with C or better
TCL	443	Political Ecology of the Border	Using a political ecology approach, focuses on the creation of border communities of Southwest North America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 463 or SOS 463 or TCL 443
TCL	444	The Ethnography of Mexico and the Borderlands	Focuses on the internal characteristics of a selected Mexican rural border towns and villages; analyzes the dynamics of development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & G	Pre-requisites: Minimum 45 earned hours; Credit is allowed for only ASB 464, TCL 444 or 598 (The Ethnography of Mexico and the Borderlands)
TCL	445	Transborder Latin American Short Story	Studies the modern Latin American short story, with primary focus on the development of its literary and cultural tradition. Taught in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L or HU	Prerequisite(s): SPA 202 (or SPA 204); minimum 45 hours
TCL	446	Comparative Bilingual Latina/o Poetics	Comparative study of contemporary bilingual Latina/o poetry. Focuses on two specific U.S. ethnic minority groups--Mexican- (or Chicanos) and Puerto Rican-Americans (or nuyoricans)--who have long and strong literary traditions of bilingual poetry. The significant feature of both bodies of poetry is the interactive mixture of their base languages: Spanish and English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU) & C	Credit is allowed for only TCL 446 or 598 (Comparative Bilingual Latina/o Poetics)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TCL	447	Gender, Culture, and Development	In-depth analysis of gender roles related to health, family, work, education and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or SB) & G	Prerequisite(s): WST 100 or 300 or minimum 45 hours; Credit is allowed for only SGS 454 or SOS 447 or TCL 447 or WST 447 or TCL 598 (Gender, Culture & Development)
TCL	448	Teaching Chicana and Chicano Studies in the Schools	Approaches/techniques for infusion of transborder studies content into elementary and secondary curriculum; designed for teachers who work with Mexican and Latino origin students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): minimum 45 hours
TCL	464	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU) & C	Credit is allowed for only ENG 458, FMS 464 or TCL 464
TCL	465	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	Pre-requisites: ENG 102, 105 or ENG 108 with C or better. Credit is allowed for only FMS or TCL 465
TCL	466	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	C	Credit is allowed for only FMS or TCL 466
TCL	470	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 470
TCL	471	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		
TCL	485	Chicana and Latina Writers	Critical reading of Mexican American women authors; emphasis on contemporary (post-1970) poetry, novels, short stories, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU) & C	
TCL	488	Border Global Narratives	Studies four general and different border areas through literature. Through literary-cultural texts, looks into peoples' experiences of migration to and from the homelands of Mexico, Haiti, the Dominican Republic, Cuba, and the Puerto Rican isle to the U.S. These experiences are never uni-directional but are characterized by constant back-and-forth movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L & C	Credit is allowed for only TCL 488 or 598 (Border Global Narratives)
TCL	490	Transborder Queer Performativity	Explores a rich and diverse body of border-crossing performative expression created by queer and/or Latina/o artists. Course readings and discussions include solo and collaborative works with an emphasis on solo autobiographical performance scripts as well as performer interviews and performance scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 45 credit hours; Credit is allowed for only TCL or WST 490
TCL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-6		Prerequisite(s): Barrett Honors student
TCL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-6	L	Prerequisite(s): Barrett Honors student
TCL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-7		Prerequisite(s): Transborder Chicana/o and Latina/o Studies (Media and Expressive Culture or Transborder Community Development and Health or U.S. and Mexican Regional Immigration Policy and Economy) major; minimum 56 hours

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TCL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-3		
TCL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		Pre-requisite: Maximum 25 hours; Credit is allowed for only CRD, PRM or TDM 191
TDM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
TDM	205	Introduction to Travel and Tourism	Examines the components of the travel and tourism industry at the state, national, and global levels.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	G	
TDM	210	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD or NLM or PRM or TDM 210
TDM	225	Introduction to Resort and Hotel Management	Introduces local, national and international lodging and food service industries.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
TDM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
TDM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
TDM	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301
TDM	302	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	C	Pre-requisites: ENG 102; MAT 142; NLM 160 (or PRM 120) with a C or better; 2.50 GPA; 45 earned hours; Credit is allowed for only CRD, NLM, PRM or TDM 302
TDM	345	Meeting and Convention Planning	Basic aspects and skills in planning meetings and conventions. Industry and market overview with certified meeting planners.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	350	Tourism, Recreation and Sports Marketing	Critical examination of marketing principles in leisure and related industries in diverse settings, including local, national, and international.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or CSM 201 or TDM 205; minimum 45 hours. Credit is allowed for only CSM 350 or PRM 350 or TDM 350
TDM	372	Tourism Planning	Applies economic and regional development concepts and theories to destination product development.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	L	Pre-requisites: Tourism Development & Mgmt or Recreation (Tourism) students; Minimum 2.50 gpa; Minimum 45 hours; TDM 205 or RTM 373 with C or better; ENG 102 with C or better; MAT 142 or higher with C or better

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TDM	386	Convention Sales and Management	The role of convention and visitors bureaus or resort managers, including economic impacts of markets, structure, governance, membership, and advertising.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
TDM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
TDM	401	Tourism Management	Basic principles of administration and their application in successful administrative situations. Analyzes administrative function, structure, and policies.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 201 or PRM 210 or TDM 210 with C or better; CRD 301 or PRM 301 or TDM 301 or TDM 301 with C or better; PRM 303 or TDM 372 with C or better
TDM	402	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre- or corequisite(s): CSM 401, NLM 410, PRM 401, or TDM 401 with C or better if completed; Credit is allowed for only CSM 402 or NLM 402 or PRM 402 or TDM 402
TDM	403	Leadership and Professional Development	Examines leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: NLM, PRM or TDM 210 with C or better; NLM, PRM or TDM 301 with C or better; Senior standing; 2.50 GPA. Credit is allowed for only CRD, NLM, PRM or TDM 403
TDM	415	Tourism Transportation Systems	Examines the role of various modes of transportation in domestic and international tourism development.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	448	Heritage and Cultural Tourism	Provides a solid conceptual understanding of the issues, problems, and management implications associated with heritage and cultural tourism.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: TDM 205 with C or better; Credit is allowed for only TDM 448 or CRD 598 Heritage and Cultural Tourism)
TDM	458	International Tourism	Global examination of international tourism and its significance as a vehicle for social and economic development.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	G	
TDM	463	Senior Internship	Supervised guided experience in selected agencies.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	6-12		Prerequisite(s) with C or better: CRD 403 or PRM 413; CSM 402 or NLM 402 or PRM 402 or TDM 402. Credit is allowed for only CSM 463 or NLM 463 or PRM 463 or TDM 463
TDM	475	Entrepreneurial Recreation and Tourism	Explores basic business principles and innovative processes involved in starting a small business in the commercial recreation and tourism industry.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 60 hours; Credit is allowed for only PRM or TDM 475
TDM	480	Sustainable Tourism	Tourism has a multitude of impacts, both positive and negative, on people's lives and on the environment. Critically analyzes the environmental, economic, and socio-cultural aspects of tourism development, and strategies to attain balance among these three dimensions to guarantee its long-term sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: PRM 120 or TDM 205 or 60 minimum hours
TDM	481	Sustainable Food Management in Tourism	Focuses on the fundamentals of sustainability, sustainable food systems, relationships between food and tourism, and the applications of sustainable food practices in different types of global tourism. Defines sustainable development, explains the importance of sustainable food systems, recognizes the relationship between local food systems and global food challenges. Connects the challenges of creating and maintaining sustainable food systems with the needs of tourists and tourism destinations; defines leakage in reference to tourism and food. Creates and applies sustainability assessment criteria to food systems in a variety of different tourism spaces.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Junior standing; Minimum 60 hours
TDM	482	Sustainable Revenue Management	Introduces the fundamental economic principles that underlie revenue management and the practical application of new analytical technological services in the hotel and resort industry. Uses experienced revenue managers from local resorts and hotels as regular guest speakers and IdeaS system (a revenue management analytics subsidiary of SAS).	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: MAT 142 or higher; Minimum 72 hours

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TDM	483	Sports Tourism	Examines the relationship between sports and tourism, and the role of recreation and amateur sports as an economic and community development strategy. Also considers the motives, behaviors and experiences of sport tourists; the impacts of sport tourism; and trends in sports tourism.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): Minimum 45 hours. Credit is allowed for only CSM 483 or TDM 483
TDM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; 72 minimum hours; 2.50 GPA or higher; Non SCRD majors
TDM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
TDM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6	L	Prerequisite(s): Barrett Honors student
TDM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
TDM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
TDM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-7		
TDM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
TDM	520	Sustainable Thinking in Tourism	First in a series of two courses introducing students to the basic concepts of sustainability and their application and implications for tourism.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	521	Sustainable Thinking in Tourism II	Second in a series of two courses focusing on how to measure, assess, and plan for sustainability in the tourism industry.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: TDM 520 with C or better
TDM	530	Sustainable Tourism Destination Planning and Management I	Applies sustainable economic and regional development concepts and theories to destination planning and management. Students learn the fundamentals of sustainable planning, including stakeholder involvement and meeting community needs.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	531	Sustainable Tourism Destination Planning and Management II	Applies sustainable economic and regional development concepts and theories to destination planning and management. Students learn the fundamentals of sustainable planning, including stakeholder involvement and meeting community needs.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): TDM 530
TDM	540	Sustainable Food Management in Tourism	Focuses on the fundamentals of sustainability, sustainable food systems, relationships between food and tourism, and the applications of sustainable food practices in different types of global tourism. Students learn to define sustainable development; explain the importance of sustainable food systems, recognize the relationship between local food systems and global food challenges; connect the challenges of creating and maintaining sustainable food systems with the needs of tourists and tourism destinations; define leakage in reference to tourism and food; and create and apply sustainability assessment criteria to food systems in a variety of different tourism spaces.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	550	Managing the Sustainable Tourism Business	Through case study analysis, students learn how sustainability impacts business operations, how successful sustainable businesses identify and assess alternative resource management techniques, and evaluate operational models for embedding sustainability practices into their business models.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s) TDM 570; Credit is allowed for only TDM 550 or CRD 598 (Managing the Sustainable Tourism Business)
TDM	561	Best Practices Workshop Preparation	First in a series of two courses investigating and sharing best practices in sustainable tourism. Provides an overview of best practices and innovative actions in tourism. A destination or business is identified to be used as a case study.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Pre/co-requisite: TDM 521 with C or better
TDM	562	Best Practices Workshop Presentation	Second in a series of two courses investigating and sharing best practices in sustainable tourism. Provides an overview of best practices and innovative actions in tourism. A presentation of a best practices case study is conducted for the class.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Pre-requisite: TDM 561 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TDM	570	Sustainable Tourism	Critically examines the environmental, economic, and socio-cultural aspects of tourism development, and strategies to attain balance among these three dimensions to guarantee its long-term sustainability.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	101	The Teachers College Experience	Introduces all new first-time ASU students to the unique elements, culture, challenges, and opportunities of their university. Mary Lou Fulton Teachers College sections relate specifically to future educators. Covers several core college success topics.	N	SEM	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Pre-requisite: Mary Lou Fulton Teachers College Freshmen student
TEL	111	Exploration of Education	Education as an instrument in the development of the individual and society and its significance as an American Institution.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	
TEL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
TEL	200	Social Embeddedness of Educational Endeavors	Serves as a pathway toward self discovery and professional identity. Course readings, reflections and self assessments help students develop personal and professional goals and goal-setting strategies. Course assignments provide students with a greater level of understanding regarding the reciprocal influences among community and culture and the student's life experiences. Students have an opportunity to clearly define themselves and share topics they are passionate about, as well as locate how they might fit into and contribute to their community.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
TEL	212	Understanding the Culturally Diverse Child	Surveys cultural and linguistic diversity in American education, including education equity, pluralism, learning styles, and roles of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	C	Credit is allowed for only MCE 230 or TEL 212
TEL	215	Introduction to Child and Adolescent Development	Emphasizes the cognitive, social-emotional, and physical domains of child and adolescent development. From a knowledge base of theory, research, and current issues, students apply learning to developmentally appropriate principles and practices that guide relationships and learning experiences for all children. Uses available technologies; emphasizes the complex ecosystem of culture, ethnicity, family, and school.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	
TEL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
TEL	300	Community, Family, and Education	Addresses education in a community and family context. Analyzes education and identifies education-focused community challenges in a broad variety of settings and across multiple times and places.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): TEL 200
TEL	311	Instruction and Management in the Inclusive Classroom	Planning and delivering instruction, organizing and managing classrooms, and making adaptations for English language learners and students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
TEL	313	Educational Technology in the K-12 Curriculum	Focuses on using technology in an education setting and addresses the integration of technology in curricular areas for all students. Students receive a broad-based introduction to using and integrating technology into many different educational settings.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 56 hours
TEL	314	Classroom Assessment	Assessment and evaluation of student learning; emphasizes integration and adaptation of curriculum, instruction, and evaluation of all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
TEL	315	Child and Adolescent Development	Physical, cognitive, social, and emotional development during childhood and adolescence; developmentally appropriate principles and practices to facilitate development for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L or SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TEL	316	Teaching, Imagination, and Creativity	Engages students in critical thinking and the complex terrain of aesthetic theory and intellectual, academic work and teaching practice. Students apply aesthetic consciousness teaching by teachers developing imagination, creativity, and intuition as tools to use every day in their classrooms. Emphasis on how teachers can integrate the arts into the curriculum, use the arts to support academic content, and develop aesthetic consciousness as a way of becoming attuned to the teaching environment as well as to learners' diverse cultures, talents, and needs. The arts will also be studied as multi-cultural and socio-cultural phenomena, aiding teachers to become consciously attuned to the culturally diverse learner within the larger society.consciousness as a way of becoming attuned to the teaching environment as well as to learners' diverse cultures, talents, and needs. Also studies the arts as multicultural and sociocultural phenomena in support of these ends, aiding teachers to become consciously attuned to the culturally diverse learner within the larger society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Education majors; Minimum junior standing
TEL	320	Introduction to Gifted Education	Overview of a variety of issues related to gifted students from preschool through high school. Provides background in order to create an optimal experience for students, parents and teachers when working with gifted students.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
TEL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
TEL	400	Innovation in Educational Endeavors	Pursues innovative solutions to social problems with the courage and ability to impact change in individuals, communities and organizations. Reviews community problems, challenges or areas of improvement; learns underlying principles of social enterprise; and develops innovative methods that empower individuals and support educational initiatives.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): TEL 200, 300
TEL	404	Current Issues in Education and Policy Reform in the United States	Specialized topics related to current issues in education with a focus on education reform efforts from the late 20th century into the 21st century. Explores current reform efforts in education as part of the larger public policy agenda in the United States, analyzing how external influences shape present education systems.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-reqs for TEL 404
TEL	405	History of Education and Policy Reform in the United States	Specialized topics in education history with a focus on education reform efforts from pre-Revolutionary War time to the end of the 20th century. Explores the past reform efforts in education as part of what was happening historically in the United States, analyzing how those efforts have shaped the present education systems.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only TEL 405 or TEL 494 (History of Education & Policy Reform in the US)
TEL	410	Leadership and Advocacy in Educational Endeavors	Educators who take an active stance through advocacy and leadership are well-equipped to create societal change. Students learn about styles of leadership that are fitting for this need, study advocacy techniques, then position themselves as advocates and leaders as they create a plan, with goals, to address an identified community problem, challenge or area of improvement.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): TEL 200; 300; 400
TEL	420	Curriculum Strategies for Gifted Learners	Overview of a variety of ways in which to create and adapt curriculum for gifted students from preschool through high school. Provides a broad range of resources for classroom teachers to use in order to help gifted students work to their full potential in a heterogeneously grouped classroom.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): Admission to Professional Teacher Preparation Program
TEL	430	Learning Outside of School	Studies and methods from a variety of nonschool environments for learning and development. Teaches knowledge and skills such as methods of identifying and evaluating free-choice learning that occurs through museum going, hobbies, family learning, media, community programs, sports, public health campaigns, and more. Covers career opportunities for educators in key creative environments besides classrooms.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only TEL 430 or 494 (Learning Outside of School)
TEL	431	Learning in Workplaces	School isn't the only place where people learn! Once you get a job, most of what you learn will occur as you do your job, and that kind of learning is crucial to the development of competence and expertise. Surprisingly, seventy to eighty percent of this important learning takes place outside of formal training. Studying learning in workplaces illuminates how learning happens universally, and helps teachers and trainers design effective educational programs.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only TEL 431 or 494 (Learning in Workplaces)
TEL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1		
TEL	489	Undergraduate Projects and Research in Education	Topics include history of educational research, literature reviews, research methodology, resources, individual project ideas and the creation of a research prospectus. Students may also work in teams to complete theses or projects if their interests intersect. Open to all students; however, Honors and Scholar's Academy students will be planning and/or implementing theses or creative projects.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only TEL 489 or TEL 494 (Undergrad Projects & Research in ED)

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TEL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
TEL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
TEL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
TEL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
TEL	501	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
TEL	504	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	505	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	N	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	607	Critical Social Theory and Education	Seminar exploring education through the lens of critical social theory originating in the Frankfurt School. Marxian theory is updated to confront current situations through the ideas of alienation, base and superstructure, hegemony, ideology, and culture theory as well as a vision of human consciousness. Includes Pierre Bourdieu's theory of habitus, social or cultural capital, and field. Studies various critical education scholars as applications of critical social theory. Examines critiques of critical theory.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Credit is allowed for only DCI 691 (Critical Social Theory) or TEL 607
TEL	683	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
TEL	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	GRD	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	701	Assessment Policies, Issues, and Practices	Critical thinking about assessment data and other information sources to make inferences, judgments, and predictions about reality in schools.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	702	Dynamic Contexts of Education	Explores current ethical issues influencing leadership decisions with a focus on real problems in the educational setting.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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TEL	703	Innovation in Teaching and Learning	Development and psychological processes of human cognition, motivation, and performance applied to cognitively diverse, English language learners, adult professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	704	Leading Change in Educational Organizations	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	706	Introduction to Doctoral Studies	Prepares doctoral students for success, focusing on balance and identity, communities of practice, leadership and innovation, action research, and organization systems.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Leadership and Innovation EDD major; Credit is allowed for only TEL 598 (Introduction to Doctoral Studies) or 706
TEL	711	Strategies for Inquiry	Develops knowledge and skills for research and program evaluation that foster innovation in education that leads to improved student learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	712	Mixed Methods of Inquiry	Methods for combining qualitative and quantitative inquiry in action research, evaluation, and data-based decision making.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	713	Applied Mixed Methods of Inquiry	Data collection, analysis, interpretation in studies combining qualitative and quantitative inquiry in action research, evaluation, and data-based decision making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	795	Continuing Registration		N	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
TEM	100	Seminar in Entrepreneurship	Exposes students to careers in entrepreneurship by inviting diverse entrepreneurs to discuss their businesses and backgrounds and share their stories on starting and growing their ventures.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1		Credit is allowed for only TEM 100, TEM 194 (Entrepreneurship) or OMT 191 (Entrepreneurship)
TEM	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
TEM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TEM	200	My Technology Venture	Introduces the concept of entrepreneurship through venture practice and self-reflection to help students understand their potential roles in a technology-driven marketplace.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: TMC 110; Credit is allowed for only TEM 200, 294 (My Technology Venture) or TMC 294 (My Technology Venture)
TEM	230	Creativity and Business Innovation	Introduces concepts, models and techniques of creativity and innovation. Exposes processes related to developing creative skills and habits with an emphasis on problem solving and design.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisite: Minimum sophomore standing; Credit is allowed for only TEM 230, TEM 394 (Technology Entrepreneurship) or TMC 394 (Technology Entrepreneurship)

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TEM	250	Design Methodology	Outlines product design method and provides opportunity to apply it to a design project including identifying needs, setting target specifications, generating and selecting concepts, prototyping and testing.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only TEM 250 or OMT 294 (Design Methodology)
TEM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TEM	311	Opportunity Analysis	The key to making sound business decisions involves the careful analysis of the situation, intelligent use of research, and successful practice. Entails the research and implementation of strategy to determine consumer expectations utilizing the skills especially important in today's competitive and turbulent market.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: TEM 200 (or TMC 110)
TEM	330	Systems Innovation	Systems thinking course that investigates how innovators can incorporate the knowledge of complex systems into the processes of technology development, product/service innovation and venture development.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: ENG 102, 105 or 108 with C or better; TEM 200 or 45 earned hours; Credit is allowed for only TEM 330 or TEM 394 (System Innovation)
TEM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TEM	400	Technology Entrepreneurship	Introduces opportunities and challenges that accompany starting and operating an entrepreneurial venture by exploring the fundamentals and principles of entrepreneurship suitable for undergraduate business and technology students. Provides real-world, hands-on learning on what it's like to successfully transfer knowledge into products and processes that benefit society. Engages students with industry, talking to customers, partners and competitors, as the team encounters the chaos and uncertainty of transferring knowledge into products and processes that benefit society.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only TEM 400, TEM 394 (Technology Entrepreneurship) or OMT 494 (Tech Entrepreneurship)
TEM	420	Statistics for Industry	Covers topics such as probability theory, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, and simple linear regression analysis. Provides a fundamental understanding of probability theory and statistics as used in typical industrial applications. Presents and discusses illustrative problems. Where possible, explores problems from the students' disciplines to insure that the principles of statistics and probability are studied in the context of the students' chosen field.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: MAT 117 or any MA General Studies course
TEM	431	Innovation Management	Focuses on execution challenges that innovation initiatives face, including: (a) Resources: Where do the resources for innovation initiatives come from? (b) Organization: How should innovation initiatives be organized? (c) Planning: How should plans for innovation initiatives be written and through what kind of process should they be revised? Explores the processes of innovation management for various sizes of companies utilizing smaller scale, local processes to large scale, globally dispersed innovation processes and teams.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: ENG 102, 105 or 108 with C or better; TEM 200 or 45 earned hours; Credit is allowed for only TEM 431 or TEM 494 (Innovation Management)
TEM	450	Design for the Developing World	Learn the product design process; improve the lives of poor residents in communities at the base of the economic pyramid who earn less than \$2/day. Help improve health, energy and clean water issues among others by joining with GlobalResolve, an ASU program in the College of Technology and Innovation whose goal is to help reduce poverty through technological innovation and entrepreneurship.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: Junior, Senior or Graduate standing; Credit is allowed for only TEM 450 or TEM 494 (Design for the Developing World)
TEM	455	Global Impact Entrepreneurship	Increases awareness and understanding of the complex nature of global poverty. Students think comprehensively about sustainable ways to address by focusing on business ventures and product design, which take advantage of local resources, networks and institutions. Students design and refine technologies and services that address the needs of communities in the developing world. Examines piloted technological innovations by ASU students in the west African nation of Ghana, India, and Latin American countries such as Mexico and Peru. Analyzes technological initiatives that have been piloted in Ghana and Peru, and attempts to create sustainable business ventures for them.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisite: Junior, Senior or Graduate (degree or nondegree) student; Credit is allowed for only TEM 455 or OMT 494 (Global Impact Entrepreneurship)
TEM	460	Lean Six Sigma Green Belt Certification	Six Sigma and Lean are fast becoming required knowledge for professionals involved in helping their companies streamline productivity and improve performance. Provides a focused and measurable management discipline, structured to reduce product and service failure rates to near perfection. Explores how Six Sigma and Lean strategies and tactics fit into a larger management systems and how to apply these techniques to solve and prevent critical business process problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: ENG 102, 105 or 108 with C or better; TEM 200 or 45 earned hours; Credit is allowed for only TEM 460 or OMT 494 (Lean Six Sigma Green Belt Certification)

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TEM	480	Focus Area Project	Student research project that synthesizes knowledge across the core and the student's selected focus area. Examines a practical challenge that demonstrates technical competence related to technological entrepreneurship and management. Enhances the student's ability to focus on a topic, conduct research and present findings.	N	LEC	Y	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: TMC 330 (or TEM 394 or TMC 394 System Innovation) or Junior standing
TEM	481	Consulting Project	Students learn about technology entrepreneurship through consulting with leaders and owners of businesses, not-for-profit organizations and government agencies. Requires both out-of-class consulting projects and in-class instructional sessions focused on technology entrepreneurship and business strategy, including financing, promoting, leading and growing the venture and consulting skills.	N	PRA	Y	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ENG 102, 105 or 108 with C or better
TEM	482	Startup Workshop	Students launch their own technology-based ventures with collaboration and mentorship from colleagues and faculty. Explores the fundamentals and principles of entrepreneurship suitable for undergraduate technology entrepreneurship. Provides real-world, hands-on learning on what ifs to successfully transfer knowledge into products, processes and services that benefit society. Engages with industry, talking to customers, partners and competitors, as the team encounters the chaos and uncertainty of transferring knowledge into products and processes that benefit society.	N	PRA	Y	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ENG 102, 105 or 108 with C or better
TEM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		
TEM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-6		Prerequisite(s): Barrett Honors student
TEM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-6	L	Prerequisite(s): Barrett Honors student
TEM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TEM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
TEM	505	Lean Process Improvement	Develops an understanding of individual and group decisions and responsibilities for process design and improvement in work settings. Covers common problems and success stories and qualitative and quantitative techniques to measure progress toward organizational goals for a variety of industrial business situations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEM	530	Statistics Bootcamp for Industry	Provides foundational coverage of topics such as probability theory, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, and simple linear regression analysis, appropriate for first-year graduate students. Additionally, provides a fundamental understanding of probability theory and statistics as used in typical industrial applications. Presents and discusses illustrative problems from technology, entrepreneurship, aviation and psychology. Where possible, explores problems from the student's discipline to insure that the principles of statistics and probability are studied in the context of the student's chosen field.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only TEM 530 or 598 (Statistics Bootcamp for Industry)
TEM	531	Disruptive Innovation and Technological Evolution	Focuses on the processes of innovation management of various sizes of companies utilizing smaller scale, local processes to large scale, globally dispersed innovation processes and teams, with an emphasis on disruptive innovation and the evolution and forecasting of technology. Provides a survey of innovation management concepts and various technological forecasting and prediction approaches, both mathematical and nonmathematical, in conjunction with a study of the evolution of selected technologies and the management problems associated with emerging technologies.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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TEM	532	Advanced Analysis of Systems	Introductory course in systems analysis and modeling. Develops basic competence in formulating and solving models of systems to aid decision making. Topics include: introduction to systems and systems modeling; a simple what-if analysis; overview and review of linear algebra and matrices; problem formulation and model development in optimization; linear programming (LP), economic interpretation and sensitivity analysis; introduction to integer programming (IP); special linear programs; project schedule network development and computations; overview of heuristic algorithms. Uses selected software in examples, short problems and in a project.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TGM	101	Principles of Global Management	Provides the basic concepts of management with particular emphasis on the functions of management in a global environment. Examines the antecedents of globalization; the role of global environments in shaping organization structure, strategy and processes, as well as the basic principles of managing in complex cross-cultural settings. Emphasizes global institutional arrangements and macroeconomic issues. Serves as an introductory course that provides a quick snapshot of key issues facing global corporations today with each of the major themes explored more fully in the set of advanced courses that follow. Applies global business concepts in understanding global political economics, legal systems and socio-cultural environments.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		
TGM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): Maximum 25 hours
TGM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	200	Principles of Accounting for Global Organizations	Focuses on financial and managerial accounting and examines how outsiders evaluate businesses, nonprofits and governmental operations and how economic events are reflected in a firm's financial statements, including balance sheets and cash flow statements. Examines key accounting methods that impact a company's financial statements and how they are used by shareholders, creditors, employees and customers to make credit decisions and/or value a firm's equity securities.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	204	Principles of Marketing for Global Organizations	Explores the ways in which global marketing strategies reflect a deep understanding of markets and create valuable offerings for customers globally. Broadly speaking, marketing strategy making is comprised of segmentation, targeting and positioning. Segmentation is the process by which we segregate a relatively heterogeneous mass market into relatively homogeneous market segments. Targeting is the process by which we analyze opportunities and identify those customers where our business has the greatest prospects for success. Positioning is the process of assembling the "total offering" (product, service, distribution and price) and communicating the benefits of this "total offering" to the members of our target market. Challenges students to think critically about global competition. As such, rote learning of terms and concepts is not sufficient to prepare students to manage a business in global markets.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	268	Intercultural Communication for Global Management	In a dynamic and interactive format, this course presents a framework of models and skills for building communication performance in competitive global business settings. Assists in implementing strategies for mastering interpersonal encounters, including conflict resolution, in multicultural environments. Examines theories of communication (the basic concepts, principles and skills vital for understanding and improving communication across racial, ethnic and cultural differences). Places students in experiential situations in order to develop valuable global management skills. Using cases, self-assessment questionnaires, multicultural team exercises and simulations, equips the global manager with the ability to solve problems and take advantage of opportunities in a multicultural world. Explores in depth intercultural theories from the TGM three regional areas--China, Latin America and the Middle East.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TGM	300	Principles of Finance for Global Organizations	Equips students with the tools necessary to make strategic financing and investment decisions for value creation in a competitive global environment. Topics addressed include financial analysis and projections; working capital management; and investment management (derivation of cash flows, cost of capital, discounted cash flow valuation and capital budgeting decisions).	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	353	Regional Management Environment	Provides future global managers with the analytical tools and frameworks for understanding the political, social, cultural and economic contexts within which business activities take place in various countries and regions throughout the world.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	400	Advanced Topics in Global Management	Focuses on advanced topics in global management designed to synthesize knowledge acquired from global business, language and cultural coursework.	N	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management student; ENG 208 or MND 202 or MSA 202 or SPA 202 with C or better
TGM	468	States and Markets	Global managers operate in an international economy that presents tremendous opportunities as well as risks. Globalization has dramatically expanded opportunities for international trade, investment and economic development. At the same time, global managers have to deal with the prospect of trade wars, international financial crises and intensified competition over markets and resources. In addition, international organizations such as the International Monetary Fund, World Trade Organization and World Bank Group have a direct impact on international business operations. Develops analytical tools for understanding the rapidly changing and dynamic global political. With these tools, managers are better prepared to anticipate the risks and take advantage of opportunities in the global economy.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	489	Multinational Organizational Leadership	Explores multinational organizational management strategies, organizational practices/systems, and related managerial skills which are an essential part of global competitiveness. Develops skills to understand the application of analytical tools and frameworks, executes complex strategy, and builds and leads competitive teams and people.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-6		
TGM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-6	L	
TGM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-7		
TGM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		
TGM	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TGM	501	Global Accounting	Focuses on two aspects of accounting: financial and managerial accounting. Financial accounting is about how outsiders view and evaluate an organization such as a business, a not-for-profit entity or a governmental operation. It focuses on how economic events are reflected in a firm's financial statements including a balance sheet, an income statement and a statement of cash flows. It also focuses on how financial statement information is used by various stakeholders such as shareholders, creditors, employees and customers in making decisions with regard to the firm, including credit decisions and/or valuing a firm's equity securities. Analysis and equity management accounting involves providing information, both financial and non-financial, to management and employees to aid in planning, organizing activities, and monitoring and controlling business performance.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	502	Financial Management for Global Value Creation	Equips students with the tools necessary to make strategic financing and investment decisions for value creation in a competitive global environment. Topics addressed include financial analysis and projections; working capital management; and investment management (derivation of cash flows, cost of capital, discounted cash flow valuation, and capital budgeting decisions).	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	503	Global Marketing	Provides a managerial orientation to the topic of global marketing in today's complex, rapidly changing international business environment. A key focus is developing competitive advantage by creating customer value. Course participants gain a fundamental understanding of marketing strategy and marketing analysis (i.e., customer, competitor and company analysis) as well as an appreciation of the basic strategic issues involved in market segmentation, market targeting and market positioning in the international arena. Also examines the major tactics/tools used by global marketers to facilitate the management of their international marketing plans (i.e., product development, pricing strategies, marketing communications, distribution management). Emphasizes developing skills for entering new markets and sustaining or growing current markets.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	504	Managing Organizations from a Global Perspective	Covers two key aspects of successfully managing an organization in a global environment. The first component covers the strategic direction of the organization, and the second component discusses how to harness the power of people in the organization to build teams and lead people to execute the strategy.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	505	States and Markets in a Global Economy	Global managers operate in an international economy that presents tremendous opportunities as well as risks. Globalization has dramatically expanded opportunities for international trade, investment and economic development. At the same time, global managers have to deal with the prospect of trade wars, international financial crises and intensified competition over markets and resources. In addition, international organizations such as the International Monetary Fund, World Trade Organization and World Bank Group have a direct impact on international business operations. Develops analytical tools for understanding the rapidly changing and dynamic global political. With these tools, managers are better prepared to anticipate the risks and take advantage of the opportunities they will encounter in the global economy.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	506	Communicating and Negotiating Across Cultures	This dynamic and interactive course provides managers with an effective framework for achieving their goals in global management settings. Assists students to prepare for and execute time-tested strategies for achieving communication competence with persons from different cultures. Also covers negotiating in the global context. Not only examines theories of culture and communications, but also places students in an experiential situation to gain valuable skills for overcoming obstacles in global management environments. Through use of cases, multicultural team exercises, student negotiation exercises and simulations, equips the global manager with tools to solve problems and take advantage of opportunities in a multicultural world.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	507	Global Organizational Consulting: Basics	Consulting course provides an overview of the field of consulting and the role of the management consultant. Familiarizes students with the tools and techniques used during a consulting engagement, including project entry, problem definition, intervention planning, data collection, problem solving, alternative generation, feedback, project exit, client relations skills and project management. Requires students to work in project teams to solve business problems in organizations through the application and expansion of technical skills acquired in other classes.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TGM	508	Regional Business Environment I: Emerging Markets	As an extension of states and markets in a global economy, provides an analysis of contextual factors that influence dynamic business environments by employing frameworks that integrate political, economic, geographic, and sociocultural factors in a specific regional area.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 505
TGM	509	Regional Business Environment II: Developed Economies	Provides future global managers with the analytical tools and frameworks for understanding the European business environment. Also provides a broad understanding of the region in order to be successful therein. Deals with the political, social and economic context within which business activities take place in Europe. In order to succeed as managers in the environment, requires knowledge of political, social, cultural, economic, business and regional economic factors, both across the European landscape and within individual countries.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 508
TGM	511	Global Financial Accounting	Accrual accounting concepts, teaching students how to prepare and understand the content of traditional financial statements. Topics include the recognition and measurement of accounting events; preparation and analysis of income statements, balance sheets and statements of cash flows; and the measurement of revenue, expenses, assets, liabilities and stockholders' equity, including both U.S. and international principles.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	512	Managerial Accounting and Decision Making in a Global Environment	Covers the development and use of managerial accounting information, including both financial and nonfinancial performance measures, in making long- and short-run decisions. Topics include cost-profit-volume analysis, cost behavior, relevant costs, job-order and processes costing, activity-based cost management and the analysis of customer profitability.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-2		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 501 or 511
TGM	521	Managing for Global Value Creation	Equips students with the tools necessary to make strategic financing and investment decisions for value creation in a competitive global environment. Topics addressed include financial analysis and projections; working capital management and investment management (derivation of cash flows, cost of capital, discounted cash flow valuation, and capital budgeting decisions).	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	522	Global Financial Decisions	Covers modern practices of financial decision-making and management in a market-oriented multinational framework. Topics addressed include capital structure decisions, risk management involving financial derivatives and currency hedging, cross-border investment decisions, subsidiary management, and cross-border merger and acquisitions.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 521
TGM	528	Business Intelligence	Examines the role that business intelligence--the systematic collection, synthesis and analysis of information on the external operating environment--should play in strengthening corporate strategies and decision making. Through lectures and client-sponsored competitive assessment projects, the course has two goals: to help students understand this management tool and to train them to be able to utilize it for competitive advantage. Also addresses the related issues of corporate/industrial espionage and information security.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 504 or 540; TGM 541
TGM	530	Big Data in the Age of the Global Economy	Creating a sustainable IT-dependent competitive advantage is a major goal for forward-thinking multinational organizations. Understands how multinational organizations make strategic use of Big Data to gain a competitive advantage in the global economy. Covers the important technological aspects of big data from a managerial viewpoint. Delves into the understanding of global data and how this data must be standardized to account for differences in collection methods, legal constraints and cultural interpretation to create a reliable platform for evaluation.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	531	Multinational Value Chain	Exposes students to the strategies and challenges associated with moving goods, services, information and associated payments across complex, globally dispersed value chains to end customers. Topics include value-chain structures, supplier partnerships, cross-cultural issues, technology, data networks, global logistics, risk management and value-chain mapping. A field project provides students with an opportunity to work in teams applying the course concepts to increase customer value in a real value chain.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	532	Leading Global Projects	Provides an overview of the global context of project leadership. Global project leaders work at the intersection of project management, leadership in a project context and cross-cultural effectiveness. Exposes students to key project leadership approaches including stakeholder management, methods for increasing inclusion on global project teams and building high-performing global project teams. Uses case studies, a simulation, several exercises and interactive discussions.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TGM	540	Managing People from a Global Perspective	Explores the mix of organizational practices and people that can be the basis of sustainable competitive advantage in the contemporary global business environment. Topics covered include cross-cultural issues in managing people, traditional and emerging models of organizations, organizational culture, leadership, employee skills and motivation, reward systems and change management.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	541	Competitive Strategy from a Global Perspective	Focuses on choices that impact the performance of the entire organization. Examines central questions: Why are some industries and firms more profitable than others? How do firms create competitive advantage? How does the choice of strategy drive organizational performance? How do firms manage scarce resources in the pursuit of strategic objectives? How do firms create unique and sustainable industry positions?	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	546	Regional Industrial Analysis	Builds on concepts introduced in competitive strategy, global strategy and regional business environment. Focuses on the analysis of the strategies adopted by competing players and their impact on the global strategies pursued by the parent organization in the context of regional industry dynamics. Covers a spectrum of topics ranging from industry cluster formation, country-specific advantage, industry versus industry ecosystem analysis, the government's role in industry and regional development including national innovation systems, demand and supply chains in regions, and emerging market challengers. Applies multiple decision-making tools and frameworks to understand the Information and Communications Technology (ICT) industry in Asia Pacific--the fastest growing region in the world. Tools and frameworks learned in this course are applicable to other regions and other industries.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 505
TGM	547	Leading Change and Transformation in a Global Environment	Increases understanding of the nature of organizational change (through conceptual frameworks, readings and discussions). Specifies skills needed for managing change. Enhances sensitivity to the contribution and consequences of the human element as related to change. Helps student's own capacity to "thrive on change."	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 540
TGM	548	Global Strategy	Focuses on how global firms create value. Covers topics ranging from country-specific competitive advantage and the notion of distance to alternative global strategy archetypes and sources of competitive advantage for emerging market multinationals. The approach applies multiple decision-making tools and frameworks to untangle the complexities of managing in a global corporation.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 541
TGM	549	Global Leadership	Explores the concept of effective leadership within and across a variety of organizations and global contexts. Definitions of "leadership" and strategies for becoming an accomplished leader abound. Rather than attempt to narrowly focus our attention on definitions, leadership styles, and supposedly "definitive" theories of leadership, focuses on the demands of and competencies associated with excellent leadership. Most importantly, examines how leaders sense the need for and then manage organizational change. Given the increasingly complex world we live in and the ongoing and rapid rate of change, change management has become one of the most critical of leadership skills.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 504 or 540
TGM	551	Global Marketing Strategy	Covers the major concepts involved in creating and sustaining customer value, analyzing the firm's macro environment, choosing whether or not to enter a foreign market, how to evaluate different foreign markets, the best methods for entering different markets, the market research design process, understanding consumer and B2B customer behavior, and ethical issues encountered in global marketing.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	552	Global Marketing Management	Covers the functional aspects of marketing including decisions relating to segmentation, targeting, branding, product development, pricing, distribution and advertising/promotion. Students integrate their knowledge of these topics through the creation of an international marketing plan based on a product or service and in a country approved by the instructor.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	579	Communicating in a Global Context	In a dynamic and interactive format, presents a framework of models and skills for building communication performance in competitive global business settings. Assists in implementing strategies for mastering interpersonal encounters, including conflict resolution, in multicultural environments. Not only examines theories of communication, but places students in experiential situations in which they develop valuable global management skills. Using cases, self-assessment questionnaires, multicultural team exercises and simulations, equips the global manager with the ability to solve problems and take advantage of opportunities in a multicultural world.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-2		Prerequisite(s): graduate Thunderbird School of Global Management student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TGM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	581	Negotiating in a Global Context	Provide students with knowledge, skills, insights and experience necessary to be a competent negotiator. Covers theories of cross-cultural negotiation and how these impact business interactions. Students gain insight into personal and cultural underpinnings that influences cognitive, affective and negotiation behavioral processes. Expands skills in achieving communication and negotiating competence through the understanding and practice of increased appropriateness, flexibility and adaptability.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2-3		
TGM	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	585	Corporate Social Responsibility in a Global Context	Provides knowledge, skills, insights and experience necessary to be a competent negotiator. Covers theories of cross-cultural negotiation and how these impact business interactions. Students gain insight into personal and cultural underpinnings that influences cognitive, affective and negotiation behavioral processes. Expands skills in achieving communication and negotiating competence through the understanding and practice of increased appropriateness, flexibility and adaptability. Corporate Social Responsibility (CSR) has become essential for corporations seeking to succeed in an intensely competitive global economy. Provides an in-depth understanding of what CSR is, how to apply it effectively in an international context and how to manage it well. Using a case-based approach, focuses on actual experiences of corporations that have used CSR strategies successfully--and unsuccessfully--to draw practical lessons for international managers. Incorporates several guest lectures from executives who share their firsthand experiences with CSR in various regions of the world.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 505
TGM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic or writing a literature review of a topic.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	591	Seminar	A small class emphasizing discussion, presentations by students and written research papers.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	592	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded and no grade is assigned.	Y	RSC	Y	Z3	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1		
TGM	596	Thunderbird Experiential Practicum	Capstone course offering students an opportunity to apply the full range of professional skills they have acquired during graduate business and management studies. Consists of participation in a consulting project for a client system in an emerging market country, including Central America, Latin America, the Middle East, Africa, central and eastern Europe, and the whole of Asia apart from Hong Kong, Japan, Singapore, Australia and New Zealand. Serves all sectors: public/governmental, private and NGO/nonprofit.	N	PRA	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-6		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 501 or 512; TGM 502 or 522; TGM 503 or 552; TGM 505 or POS 586; TGM 506 or 579; TGM 508; TGM 581, OR Master of Arts in Global Affairs and Management major; TGM 507

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TGM	597	Thunderbird Integrative Experience	Provides a capstone experience that integrates content from several business areas including strategy, finance, cross-cultural communication, supply chains, leadership, operations and accounting. May take the form of an integrative business computer simulation or a seminar drawing on faculty from a variety of business areas to highlight key issues in those areas.	N	LEL	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 505; TGM 512; TGM 522; TGM 530; TGM 541; TGM 552; Corequisite(s): TGM 548
TGM	598	Special Topics	Topical courses not offered in regular course rotation (e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand).	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
THA	101	Elementary Thai I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose readings in Thai script.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
THA	102	Elementary Thai II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		Pre-requisites:THA 101 with a grade of C or better
THA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Prerequisite: Freshman with minimum 25 hours
THA	201	Intermediate Thai I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites:THA 102 with C or better
THA	202	Intermediate Thai II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites:THA 201 with C or better
THE	100	Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisite(s): non-Theatre and non-Film students only
THE		Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
THE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
THE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THE	320	History of the Theatre I	Centers on the historiography of world theatre as art, as a medium of cultural expression and as a social institution. Involves, along with the reading of plays, advanced methodological approaches to studying the creation of theatre within cultural and political contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & H	Prerequisites: THF 220 with C or better; THE 220 with C or better
THE		History of the Theatre I	Centers on the historiography of world theatre as art, as a medium of cultural expression and as a social institution. Involves, along with the reading of plays, advanced methodological approaches to studying the creation of theatre within cultural and political contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Prerequisites: THF 220 with C or better; THE 220 with C or better
THE	321	History of the Theatre II	Traces major developments in theatre production from the 17th century to modern times.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & H	Pre-requisites: THE 220 (or THF 220) with C or better; THE 320 with C or better
THE	322	Theatre History and Culture	Critically examines major developments in theatre history, historiography, and dramatic literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & H	Prerequisites: Must NOT be a Theatre student
THE	325	Play Reading for Educational Theatre	Assigned independent readings in plays for secondary school play production.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisites: Theatre student
THE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THE		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
THE	403	Independent Film	Examines the independent film movement from the French New Wave to contemporary independent filmmakers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisites: ENG 102, 105 or 108 with C or better
THE	404	World Cinema	Films and filmmakers from Europe, Asia, Australia, the Far East, South America, and the Caribbean. Emphasizes cultural content and filmmaking philosophies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	G	Prerequisites: ENG 102, 105 or 108 with C or better
THE	405	Film: Great Performers and Directors	Examines processes and influences of one or more great film performers and/or directors.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Pre-requisites: ENG102, 105 or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	406	American Multicultural Film	Examines Native, African, Asian, and Latina and Latino American films and film artists in cinema history and production.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & C	Pre-requisites: ENG102, 105 or 108 with C or better
THE	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
THE		Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
THE	421	Shakespeare: Stage and Film	Examines Shakespeare's plays as written texts, stage performances, and film productions. Focuses on play reading, performance analysis, and film critique. Online course.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better
THE	422	Latina and Latino Theatre and Film	Explores issues of cultural identity through critical analysis of theatre and film by Latina and Latino artists in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better OR Theatre Masters students
THE	423	African American Theatre	Readings, discussion, video of the history and dramatic literature of African American playwrights and theatre companies in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	C	Prerequisites: ENG 102, 105 or 108 with C or better, or Masters student
THE	424	Trends in Theatre for Youth	Surveys the history, literature, and contemporary practices in theatre for youth.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		
THE	425	Chekhov and Russian Drama	An in-depth study of Chekhov's major works, representative short stories and major plays, including "The Cherry Orchard" and "Three Sisters". Taught in English.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only RUS or THE 425
THE	426	Pre-Columbian Theatre of the Americas	Selected studies in pre-Columbian theatre forms and texts of the Aztecs, Mayans, Caribbean islands, and North American Indians.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: ENG102, 105 or 108 with C or better, or Masters Theatre student
THE	429	Studies in European Literature and Culture	Literary, cultural, and historical issues.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better; Credit is allowed for only ENG, SLC or THE 429
THE	430	History of Fashion	Fashion is rarely set but rather evolves with eras of upheaval between one generation and the next. Clothes express the personality and rank of the individual creating an instantaneous and lasting impression. Introduces over 400 years of Western fashion history drawing parallels between the fashion and the period in which it existed.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Sophomore standing or higher; Minimum GPA 2.50
THE	440	Experimental Theatre and Performance	Explores 20th-century modernist theatrical forms and movements and development of alternative strategies for analyzing contemporary theatre and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L	Prerequisite(s): Theatre undergraduate student; THF 220 (THE 220) with C or better; THE 320 with C or better
THE	480	Methods of Teaching Theatre	Applies materials, techniques, and theories for theatre with 9th- through 12th-grade students. Emphasizes curriculum development and praxis.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Minimum junior standing; Credit is allowed for only THE 480 or 581
THE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Pre-requisites: Barrett Honors Theatre or Film student
THE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Pre-requisites: Barrett Honors Theatre or Film student
THE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THE		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
THE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-7		
THE		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		

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THE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
THE		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
THE	500	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): graduate School of Film, Dance and Theatre major
THE	504	Studies in Dramatic Theory and Criticism	Surveys dramatic theory, criticism, and aesthetics as they relate to contemporary performance.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre student
THE	505	Critical Theory and Performance	Surveys contemporary theories of culture as they apply to theatre and performance studies.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre graduate student
THE	510	Studies in Literature	Assigned individual reading program in standard sources and masterpieces in theatre literature. May be repeated for credit.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite: Must be a Theatre Education or Theatre for Youth student
THE	520	Theatre History and Literature	Surveys historiographical issues and dramatic literature related to key periods in theatre history.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre student
THE	524	Advanced Studies in Theatre for Youth	In-depth study of the history, literature, and contemporary practice of theatre for young audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Theatre Education or Theatre for Youth student
THE	525	Advanced Studies in Theatre for Youth II	Project-oriented explorations of theory and practice of contemporary theatre for youth audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite: THE 524 with B or better
THE	562	Literary Management Workshop	Advanced literary management for the contemporary theatre, including trends in new play development, festivals and productions throughout the United States. Participation in Arizona Playwriting Competition.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite: THP 560 with B or better
THE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THE	581	Methods of Teaching Theatre	Applies materials, techniques, and theories for theatre with 9th- through 12th-grade students. Emphasizes curriculum development and praxis.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate (degree or non-degree) student. Credit is allowed for only THE 480 or 581
THE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE		Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE		Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
THE		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
THE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Master of Art Theatre student
THE	600	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		
THE	700	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Pre-requisite: Must be a Theatre Education or Theatre for Youth student or have instructor approval.
THE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-15		
THE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-15		
THF	101	Acting Introduction	Introduces basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Must not be a Theatre student
THF	125	Orientation to Film, Dance and Theatre	Orientation to university and school resources and procedures. Academic success strategies, mentorship, goal setting. Community-building exercises.	N	REC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): BA Film (Film and Media Production or Filmmaking Practices) or BA Performance and Movement or BA Theatre (Acting or Design and Production or Theatre Exploratory) major; freshman standing
THF	126	School of Film, Dance and Theatre: First-Year Experience	Community building within the School of Film, Dance and Theatre; connections with faculty; foundations of creative process; attendance and written response to performance and media events.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Prerequisite(s): BA Film (Film and Media Production or Filmmaking Practices) or BA Performance and Movement or BA Theatre (Acting or Design and Production or Theatre Exploratory) major
THF	160	Introduction to Storytelling	Introduces the nature, structure, and operations of story, as well as the functions of narrative in societies and cultures. Several modules introduce a different mode of storytelling. Students learn to create their own stories utilizing several of the approaches introduced in the modules.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): BA Film or BA Performance and Movement or BA Theatre major

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THF	215	Design and Composition for Theatre and Film	Introduces the aesthetic principles and practices employed by designers/artists of the stage and screen, including: basic knowledge of the elements and principles of design; conceptualization of design for theatre and film; director/designer collaboration models; methods and modes of visual communication for theatre and film (storyboards, renderings, models, etc.).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): BA Digital Culture (Theatre) or BA The Arts (Entertainment Design) or BA The Arts (Fashion Design) major OR School of Theatre and Film major
THF	220	Principles of Dramatic Analysis	Analysis, evaluation, and interpretation of dramatic literature for theatrical production. Emphasizes the traditional canon of dramatic literature and traditional structures and forms of drama.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Pre-requisites: School of Theatre and Film major or Theatre Exploratory major with minimum sophomore level; ENG 101, 105 or 107 with C or better; Pre- or Co-requisite: THF 126 with C or better
THF	397	Professional Development Seminar	Preparatory course for senior projects. Students research and create senior project proposals while formalizing faculty mentorships.	Y	SEM	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisites: Film BA or Performance and Movement BA or Theatre BA major; Minimum 56 hours
THF	497	Senior Project	Mentored practicum for culminating capstone projects.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): THF 397 with C or better; Film BA or Performance and Movement BA or Theatre BA major; Minimum 56 hours
THP	102	Acting I: Fundamentals	Explores and applies basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Performance and Movement of Theatre major
THP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THP	201	Theatre Production Crew	Participation in university mainstage theatre production backstage and board operations.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		
THP	202	Acting II: Intermediate Techniques	Rehearsal techniques and application of action to dramatic text.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 101 or THP 102 with B or better; THP 272, 277 with B- or better. Pre- or corequisite(s): THF 220 (THE 220) with C or better if completed
THP	212	Puppetry with Children	Construction and manipulation of puppets; practice in performance skills. Emphasizes educational and recreational uses of puppetry by and with children.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		
THP	213	Introduction to Technical Theatre	Procedures of technical theatre production and demonstration. Topics include design and construction of scenery, lighting, and properties.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	4		Pre-requisites: Theatre or Digital Culture (Theatre) student
THP	214	Introduction to Costuming	Basic principles of costume design, construction, and survey of selected historical periods including makeup styles. Costume design project and production experience.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	4		Prerequisite(s): Digital Culture (Theatre) or The Arts (Entertainment Design) or The Arts (Fashion Design) or Theatre major
THP	218	Directing I: Introduction to Directing	Overview of emergence and practice of the director's craft. Explores director's role and responsibilities, play selection, conceptualizing, ground plans, blocking.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre student; THF 220 with C or better; THP 102 with C or better
THP	251	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
THP	260	Introduction to Playwriting	Basic skills of playwriting including exercises in monologues, scenes, and conflict and resolution, leading to completion of a one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: ENG101,105 or 107 with C or better
THP	272	Acting: Introduction to Movement	Movement vocabulary and physical training in relaxation, alignment, conditioning, and stage presence. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THF101 or THP102 with B- or better
THP	277	Acting: Introduction to Voice	Exercises and techniques to free the voice and improve quality and projection. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THF101 or THP102 with B- or better
THP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THP		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		

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THP	301	Theatre Production	Participation in university mainstage theatre productions (e.g., acting, construction, stage management).	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-2		Prerequisites: THP 213 or THP 214 with C or better
THP	302	Acting III: Advanced Techniques	Advanced practice in methods, skills, and research for rehearsal and performance.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s) with C or better: THF 101 or THP 102; THF 220 (THE 220); THP 202, 272, 277; minimum junior standing
THP	307	Acting: Research and Performance	Acting in theatre projects, productions, or collaborative performances in directing classes.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		Prerequisite: THF 101 (or THP 101 or THP 102) with C or better
THP	311	Creative Drama with Youth	Theories, materials, and techniques for facilitating improvisational drama with children and youth in classroom and community settings.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; minimum 25 hours
THP	313	Fundamentals of Design	Art and practice of scenic, costume, and lighting design for the theatre and the media.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: THP 213 or THP 214 with C or better or Digital Culture (Theatre) major
THP	317	Stage Management	Readings in stage management and participation as a stage manager in a university theatre production.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre undergraduate student; Corequisite: THP 301
THP	318	Directing II: Intermediate Directing	Explores approaches to staging and composition. Studio work culminates in presentation of a fully rehearsed ten-minute play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP218 with C or better; THP213 or THP214 with C or better
THP	330	Costume Design	Explores the elements of design, taking abstract ideas and formulating them into concrete forms. Encourages the student to experiment with different ideas and mediums. Emphasizes design basics, research, figure drawing, and beginning rendering techniques. Uses projects that involve complex script and character analysis to promote the student's ability to effectively communicate.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THF 215 or THP 313 with C or better
THP	331	Costume Construction	Uses of materials and techniques for stage costumes with actual construction of period apparel. May be repeated for credit.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 214 with C or better
THP	332	Makeup	Practical guide to the theory and practice of theatrical makeup. Basic principles of stage makeup design and application. Develops and increases skills in the application and design of the medium through a combination of reading assignments, lecture, demonstration and supervised practice sessions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Theatre (Design and Production) major or minimum 45 hours; Credit is allowed for only THP 332 or 494 (Makeup/Advanced Makeup)
THP	335	Advanced Stagecraft	Advanced construction techniques through applicable projects in carpentry and steel fabrication for theatre production in scenery and properties.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Minimum sophomore standing; THP 213 (or THP 301 Production) with B or better; Credit is allowed for only THP 335 or 394 (Advanced Stagecraft)
THP	340	Scene Design	Studio projects in designing scenery for contemporary stages.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 220 with C or better; THP 213 with C or better OR Digital Culture (Theatre) major
THP	345	Lighting Design	Principles and theories of stage lighting design, including design process and execution, advanced exploration of design implementation and equipment; course includes drafting and drawing.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Minimum Junior standing or Design & Production student with minimum sophomore standing
THP	350	Sound Design	Introduces the equipment, process, and recording techniques used in sound design for the theatre.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre or Film student or Digital Culture (Theatre) student; THF 215 or THP 313 with B- or better
THP	351	Arts Management	Management, organizational behavior, and human behavior in the arts; marketing, financing, and budgeting for the arts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: BA The Arts major or minimum 45 hours; Credit is allowed for only THP 351 or 394 (Management and the Arts)

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THP	355	Media Design for Performance	Introduces the fundamental skills, practices and theories for media and projection design for live performance, building on traditional areas of design for the theatre.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Theatre and Film or Digital Culture (Theatre) student; THF 215 or THP 313 with B- or better
THP	360	Intermediate Playwriting	Continued development of skills in playwriting through specific exercises and completion of a full-length play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre- or Co-requisite: THP 260 (with C or better if completed) or Pre-requisite: ENG 210
THP	372	Acting: Advanced Movement	Movement techniques for the classical and nonrealistic theatre.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 272 with B or better; Minimum junior standing
THP	377	Acting: Voice and Speech	Introduces phonetic alphabet, exercises, and techniques for voice and speech improvement. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 277 with B or better; Minimum junior standing
THP	385	Acting: Classical and Poetic Drama	Rehearsal and performance of Shakespeare and other classical playwrights. Emphasizes understanding poetic language, vocal and physical skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 101 (or THP 102) with B- or better; THP 277 with B- or better
THP	386	Acting: the Meisner Approach	Improvisations and exercises developed by Sanford Meisner applied to scene work.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 101 or THP 102 with B or better
THP	387	Acting: TV and Film	Professional television and film acting techniques, terminology, and on-camera experience.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre major, Theatre minor or Filmmaking Practices major; THF101 (THP 101) or THP102 with B or better, or Film and Media Production student
THP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THP		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
THP	401	Theatre Practicum	Production assignments for advanced students of technical production, stage and business management, and design.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-2		Prerequisites: THP 301 with a C or better, or Master of Arts or Master of Fine Arts student
THP	406	Advanced Scenography	Process of production collaboration among scenographers, directors, and playwrights. Taught in conjunction with THP 519.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master in Fine Arts student; THP 340 plus one of the following: THP 214, THP 313, or THP 345 with C or better
THP	411	Methods of Teaching Drama	Applies materials, techniques, and theories with grades K-8 youth. Regular participation with children.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: THP 311 with A- or better or Graduate student; Credit is allowed for only THP 411 or 511
THP	418	Directing III: Advanced Directing	Studio work building on skills learned in intermediate directing, culminating in the presentation of a fully rehearsed one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: THP 318 with C or better or Herberger Master of Art or Master of Fine Arts student
THP	420	Acting: Solo and Collaborative Performance	Creation and development of original performance art works combining text, movement, multimedia, visual art; the actor as writer, designer, performer.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 101 or THP 102; minimum junior standing
THP	428	Theatre and the Future	Senior projects course that includes a culminating creative synthesis of student's knowledge.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre student; THP 201 or THP 301 with C or better; THE 440 with C or better
THP	431	Advanced Costume Construction	Specialized training in costume construction problems and crafts with projects in tailoring, millinery, and period accessories.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre Design & Production or Digital Culture (Theatre) students; THP 214 and 331 with C or better or Theatre Performance Design student.

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THP	435	Technical Direction	Seminar in fundamental principles and practices of technical directors as managers, engineers and artisans in theatre production.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Minimum junior standing; THP 213 and 301 (Theatrical Construction) OR THP 301 (Production) with B or better; Credit is allowed for only THP 435 or 494 (Technical Direction)
THP	440	Advanced Scene Design	Advanced studio projects in designing scenery for a variety of stage forms.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 340 with C or better, or must be a Theatre Scenography or Performance Design student
THP	441	Scene Painting	Studio projects in painting stage scenery.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 340 with C or better, or Theatre Scenography or Performance Design student
THP	442	Drawing	Techniques in drawing and rendering for scenic, costume, and lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Digital Culture (Theatre) or The Arts (Entertainment Design) or The Arts (Fashion Design) or Theatre major
THP	444	Drafting for the Stage	Fundamentals of and practice in graphic techniques for the stage. Introduces computer-aided design for the stage.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 213 with C or better, or Theatre Performance Design or Digital Culture (Theatre) student
THP	445	Advanced Lighting Design	Specialized techniques in stage lighting. Advanced application of design process, graphic techniques of design presentation, and use of qualities of light.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP345 C or better, or Theatre Scenography or Performance Design student AND THP444 with B or better
THP	448	AutoCAD for Live Entertainment	Comprehension and practice of two-dimensional drafting techniques in AutoCAD. Focuses on applications in live entertainment.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: THF 215 or THP 313 with C or better or Theatre Design and Production major; Credit is allowed for only THP 448 or 494 (AutoCAD)
THP	449	AutoCAD 3D for Live Entertainment	Comprehension and practice of 3D drafting and rendering techniques in AutoCAD. Focuses on applications in live entertainment.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: THP 448 with C or better; Credit is allowed for only THP 449 or 494 (AutoCAD 3D)
THP	450	Theatre Organization and Management	Overview of nonprofit arts: organizational design, strategic planning, financial management, and leadership.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Herberger Institute for Design and the Arts student
THP	451	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre/Co-requisite:THP 450
THP	452	Arts Entrepreneurship Seminar	Challenges students to learn how individuals have used their creative skills to create new arts business models. Case studies examine how creativity can spur new opportunities in the arts industry. Students complete their own project proposals.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: THP 352 with C or better
THP	455	Advanced Media Design	Explores advanced skills, practices and theories for media and projection design for live performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Dance, Film or Theatre major; THP 355 with C or better; Credit is allowed for only THP 455 or THP 494 (Advanced Media Design)
THP	457	Digital Portfolio	Cross-disciplinary exploration of methods, technologies and aesthetics of portfolio presentation for professional designers and artists.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): The Arts (Fashion Design) or Theatre (Design and Production) major; minimum 56 hours; Credit is allowed for only THP 457 or THP 494 (Digital Portfolio)

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THP	482	Theatre for Social Change	Interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	C	Prerequisite: Minimum sophomore standing
THP	483	Acting: Viewpoints and Composition	Training in Anne Bogart's viewpoints and composition techniques; application to rehearsal and performance, and creating new work.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THP 202 with C or better (or BA Performance and Movement major), junior standing or higher or MFA major
THP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): Theatre or Film student
THP	489	Acting: Audition Techniques and Career Development	Familiarization with the business of performance: preparation and techniques for auditioning; self-promotion and marketing strategies; grant resources, interviews, and unions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THP 102 or THF 101 with B or better; THF 220 (THE 220) with B or better; minimum junior standing
THP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): Barrett Honors student
THP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Prerequisite(s): Barrett Honors student
THP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THP		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
THP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-7		Prerequisites: Theatre Design & Production student
THP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
THP	501	Performance: Solo Performance	Students begin to define their mission in art. Emphasizes the actor as a solo storyteller, speaking as herself or himself.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-8		Prerequisites: Master of Arts or Master of Fine Arts Theatre student
THP	505	Graduate Colloquium	Orientation to graduate study of theatrical practice; cohort development, introduction to the advanced literature and media in the art form.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisites: Master of Fine Art Theatre student
THP	506	Design Collaboration	Process of production collaboration. Taught in conjunction with THP 519. May be repeated for credit.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Arts or Master of Fine Arts Theatre student;
THP	511	Methods of Teaching Drama	Applies dramatic materials, techniques, and theories with grades K-8 youth. Regular participation with children. Credit is allowed for only THP 511 or 411.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		
THP	512	Puppetry Workshop	Surveys puppetry in education, puppetry as an art form in design and performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate student
THP	513	Touring Theatre	Provides an understanding of the theories and aesthetics of touring theatre and a practice in its conceptualization, creation, administration, and production. Examines a variety of styles and methods of creating "movable" theatrical material, focusing on forms that require minimal scenic and design support. Focuses on process and working toward a quality product.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Fine Arts Graduate student; Credit is allowed for only THP 513 or 598 (Touring Theatre)
THP	514	Projects in Community-Based Theatre	Theories and techniques of improvisational theatre with emphasis on youth. Stresses professional development through projects combining research, theory, and practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite: Master in Arts, Master in Fine Arts or PHD Theatre major
THP	517	Stage Management	Advanced study of the principles and practices of stage management in the professional theatre.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate student in the Herberger Institute for Design and the Arts, the School of Community Resources and Development, or the W.P. Carey School of Business
THP	518	Advanced Directing Lab	Active discovery of directing concepts through practical exercises and collaboration; deconstruction of contemporary/classic literature. Explores director as primary artist.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Arts, Master of Fine Arts, or PHD Theatre student

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THP	519	Directing: Works in Progress	Advanced projects in directing concentrating on a collaborative process among director, playwright, actors, and designers. Focuses primarily on new scripts or adaptations of literature.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	520	Directing the New Play	Advanced methods and studies in directing, focusing on new play development.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	521	Performance I: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination; emphasizes physical diagnostics and development.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	522	Performance I: Acting and Voice	Advanced studio work in the performer's voice; emphasizes physical awareness, vocal anatomy, training, and interpretation of texts.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	523	Performance II: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	524	Performance II: Acting and Voice	Advanced studio work in the performer's voice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	525	Design I: Conceptualization and Collaboration	Conceptual structures of the design process in theatre; development of creativity, flexibility, and communication in the collaborative process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	526	Design I: Drawing and Rendering	Development of drawing and rendering skills, techniques, and evaluation in the presentation, realization, and communication of performance design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	527	Design II: Conceptualization and Collaboration	Offers students the chance to develop advanced skills in creating fully realized design ideas, particularly in working with new and experimental forms. Through the coursework, readings, and projects, students develop new methods and systems of thought for dealing with challenging dramatic works.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Master of Fine Arts Theatre major
THP	528	Design II: Visualization and Presentation	Advanced skills and techniques in rendering, visualizing and presenting design ideas and materials for performance.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	529	Viewpoints and Composition		N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		
THP	540	Scene Design Applications	Conceptual and practical application of the design process including graphic and sculptural projects. Practical design problems investigated in a lab.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Art or Master of Fine Art Theatre student
THP	545	Lighting Design Applications	Advanced studio projects in stage lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Fine Arts Theatre student
THP	550	Theatre Organization and Management	Overview of nonprofit arts: organizational design, strategic planning, financial management, and leadership.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Theatre student
THP	551	Arts Management	Advanced study of the principles and practices of arts management in the nonprofit and for-profit sectors.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate student in the Herberger Institute for Design and the Arts, the School of Community Resources and Development, or the W.P. Carey School of Business
THP	552	Arts Entrepreneurship	Project-based course in new venture creation for the arts.	N	SEM	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate student in the Herberger Institute for Design and the Arts, the School of Community Resources and Development, or the W.P. Carey School of Business
THP	555	Media Design Applications	Advanced applications for skills and practices in media design for live performance, including content creation, systems design, and playback.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	556	Performance Technology	Examines issues surrounding the integration of live performance and digital media. Students study the work of contemporary practitioners and theorists and experiment with creating their own works of digital art.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Graduate Theatre major
THP	557	The Digital Portfolio	Crossdisciplinary exploration of methods, technologies, and aesthetics for portfolio presentation for professional designers and artists.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
THP	560	Dramatic Writer's Workshop	Practice and study of creating characters, dialogue, scenes, plays, and monologues for the stage.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre Master of Arts or Master of Fine Arts student
THP	561	Scripts in Progress	Studio work with the instructor centered on revisions of original plays.	N	IND	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	582	Theatre for Social Change	Advanced, interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Graduate or Doctoral student
THP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Pre-requisites: Theatre student
THP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre Master of Arts or Master of Fine Arts student
THP		Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Pre-requisites: Fine Arts Graduate student
THP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Prerequisite(s): Fine Arts graduate student
THP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Master of Art or Dramatic Writing Theatre student
THP	611	Research in Drama Education	Current research practices in drama education. Development and execution of research projects in ethnographic and arts-based models.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	618	Theatre for Youth Practicum	Practical experience in theatre for youth projects: improvisation, education, production.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2-3		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	649	Design Studio	Projects include design of scenery, costume, lighting, or sound for lab or mainstage productions.	N	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		Prerequisites: Master of Fine Arts Theatre student
THP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Master of Fine Arts or PhD Theatre student
THP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite: Master of Arts, Master of Fine Arts, or PhD Theatre student
TMC	110	Understanding the Enterprise	Introduces essential functions required in technology-based and innovative enterprises and viewed in the context of their relationship to each other; examines the enterprise's role in society.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Credit is allowed for only TMC 110 or TEM 194 (Introduction to Technology Development)
TMC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TMC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TMC	300	Career Management	Provides professional program business administration students with information on ASU business-related courses, business careers, interviewing, job hunting, and résumé skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1		Prerequisite(s): minimum 56 hours
TMC	310	Promotion of the Enterprise	Building and maintaining customers with an emphasis on developing a market identity and sales for technology-based and innovative enterprises.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: TMC 110 OR minimum 56 hours
TMC	320	Funding the Enterprise	Focuses on financial resource management techniques utilized by U.S. domestic companies and covers the unique aspects of revenue accounting and its application to company operations. Concepts covered include: data capture of requisite information from various computer systems; determination of revenues generated from sales of products and services to customers; in-depth analysis of operational expenses; preparation of accounting and financial data; monthly accounting requirements; account reconciliation; monthly/quarterly/annual reporting; development and analysis of financial reports and billing. Emphasizes accounting, planning and valuation concerns, as well as financial trends and industry prospects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 110 or TEM 194 (Introduction to Technology Development) OR IFT major: IFT 100
TMC	330	Leading the Enterprise	Essential practices for managers, including planning, organizing, leading and controlling the enterprise. Studies current issues affecting managers such as sustainability, environmental protection, work groups, globalization, technology management, entrepreneurship, diversity and continuous improvement.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): minimum junior standing
TMC	331	Quality Assurance	Instrumentation and methodologies for materials testing and quality control in various manufacturing processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre- or corequisite(s): ABS 350 (or AGB 360, ECN 221, EGR 280, PSY 230, STP 420, STS 401 or TEM 420); TMC 330 (or TMC 346)
TMC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TMC	396	Professional Orientation	Senior advising, industry presentations, and career counseling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1		Prerequisite(s): Fulton Polytechnic School undergraduate; minimum junior standing; Credit is allowed for only TMC 396 or GIT 396
TMC	410	Enterprise Operations	Emphasizes basic principles of enterprise operations management, including productivity, strategic management, global environment, forecasting, capacity planning, new technologies, location and layout strategies, supply-chain management, inventory control and scheduling. Uses common decision-making issues and related qualitative and quantitative techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisite: TMC 330
TMC	430	Enterprise Strategy and Innovation	Enterprise strategic plan development and implementation, concepts of open innovation; vision, mission, steps of strategic plan development; strategic goals, objectives, tasks, schedule, resource considerations; organization's strengths and weaknesses; environmental opportunities and threats; strategy implementation, impact assessment and refinement, organizational- and management considerations, theory and practice of open innovation.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisite: TMC 330; Credit is allowed for only OMT 494, Strategic Planng/Mgt or TMC 430
TMC	470	Enterprise Planning and Implementation	Investigates and tests tools and techniques for effective design and management of enterprise projects and programs using computer applications. Develops and demonstrates teambuilding and leadership skills in course projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisite: TMC 330 OR W.P. Carey BA Technology major with MGT 300. Credit is allowed for only OMT 570 or TMC 470
TMC	480	Senior Project	Capstone project experience refining skills in communication, research and information retrieval, critical analysis and criticism, and demonstrating technical competence in each student's area of study.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 430; senior standing
TMC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TMC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-7		Prerequisites: Fulton Polytechnic School undergraduate or graduate student AND have a 2.25 GPA or better

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TMC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		Prerequisite(s): Fulton Polytechnic School undergraduate; minimum 3.00 GPA
TMC	555	Leadership and Teams	Evaluates and discusses the latest research in leadership and teams in terms of accomplishing set goals efficiently and effectively both within large organizations and smaller groups. Addresses management and leadership styles and concepts such as team cognition and team situational awareness. Seminar-style course with a large amount of reading, discussion, synthesis and application of current research. Field trips to local airline operations and high-operational tempo organizations accompany the readings and in-class discussions.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TMC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1		Pre Requisites: Graduate or Non Degree Students Only
TMC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TSS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	501	A Deep History of the United States/Mexico Borderlands I	Using a comparative and relational approach, the seminar explores various layers of development starting with economic structures and culture and their impact on various aspects of transborder society including politics, social organization, demography, and cultural practice. Focuses on the period from pre-contact times to the Mexican American War.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	502	Foundations of Transborder Studies	Using a comparative and relational approach, explores various layers of development starting with economic structures and culture and their impact on various aspects of transborder society including politics, social organization, demography, and cultural practice. Focuses on the period from the Mexican American War to the recent past. Centers on comparative economic growth and development of Mexico and the United States, the impact of unequal development on the border region and its people, and the development of a transnational society in the U.S./Mexico borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	503	Epistemologies and Transborder Thought	Examines different approaches to the production and critique of knowledge relevant to transborder social, political, economic, cultural, and institutional structures and processes. The complexity of these structures and processes require transdisciplinary methods of inquiry that go beyond a single set of disciplinary assumptions. Explores the transdisciplinary articulation of theory and method, and considers the strengths and limitations of various approaches and critiques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	504	Tools for Transborder Research	Focuses on the selection of methods appropriate for transborder research. Considers the pitfalls of conducting monodisciplinary research in a stratified, differentiated and multicausal world; the most robust methods used in various approaches; the main methodological obstacles to transdisciplinary research; and the challenges of using mixed methodology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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TSS	505	Theories and Methods of Migration, Health & Applied Social Policy in a Transborder Context	Divided conceptually in three broad analytical areas: (1) migration with an emphasis on demography, (2) health with an emphasis on epidemiology, and (3) public policy analysis. Provides basic training in the application and interpretation of quantitative and qualitative methods and techniques commonly used in researching these areas. Applies these techniques to issues that are specific to the reality of transborder and/or transnational contexts. Students are required to apply and present an analysis in their field of interest which demonstrates their grasp of theory and method.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	506	Theory and Methods of Transborder Media and Expressive Culture	Overview of the interdisciplinary theories and methods employed to research and analyze media and creative cultural production. Objects of analysis include literature, film, live performance, theater, Web-based media, popular culture production, and visual arts. Required readings elucidate strengths, limitations, and applicability of particular theories and methods to different types of creative expression and media production as well as to their historical and political contexts. Students engage with, critique, and contribute to the theories and methods presented in the course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	507	Theory and Methods of Transborder Cultural Acquisition, Language Development, and Learning	This course familiarizes graduate students with literature on relationship between culture, language, and learning, and their theoretical and methodological underpinnings within a transborder context.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	601	Internship in Transborder Studies	Academic internship helps students become full participants in globalized, transnational contexts through a combination of practical experiences in community organizations, readings about transnational life in globalized contexts, reflection, and discussion.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	607	Colloquium in Transborder Studies	Provide students the opportunity to present their skills, learning, research, and topical interests before an open forum of faculty and students at the beginning of their third year and prior to their dissertation research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	608	Transmitting Transborder Studies to Publics and Institutions	Provides students with the most recent advancements in presenting the underlying theory, methods, and techniques in transborder analysis and application. Designed to enter multiple audiences in public, professional, academic, and school settings, course takes advantage of the latest developments in multimedia, print, and electronic technology, film, and print in order to provide systematic and detailed learning opportunities. Provides the basis of developing capacities to create and develop learning modules, and programs on issues of transborder political ecology, economic transformations, cultural development and emergence, literary constructions and projections, and issues of identity, class, and gender. Course is conducted bilingually and makes use of Spanish- and English-language resources. For this reason, it is advisable, but not required, that students are at least conversationally proficient with Spanish and English.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	609	Prospectus Design in Transborder Studies	Provides doctoral students with the necessary tools to prepare a research proposal that could be submitted as a dissertation prospectus or to a funding agency. Students bring a well-formulated idea of the kind of research they wish to pursue for their dissertation. They also bring a clear idea of the relevant concepts, literature and methods, required to complete the proposal.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TSS	611	Comparative and Transborder Perspectives on Learning	This small class emphasizes discussion, presentations by students, and written research papers. Surveys theoretical and methodological aspects related to the use of comparative and transborder perspectives to the study of education.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	612	The Political Culture of Learning & Change in Transborder Context	Examines a variety of development and learning issues confronting linguistically and culturally diverse groups with an emphasis on immigrant children and families. Includes such topics as: (1) Theoretical foundations and their related impact on organizing interventions for learning and socialization. (2) The intersection of the development of language, culture, and learning in context of linguistic diversity and immigration. (3) The influence and impact of public policy on language minority groups of immigrant backgrounds.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	614	Bilingualism in Diverse Acquisition and Practicing Contexts	Examines bilingualism, language in society, and languages in contact in transborder contexts and bilingual schooling.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): PhD student
TSS	615	Dialectical Inquiry in Transborder Contexts	Introduces the application of dialectical inquiry in value-relevant grounded research methods as a complementary approach to value-free scientific inquiry into practical problems in transborder cultural acquisition, language development, and learning.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Transborder Studies	1		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Transborder Studies	1		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Transborder Studies	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
TWC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
TWC	301	Fundamentals of Writing for Digital Media	Foundational concepts and technologies of writing for a variety of digital media.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 45 hours
TWC	347	Written Communication for Managers	Strategies, techniques and genres for developing and presenting information intended for business and other workplace audiences.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TWC	361	Writing for Health Care Management	Strategies, formats, and techniques for effective writing and presentation of information for nursing professionals.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better; RN-BSN student. Credit is allowed for only TWC 361 or TWC 362
TWC	362	Writing in Health Professions	Focuses on effective communication practices in health-related fields, emphasizing communicating professionally with both scholarly and workplace audiences. In addition to providing a foundation in workplace communication, emphasizes information and technology literacy to help students become proficient in collecting, analyzing, interpreting and synthesizing information using appropriate tools, sources and styles.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Medical Studies major or Nursing and Health Innovation student; Credit is allowed for only TWC 361 or TWC 362
TWC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
TWC	401	Fundamentals of Technical Communication	Basic information design principles for producing effective technical communication, including rhetorical and audience analysis, as well as common workplace genres and technical communication tools.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 401 or TWC 501
TWC	403	Writing for Professional Publication	Analyzes the market and examines the publication process, including the roles of the author, editor, and reviewer.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 45 hours
TWC	411	Principles of Visual Communication	Principles and tools of visual communication in print and electronic media, with an emphasis on document design, including typography and color.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 411 or TWC 511
TWC	414	Visualizing Data and Information	Covers how to process data and information in ways that help discover what's important about the information and what the clearest way is to communicate that information. Covers how to manage data and use a variety of software tools to communicate patterns and tell visual stories, as well as how to make choices in visualization style in ways that will assist an audience to effectively interact with and process the information.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only TWC 414 or TWC 494 (Visualizing Information or Information Visualization) or TWC 514 or TWC 598 (Visualizing Information or Information Visualization)
TWC	421	Principles of Web Authoring	Principles of writing for the Web, including information architecture, accessibility, usability and responsive design. Explores basics of markup language and content management.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 421 or TWC 521
TWC	422	Social Media in the Workplace	Analyzes different social media platforms and develops strategies and techniques for effective and appropriate use of social media in the workplace.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only TWC 422 or TWC 494 (Social Media in the Workplace)
TWC	431	Principles of Technical Editing	Principles and techniques of technical editing for print and electronic media, including standards, styles, copyediting, comprehensive editing and project management.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 431 or TWC 531
TWC	435	Global Issues in Technical Communication	Helps students understand issues that shape workplace communication in a global environment. Technical communicators are expected to be specialists who interact effectively with a broad range of audiences. Given the global nature of today's workplace, those audiences typically include people from many cultures and countries. Through readings, written assignments, and analysis of case studies, documents, and websites, explores ways in which culture and language shape professional interactions. Also examines other critical issues such as translation, localization, technology and distributed work teams that impact writing and designing documents in a globalized work environment.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only TWC 435 or TWC 494 (Global Issues in Technical Communication)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TWC	443	Grant & Proposal Writing	Develops persuasive strategies and approaches for researching and writing professional funding proposals and grant applications.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 443 or TWC 543
TWC	444	User Experience	Explores principles, techniques and tools of user experience (UX), including user and task analysis, user-centered design and usability testing.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 444 or TWC 544
TWC	445	Content Management and Topic-Based Authoring	Explores concepts, techniques, strategies and technologies for authoring, managing, and publishing re-usable content in online documentation, help files and other types of technical communication.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 445 or TWC 545
TWC	446	Technical and Scientific Reports	Explores strategies and techniques for developing informational and analytical reports in a range of genres and for a variety of audiences in scientific and technical fields.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 446 or TWC 546
TWC	451	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws, with emphasis on electronic environment.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 45 earned hours; Credit is allowed for only TWC 451 or 551
TWC	452	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 45 earned hours; Credit is allowed for only TWC 452 or 552
TWC	453	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 45 earned hours; Credit is allowed for only TWC 453 or 553
TWC	454	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 45 earned hours; Credit is allowed for only TWC 454 or 554
TWC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		
TWC	490	Capstone	Development of a professional portfolio, creation of a culminating document, and synthesis of undergraduate experience.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 45 hours
TWC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6		Prerequisite(s): Barrett Honors student
TWC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Letters & Sciences	College of Letters and Sciences	1-6	L	Prerequisite(s): Barrett Honors student
TWC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
TWC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-3		
TWC	501	Fundamentals of Technical Communication	Basic information design principles for producing effective technical communication, including rhetorical and audience analysis, as well as common workplace genres and technical communication tools.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 401 or TWC 501

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TWC	504	Applied Rhetoric and Technical Communication	Foundation in applied and technical communication. Covers the emergence and development of technical communication as a profession and field; rhetorical concepts and their application to technical and applied communication, ethical issues; and the impact of internationalization.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Degree-seeking graduate student
TWC	505	Research in Technical and Applied Communication	Explores the research process and methods appropriate for technical and professional communication. Provides a foundation for understanding the research process; designing and planning valid research within the context of technical and professional communication; collecting and interpreting information, ethical issues related to research; and reporting results.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisite: Degree-seeking graduate student
TWC	511	Principles of Visual Communication	Principles and tools of visual communication in print and electronic media, with an emphasis on document design, including typography and color.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 411 or 511
TWC	514	Visualizing Data and Information	Covers how to process data and information in ways that help discover what's important about the information and what the clearest way is to communicate that information. Covers how to manage data and use a variety of software tools to communicate patterns and tell visual stories, as well as how to make choices in visualization style in ways that will assist an audience to effectively interact with and process the information.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 414 or TWC 494 (Information Visualization or Visualizing Information) or TWC 514 or TWC 598 (Information Visualization or Visualizing Information)
TWC	521	Principles of Web Authoring	Principles of writing for the Web, including information architecture, accessibility, usability and responsive design. Explores basics of markup language and content management.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 421 or TWC 521
TWC	522	Social Media in the Workplace	Analyzes different social media platforms and develops strategies and techniques for effective and appropriate use of social media in the workplace.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only TWC 422 or TWC 522
TWC	531	Principles of Technical Editing	Principles and techniques of technical editing for print and electronic media, including standards, styles, copyediting, comprehensive editing and project management.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 431 or TWC 531
TWC	535	Global Issues in Technical Communication	Helps students understand issues that shape workplace communication in a global environment. Technical communicators are expected to be specialists who interact effectively with a broad range of audiences. Given the global nature of today's workplace, those audiences typically include people from many cultures and countries. Through readings, written assignments, and analysis of case studies, documents and Websites, explores ways in which culture and language shape professional interactions. Also examines other critical issues such as translation, localization, technology and distributed work teams that impact writing and designing documents in a globalized work environment.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only TWC 535 or TWC 598 (Global Issues in Technical Communication)
TWC	543	Grant & Proposal Writing	Develops persuasive strategies and approaches for researching and writing professional funding proposals and grant applications.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 443 or TWC 543
TWC	544	User Experience	Explores principles, techniques and tools of user experience (UX), including user and task analysis, user-centered design and usability testing.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 444 or TWC 544
TWC	545	Content Management and Topic-Based Authoring	Explores concepts, techniques, strategies and technologies for authoring, managing and publishing re-usable content in online documentation, help files and other types of technical communication.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 445 or TWC 545
TWC	546	Technical and Scientific Reports	Explores strategies and techniques for developing informational and analytical reports in a range of genres and for a variety of audiences in scientific and technical fields.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 446 or TWC 546

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TWC	551	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws; emphasizes electronic environment.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Credit is allowed for only TWC 451 or 551
TWC	552	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Credit is allowed for only TWC 452 or 552
TWC	553	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Credit is allowed for only TWC 453 or 553
TWC	554	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Credit is allowed for only TWC 454 or 554
TWC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		
TWC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		
TWC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TWC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		
TWC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TWC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-12		
TWC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Letters & Sciences	College of Letters and Sciences	1		
TWC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Letters & Sciences	College of Letters and Sciences	1-4		
TWC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Letters & Sciences	College of Letters and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
UET	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-3		
UET	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
UET	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
UET	305	Introduction to Microelectronics	Quantifies the role of microelectronics technology and its associated skills as drivers for electronics systems development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite: Academic Level greater than or equal to Junior
UET	331	Electronic Materials	Physical, chemical, electromagnetic, and mechanical properties of electronic materials. Solid-state device characteristics and their material properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 210; CHM 113; PHY 112 OR Applied Science (Electronic Energy Systems) BAS student
UET	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
UET	411	Layer Deposition Technology	Fundamentals, applications, and vacuum technology of layer deposition processes used in IC fabrication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: UET 331; Credit for UET 411 or 511
UET	416	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: UET 331; Credit is allowed for only UET 416 or 516
UET	418	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisites: UET 331; Credit is allowed for only UET 418 or 518

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UET	432	Semiconductor Packaging and Heat Transfer	Packaging theory and techniques; hermetic and plastic assembly; thermal management; electrical characteristics and reliability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisites: UET 331. Credit is allowed for only UET 432 or 532
UET	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		
UET	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
UET	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student
UET	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisites: Fulton Schools of Engineering undergraduate student; Minimum 2.25 GPA; OR Fulton Schools of Engineering graduate student
UET	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-7	L	Prerequisites: Fulton Schools of Engineering undergraduate student; Minimum 2.25 GPA; OR Fulton Schools of Engineering graduate student
UET	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-3		
UET	516	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisites: Graduate status. Credit is allowed for only UET 416 or 516
UET	518	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status; Credit is allowed for only UET 418 or 518
UET	524	Pattern Transfer Technology	Maskmaking, lithography, and etch processes for integrated circuit fabrication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status; Credit is allowed for only UET 424 or 524
UET	532	IC Packaging	IC packaging theory and techniques; assembly techniques, material issues; thermal management; electrical performance and reliability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status; Credit is allowed for only UET 432 or 532
UET	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Grad or Non Degree Grad student; 3.0 GPA or better, OR Senior level; Fulton Polytechnic School undergraduate student; 3.0 GPA or better
UET	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Grad or Non Degree Grad student; 3.0 GPA or better, OR Senior level; Fulton Polytechnic School undergraduate student; 3.0 GPA or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
UET	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Graduate or Non Degree Students OR Fulton Schools of Engineering undergraduate senior with minimum GPA 3.0
UET	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Graduate or Non Degree Students OR Fulton Schools of Engineering undergraduate senior with minimum GPA 3.0
UET	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Graduate or Non Degree Students OR Fulton Schools of Engineering undergraduate senior with minimum GPA 3.0
UET	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) with a 3.0 GPA or better OR be a Fulton Polytechnic School senior with a 3.0 GPA or better
UET	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Fulton Schools of Engineering senior with minimum 3.0 GPA
UET	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Fulton Schools of Engineering senior with minimum 3.0 GPA
UET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Fulton Schools of Engineering senior with minimum 3.0 GPA
UET	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Graduate or Non Degree Students OR Fulton Schools of Engineering undergraduate senior with minimum GPA 3.0
UNI	101	Student Success Seminar	Understanding human diversity, perspectives, and values as they relate to student success. Orientation to ASU resources, study skills, and academic and social issues for students. Seminar, discussion.	N	SEM	N	OPT	University College	Dean, University College	1		
UNI	110	Critical Reading and Thinking	Prepares students to be successful in college-level academics and helps them improve their critical reading and critical thinking skills.	N	LEC	N	OPT	University College	Dean, University College	3		
UNI	120	Academic Success	Assists students in creating strategies for success in their academic lives. Students explore personal and academic strengths and barriers that impact success, identify and utilize university resources available to support success at ASU, acquire and enhance academic skills necessary for success in the university, and discover ways to stay on course to meet academic goals.	N	SEM	N	GNA	University College	Dean, University College	1		Credit is allowed for only ASU 150 or UNI 120 or UNI 194 (Academic Success: Residential, Academic Success: Off-Campus, or Academic Success Seminar)
UNI	150	Major and Career Exploration	Concepts and skills in the process of selecting a major: self-assessment, research, interviewing, and decision making. Exploration of ASU opportunities and investigation of career options.	N	SEM	N	OPT	University College	Dean, University College	1		
UNI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	University College	Dean, University College	1-4		

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UNI	220	Academic Refresher	Assists students who find themselves in academic trouble (failed courses, academic probation, disqualification). Students explore the barriers that may be keeping them from reaching their academic goals and acquire tools to overcome those challenges. Topics include self management, self assessment, lifelong learning, and interdependence.	N	SEM	N	GNA	University College	Dean, University College	1		Credit is allowed for only UNI 220 or 294 (Academic Refresher)
UNI	250	Choosing a Major	Advanced, one-hour career development course helps students make a thoughtful selection of major and consider the career direction that fits best for them. Students complete advanced assessments of interests, personality, and values; investigate relevant majors and careers, including connecting with working professionals; learn effective decision-making strategies; identify barriers and resources; and make connections to new major department.	N	SEM	Y	OPT	University College	Dean, University College	1		Pre-requisites: UNI 150 Career Exploration with a C or better
UNI	270	Career Direction for a Successful Future	Actively engages students in their educational and career-planning process by exploring factors that influence personal decision making and planning for the future. Students examine their strengths and personal narrative, identify decision making factors, research career development and a particular career, and develop teamwork skills for the workplace.	N	SEM	N	GNA	University College	Dean, University College	1		Pre-requisite: UNI 250 with C or better; Credit is allowed for only UNI 270 or 294 (Next Steps in Career & Major Exploration)
UNI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		Prerequisite(s): minimum 45 hours
UNI	400	Society and the Individual	Various social institutions, how they shape the socialization process of a group and individual and give a community meaning, values and a set of norms. Focuses on Arizona as a case study for student research inquiries.	N	LEC	N	GNA	College of Letters & Sciences	College of Letters and Sciences	3	L	Pre-requisites: Bachelor of General Studies major; Minimum 2.00 GPA; Minimum 90 hours; Credit is allowed for only UNI 400 or COM 494 (Society and the Individual)
UNI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	University College	Dean, University College	1-12		
UNI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
URB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
URB	220	Introduction to Urban America	Investigates traditional and evolving forms of civic engagement and management. Examines leadership and organizational models to urban development and decision making.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
URB	240	Urban Policy	Examines major theories about the purposes and processes of urban policy formulation, adoption, and implementation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	C	
URB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
URB	300	Urban and Metropolitan Studies	Examines the city using a multidisciplinary approach drawing from different historical, cultural, social, philosophical, and economic issues and concepts.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Credit is allowed for only URB 100 or 300
URB	301	Urban Research	Introduces the philosophy, scope, and methods of urban affairs research. Includes an overview of quantitative and qualitative methods and research design.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
URB	302	Urban Theory	Examines the sociological, economic, and political theoretical positions underlying the development and evolution of metropolitan areas.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
URB	305	Urban Governance	Examines major shifts and trends in urban America. Concentrates on the changing approaches to governance and policies of urban areas.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: Credit for URB 105 or 305
URB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
URB	400	Senior Professional Seminar	Demonstrates completion of the urban studies program by synthesizing and applying core knowledge, skills, and abilities to significant urban issues.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
URB	405	Citizen Engagement and Community Building	Develops a conceptual, critical, and practical understanding of urban dwellers' involvement in community affairs as citizens and as builders of vital neighborhoods and vibrant cities.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: minimum 30 hours
URB	406	Public Administration & Community Development	Critically examines the concepts community and development and considers how important forces such as diversity, civic life, changes in social space, and globalization, affect our understandings about these concepts and influence our actions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: minimum 30 hours
URB	410	Building Leadership Skills	Introduces understanding and developing leadership skills, including an examination of leadership theories and models from multidisciplinary and crosscultural points of view, an assessment of the student's leadership capabilities, and practical applications to improve individual leadership capabilities.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	SB	Pre-requisites: minimum 30 hours; Credit is allowed for only URB 410 or PAF 410
URB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		

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URB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-6	L	Prerequisite(s): Barrett Honors student
URB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
USL	210	Service Learning: Intro to Diverse Community Issues	Correlates academic coursework with community service and provides reflection opportunities that examine community needs, the importance of civic engagement and an introduction to the effects of social injustice affecting ethnic minorities and other marginalized populations in contemporary American society. Students dedicate 70 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies) directly serving a population in need or supporting activities that contribute to the greater good of our community. Weekly seminar, course readings, discussions, and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship, and how to contribute to positive social change in our community. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L & C	
USL	216	Service Learning: For Educators	Examines the effects of social justice issues on student achievement. Correlates academic coursework with required community service to analyze community needs, the importance of civic engagement and community issues affecting ethnic minorities and marginalized populations in contemporary American society, particularly how it applies to our education system. Students dedicate a minimum of 70 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services) directly serving high-needs youth or adults. Weekly seminar, course readings, discussions and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship and social injustices, and how to utilize this knowledge in the teaching profession to better serve all students. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L & C	Pre-requisite: Mary Lou Fulton Teachers College major
USL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
USL	402	Service Learning: Education & Youth	Correlates academic coursework with community service and provides reflection opportunities that examine community needs, the importance of civic engagement, and an in-depth study of the effects of social injustice affecting ethnic minorities and other marginalized populations in contemporary American society as they apply to education in Arizona and the United States (policy, student achievement, teacher and administration effectiveness and parental involvement). Students dedicate 100 service hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies), directly serving high-needs youth. Weekly seminar, course readings, discussions and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship and the importance of civic engagement particularly how it applies to the education system. Provides real-world experiences that exercise advanced academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 45 hours
USL	410	Service Learning: Diverse Community Issues	Correlates academic coursework with community service and provides reflection opportunities that examine community needs, the importance of civic engagement and an introduction to the effects of social injustice affecting ethnic minorities and other marginalized populations in contemporary American society. Students dedicate 100 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies) directly serving a population in need or supporting activities that contribute to the greater good of our community. Weekly seminar, course readings, discussions and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship and how to contribute to positive social change in our community. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L & C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; 45 minimum hours
USL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
USL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
USL	496	Service Learning Capstone	Graded internship that allows students to integrate coursework with a hands-on service learning experience. Applies theory from service learning pedagogy and educational studies to real-world application and academic success. Provides field experience for students to exercise academic knowledge and skills applicable to career experience and program studies. Students must (a) successfully assess a community need in education that correlates to current research and (b) collectively plan a sustainable service project that benefits high-needs children. The student-directed service project addresses social justice issues in education related to corresponding research.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: USL 210 or 216
USL	497	Service Learning Capstone Project	Graded internship that allows students to integrate coursework with a hands-on service learning experience. Implements a sustainable service project addressing social justice issues in education. Student-directed project corresponds to research and planning completed during the previous semester. Provides field experiences for students to implement academic knowledge and skills acquired through the Educational Studies program and to create realistic solutions to national and local community issues that impact student achievement.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: USL 210 (216); 410 and 496
VTN	101	Elementary Vietnamese I	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	
VTN	102	Elementary Vietnamese II	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites:VTN 101 with C or better
VTN	201	Intermediate Vietnamese I	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisite: VTN 102 with C or better
VTN	202	Intermediate Vietnamese II	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisite: VTN 201 with C or better
VTN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	321	Advanced Vietnamese and Literature I	Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisite : VTN 202
VTN	322	Advanced Vietnamese and Literature II	Continuation of VTN 321. Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisite: VTN 321
VTN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
WAC		Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0-460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WAC	101	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0-460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WAC		Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ACT English score of 0-18; SAT Verbal score of 0-460 or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WAC		Introduction to Academic Writing	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3		Pre-requisites: TOEFL score below 560PBT/220CBT/83iBT; IELTS score below 6.5; ACT English score of 0-18; SAT Verbal score of 0-460; or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WAC	107	Introduction to Academic Writing	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: TOEFL score below 560PBT/220CBT/83iBT; IELTS score below 6.5; ACT English score of 0-18; SAT Verbal score of 0-460; or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WAC		Introduction to Academic Writing	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: TOEFL score below 560PBT/220CBT/83iBT; IELTS score below 6.5; ACT English score of 0-18; SAT Verbal score of 0-460; or Accuplacer score of 0-4 (unless test taken prior to May 12, 2009, then score of 0-7)
WAC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
WAC		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Department of English	1-4		
WPC	101	Student Success in Business	Introduces students to resources that help them to succeed in the W. P. Carey School of Business.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1		Credit is allowed for only ASU 101 (or equivalent) or WPC 101 or WPC 201 OR 194 (Business Student Development)
WPC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WPC	196	WPC Domestic Exchange Placeholder	Reserved for undergraduate participants in a W.P. Carey Domestic Exchange program. This placeholder course remains on the student's academic record until the student's record is updated by WPC following the completion of the student's domestic exchange program. This course is then dropped and replaced with the ASU course(s), credit(s), and grade(s) equivalent to the coursework completed during the domestic exchange program. Students must register for at least the number of credits equivalent to full-time study at ASU (i.e., 12 hours during the fall and spring semesters, or 1-6 hours during the summer session). NOTE: This placeholder course is not an indication of the level of coursework or the total number of credits the student may complete during the domestic exchange program. Acceptance to an WPC Domestic Exchange program is required.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1-18		
WPC	201	Business Student Development	Introductory business course for students transferring into the W. P. Carey School of Business. Focuses on ASU resources and developing professionalism.	N	LEC	N	GNA	W.P. Carey School of Business	Prebusiness Office	1		Prerequisite(s): WPC major with 15-44 earned hours. Credit is allowed for only ASU 101 (or equivalent) or WPC 101 or WPC 201 OR 194 (Business Student Development)
WPC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WPC	301	Business Forum	Provides professional program business students with information on careers, interviewing, job hunting, and résumé skills. Must be taken in the first semester of the professional program for business students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1		Pre-requisites: Must be a W.P. Carey degree program business student
WPC	302	Honors Professional Development	Provides a foundation for developing key professional knowledge and skills required for future business and personal success. Strategic thinking and design, scenario development, verbal and written persuasion, direct marketing techniques, systems thinking, relationship development, research design, and decision-making models.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1		

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WPC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must have a minimum GPA of 2.00; Must have a minimum total earned hours of 56
WPC	480	W. P. Carey Capstone Course	Develops a general manager's or business owner's perspective on how organizations can create value. Creating long-run value by repeatedly producing goods and services that customers will buy at prices that cover the costs of producing them is the key to success for business organizations. Analyzing current and future environments to understand threats and opportunities in various institutional settings around the world is the starting point for thinking about how an organization might create value and gain sustainable competitive advantage. Evaluates the impact of institutional settings in different countries and ethical values on decision making. Students learn how to successfully manage relations with key stakeholders including customers, employees, suppliers of capital as well as other component goods and services, and stakeholders from various levels of government in different countries.	N	LEC	N	GNA	W.P. Carey School of Business	Prebusiness Office	3	L	Prerequisite(s) with C or better: W.P. Carey BS major; FIN 300 or 302 or 303 (or IEE 300 if Egr Mgt); LES 305; MGT 300 or 303; MKT 300 or 302 or 303; SCM 300 or 303; WPC 301 or 302 (unless SCM/SUS conc deg); Intl Bus course; senior standing
WPC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		
WPC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-6		Prerequisite(s): Barrett Honors student
WPC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Prebusiness Office	1-6	L	Prerequisite(s): Barrett Honors student
WPC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must be W. P. Carey BS or BA degree program student; junior or senior standing.
WPC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-6		Prerequisite(s): Barrett Honors student
WPC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-3		
WST		Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & C	Credit is allowed for only WST 100 or WST 300
WST	100	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Credit is allowed for only WST 100 or WST 300
WST		Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Credit is allowed for only WST 100 or WST 300
WST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
WST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	220	Gender, Media and Culture	Introduction to gender and the media including magazines, films, advertising, new media, and other popular culture forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C	
WST	235	Disability, Justice and Advocacy	Overarching history of the disability rights movement and how it is similar to and different from other civil and rights movements. Examines how policies and activism are interconnected within this movement, in addition to looking at other human categories related to disabilities such as gender, sexuality, race and socioeconomic status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only COM 235, JUS 235, SST 235, WST 235 or SST 294 (Disability Justice and Advocacy)
WST	270	Global Perspectives on Women	Through lectures, creative class activities and discussions, presents a comprehensive overview of gender and globalization with special emphasis on lived realities of women worldwide. Understands women's lives and gendered experiences through the issues of work, identities (nationality, race, class, age, ability), bodies and embodiment, belief systems, political economy and difference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only WST 270 or 294 (Global Perspective on Women)
WST	276	Wave on Wave: Survey of U.S. Women's Movements	Historical survey of sources influential in the development of the feminist movement in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
WST		Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
WST	300	Women and Gender in Contemporary Society	Advanced interdisciplinary examination of such topics as gender, intersectionality, media and representations, sexuality, politics, health, violence and feminism.	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & C	Pre-requisite: 30 minimum hours; credit is allowed for only WST 300 or WST 100
WST		Women and Gender in Contemporary Society	Advanced interdisciplinary examination of such topics as gender, intersectionality, media and representations, sexuality, politics, health, violence and feminism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisite: 30 minimum hours; credit is allowed for only WST 300 or WST 100
WST		Women and Gender in Contemporary Society	Advanced interdisciplinary examination of such topics as gender, intersectionality, media and representations, sexuality, politics, health, violence and feminism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Pre-requisite: 30 minimum hours; credit is allowed for only WST 300 or WST 100
WST	302	History of Black Women in America	Advanced examination of the challenges that black women have faced historically in America and how they have responded to those challenges socially, politically, economically, and culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 302 (or AFS 302) or HST 335 or WST 302
WST	313	Women and Sexuality	Explores U.S. women's sexuality in social context, including how women's sexuality is portrayed in popular media, medicine and education; how girls learn to think about sexuality; and how public policies address women's sexuality.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	318	African and African Diaspora Women Writers	An in-depth study of themes such as race, class, gender, and ethnicity in the creative fiction of black women writers of African descent in the United States, the Caribbean, and Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit allowed only for AFR 318 (or AFH 318) or WST 318
WST	320	Gender, Drugs and Alcohol	Drug and alcohol use have multiple and diverse meanings shaped by their historical, social and cultural context. Examines how and why alcohol and drug use have been identified as social problems and the role of gender in shaping this process. Reviews multiple social and cultural aspects of gender, drug and alcohol use, as well as the emergence of gender-based health disparities within this context. Fulfills a science and society requirement. Basic scientific principles such as the formulation of research questions, data collection and analysis, have been used to develop our understanding of gender, drugs and alcohol. How society influences the nature of those questions, the perceived value attached to particular scientific studies over others, and how to critically evaluate law and policy around drugs and alcohol in light of those studies.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only WST 320 or WST 394 (Gender, Drugs and Alcohol)
WST	330	Women, Film, and Culture	Critical examination of the way films can reflect, reinforce or challenge mainstream cultural ideas about women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 30 hours
WST		Women, Film, and Culture	Critical examination of the way films can reflect, reinforce or challenge mainstream cultural ideas about women.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 30 hours
WST	331	Asian Pacific American Genders and Sexualities	Explores gender and sexuality issues as they relate to Asian Pacific American experiences, including interracial relationships, stereotypes, feminism, queer theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Credit is allowed for only APA 330 or WST 331
WST	333	Critical Perspectives on Sexuality	Examines critical theories of sexuality, including history, commerce, pleasure, LGBT issues, identity, medicalization of sexuality, disorders, sex crime, and pornography.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Pre-requisites: WST 100 or 300 with C or better
WST	335	Lost in Space: Gender, Race, and Sexuality in Science Fiction	Surveys the complex interrelationships of biomedical research and discourses of biological difference as reflected in science fiction. Explores such questions as: How have biological scientists explained human differences along axes of gender, race, class, sexuality? In what ways have these scientific discussions manifested themselves in science fiction?	N	LEC	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only APA 394 (Science Fiction Adventures Race/Gender) or WST 335 or WST 394 (Lost in Space: Gender, Race, & Sexuality in Sci Fi)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	340	Gender, Science, and Technology	In-depth examination of the complex interrelationships of gender, science, technology, and society in a number of different contexts. Looks at the participation of women in scientific and technical fields both historically and cross-culturally, and addresses such topics as: gender segregation by status and discipline, feminist theories of gender and science, the conditions under which women have succeeded in the sciences, gender and biological determinism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Pre-requisites: WST 100, 300 or minimum 30 hours
WST	345	Gender, Religion, and Global Violence	In-depth study of forms of gendered violence in which religion plays a key role in either the practice or perpetuation of that form of violence in a myriad of cultures and contexts. Analyzes current responses and proposes new approaches to combating or redefining these forms of violence, emphasizing the need to understand and respect the religious and cultural contexts in which these actions occur.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Pre-requisites: WST 100, 300 or minimum 30 hours
WST	360	Women as Healers	Advanced examination of the role of women as caregivers, healers, physicians, midwives, and nurses in different cultures and historical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	364	Unruly Voices: Black Women and Cultural Narratives	In-depth study of African American women writers and how they (re)define female identities and engage a critical cross-cultural dialogue within the context of cultural history in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 earned hours; Credit is allowed for only AFR 365 (or AFH364) or WST 364
WST	365	Women and International Health	Advanced study of gender-based disparities and global health, including impact of poverty, gender discrimination, political economy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	G	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	370	Chronicling Women's Lives	Explores the lives of a selected group of American women as a point of departure for the chronicling of contemporary women's lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C	Pre-requisites: WST 100 or 300 with C or better
WST	371	Sex and the City: Women, Sexuality, and Popular Culture	An in-depth study of the changing media representations of young, sexually autonomous women in the city.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	372	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better and minimum 24 earned hours or WST 100 or 300 with C or better; Credit is allowed for only JST 373, REL 373 or WST 372
WST	373	Latina/Chicana Issues	Critical examination of the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States and along the border.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 30 hours. Credit is allowed for only TCL 373 or WST 373
WST	374	Desperate Housewives	In-depth examination of the representations of women as wives and/or mothers in the popular discourse from the 20th century to current day through an analysis of various forms of popular culture such as film, magazines, popular writing and television.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Minimum 30 hours; Credit is allowed for only WST 374 or 394 (Desp Housewives: Gender, Family & Pop Culture)
WST	375	Women and Social Change	In-depth course on feminist activism and social change. Combines research and theory on a contemporary social problem with a community action experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	376	Feminist Theory	Explores feminist theories and the intersection of gender, race, ethnicity, and class through critical analyses.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H & C	Pre-requisites: WST 100 or 300 with C or better
WST	377	History of American Feminist Thought	Critical analysis of the origins and development of American feminist thought and political movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	H & C	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	378	Global Feminist Theory	In-depth studies of global feminist theories and exploration of the intersections of gender, race, ethnicity, class, and nation through critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C & G	Pre-requisites: WST 100 or 300 or minimum 30 hours
WST		Race, Gender, and Class	In depth examination of how social inequalities are reproduced and perpetuated. Explores the intersections of race, class, and gender in culture and society	N	LEC	N	OPT	College of Letters & Sciences	College of Letters and Sciences	3	SB & C	Pre-requisite: WST 100 (or WST 300) or minimum 30 hours
WST	380	Race, Gender, and Class	In depth examination of how social inequalities are reproduced and perpetuated. Explores the intersections of race, class, and gender in culture and society	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisite: WST 100 (or WST 300) or minimum 30 hours
WST		Race, Gender, and Class	In depth examination of how social inequalities are reproduced and perpetuated. Explores the intersections of race, class, and gender in culture and society	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Pre-requisite: WST 100 (or WST 300) or minimum 30 hours

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WST	382	American Indian Women	Investigate the economic, political and ideological factors contributing to American Indian women's intellectual and creative activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Pre-requisites:WST 100, 300, or AIS 180 with a C or better; or co-requisite if completed 30 hours or more: AIS 180, or WST 100 or 300. Credit for only AIS 381 or WST 382
WST	385	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: WST 100 or 300 with C or better
WST	390	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only REL 390 or WST 390
WST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	410	Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & G	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 410 or SSH 400 or WST 410 or JHR 598 (Poverty, Social Justice, & Global Health) or MAS 598 (Poverty, Social Justice, & Global Health)
WST		Poverty, Social Justice, and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or SB) & G	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 410 or SSH 400 or WST 410 or JHR 598 (Poverty, Social Justice, & Global Health) or MAS 598 (Poverty, Social Justice, & Global Health)
WST	413	Queer Studies	In depth exploration of lesbian, gay, bisexual, transgender, and queer experiences in the U.S. and globally, from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 45 hours
WST	420	Women of Color in Film	An in-depth analysis of the history and representations of women of color in film and the film industry through the intersections of gender, race, sexuality, class, and nationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 418 (or AFS 420) or FMP 420 or FMS 420 or WST 420
WST	421	Girlhood and Adolescence	Critical analysis of the changing construction of girlhood and female adolescence through history, memoir, fiction, myth, music, and media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisite: WST 100 or WST 300 or minimum 30 hours
WST	422	Women, Law and Social Control	Examines social, economic, and legal factors that are relevant to mechanisms of social control of women, including formal legal control and informal control through violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites:ENG 102, 105 or 108 with C or better; minimum 36 hours; Minimum 2.00 GPA; Credit is allowed for only JUS 422 or WST 422
WST	430	Gender on the Borderlands	Examines women's status in the U.S.-Mexico borderlands through key issues such as migration, labor, violence, education, and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G	Pre-requisites: WST 100 or 300 with C or better; Credit is allowed for only JHR 598 (Gender on the Borderlands) or WST 430
WST	440	Politics of Women's Health	In-depth and interdisciplinary exploration of how women's social, cultural, and economic position affect their health and health care.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisite: WST 100 or WST 300 or minimum 45 hours

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WST	444	Gender, Health, and Bodies	Explores gender and health from a feminist perspective, including critical analyses of medicine, science, and popular culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	Pre-requisites: WST 100 or 300 with C or better; Credit is allowed for only MAS 598 (Gender, Health, and Bodies) or WST 444
WST	447	Gender, Culture, and Development	In-depth analysis of gender roles related to health, family, work, education and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & G	Prerequisite(s): WST 100 or 300 or minimum 45 hours. Credit is allowed for only SGS 454 or SOS 447 or TCL 447 or WST 447 or TCL 598 (Gender, Culture & Development)
WST	449	Hate Speech, Manifestos, and Radical Writings	Examines writings, speeches and texts that provoke radical or even revolutionary social change. At its core, this course asks: What is the radical and what does it do? How do radical writings function as texts, speech acts, inspirational documents, testimonies, accounts of madness, frightening moments, calls to arms, peacekeeping entities or speaking truth to power? Examines injurious speech and provocative writings that span a range of social movements and topics, including radical feminism, radical queer, Black power, indigenous rights, art and performance, anti-technology, animal rights, violence, madness and revolutionary resistance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Minimum 35 hours; Minimum 2.50 GPA; Credit is allowed for only WST 394 (Hate Speech and Manifestos) or WST 449
WST	457	Women, Cultures, and Societies	Examines issues such as poverty, dependency, interdependency, race, class, and gender in different societies of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G	Pre-requisites: WST 100 or 300 with C or better
WST	460	Women and the Body	In-depth analysis of the cultural construction of the gendered body and societal prescriptions about beauty, body image, and size.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisite: WST 100 or WST 300 or minimum 45 hours
WST	467	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Latina, and Asian-American.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C	Prerequisite(s): WST 100 (or WST 300) with C or better. Credit is allowed for only ENG 460 or WST 467
WST	470	Gender and Popular Culture	Advanced interdisciplinary examination of how gender is constructed in various popular cultural forms such as film, television, magazines, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisites: WST 100 or WST 300 or minimum 45 hours
WST	471	Women's International Human Rights	In-depth study of the core themes of a global movement for women's international human rights. Analyzes the historical evolution of the development of international human rights and women's rights within the United Nations and regional human rights systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): WST 100 or WST 300 or minimum 45 hours. Credit is allowed for only AFR 470 (or AFS 470) (Women's International Human Rights) or AFR 598 (or AFS 598) (Women's International Human Rights) or WST 471
WST	472	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
WST	473	Indigenous and Latina/Chicana Representation	Examines from an interdisciplinary perspective contemporary issues experienced by Indigenous and Chicana/Latina women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 45 hours
WST	475	Women of the Diaspora across Cultures	Examines the socioeconomic condition, political formation, and identities of contemporary indigenous, ethnic minority, immigrant, and migrant women globally.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
WST	477	Women and Violence	Critical examination of forms of violence against women globally at individual, institutional, and cultural levels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisites: WST 100 or WST 300 or minimum 45 hours
WST	480	Gender Issues in Education	Examines the relationship between gender and educational access and outcomes as a result of public policy in a variety of communities and settings.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Pre-requisites: WST 100 or 300 with C or better
WST	483	Women Writers Across Cultures	Comparative approach to contemporary writings by women from around the world.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Pre-requisites: WST 100 or 300 with C or better
WST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST		Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		

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WST	485	Women, Gender, and Leadership	Explores the gendered nature of leadership and studies strategies that enable women to lead successfully in areas such as business, education, and public service.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Pre-requisites: WST 100 or 300 with C or better
WST	490	Transborder Queer Performativity	Explores a rich and diverse body of border-crossing performative expression created by queer and/or Latina/o artists. Course readings and discussions include solo and collaborative works with an emphasis on solo autobiographical performance scripts as well as performer interviews and performance scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 45 earned hours; Credit is allowed for only TCL 490 or WST 490
WST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
WST		Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
WST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
WST		Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
WST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST		Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
WST		Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
WST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7	L	Pre-requisites: WST 100 or 300 with C or better; ENG 101 or ENG 107 or ENG 105; Majors only
WST		Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: WST 100 or 300 with C or better; ENG 101 or ENG 107 or ENG 105; Majors only
WST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-3		
WST		Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
WST	501	Foundations of Feminist Thought	Provides key concepts and theories that have shaped the field of women and gender studies. Also provides overview of resources for research in women's studies scholarship at ASU and prepares students to participate in the field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only WST 501 or WST 691 (Foundations of Fem Thought)
WST	502	Interdisciplinary Gender Research Methods	Describes the ways in which feminist scholars conceptualize and design their research. Explores the decisions scholars make in their research including the choice of research topics, applications of feminist theories and methodologies, the choice of methods and how and why feminist scholars have increasingly incorporated interdisciplinary methods, and what is at stake in these decisions for the research design and research outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	547	Gender, Activism, and the Built Environment	Explores issues of gender in the built environment. Includes traditional attitudes toward gender underlying the physical form and continuing impacts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Graduate student (degree seeking) ; Credit is allowed for only PUP 547 or WST 547
WST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST		Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
WST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST		Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
WST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: degree-seeking graduate students only
WST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST		Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
WST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		
WST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST		Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	LEC	N	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	601	Critical Concepts of Gender	Key concepts, theoretical frameworks, disciplinary and interdisciplinary approaches, and the critical debates that have shaped the field of gender studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: degree-seeking graduate students only
WST	602	Mapping the Intersections of Gender	Theoretical concepts, metaphors, and frameworks employed by feminist scholars to understand the way gender articulates with other categories of difference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Degree-seeking graduate students only
WST	603	Engendering Methodology	Focuses on the methodologies, epistemologies, and ethical dilemmas of researching gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Degree-seeking graduate students only

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	615	Masculinities	Explores the theoretical concepts, frameworks and disciplinary and interdisciplinary approaches that have accompanied the emerging analysis of masculinity studies as a field. Interrogates the ways in which masculinities have been defined in relation to femininities and other institutionalized constructions of difference, and how these definitions have contributed to material conditions and specific socio-historical contexts in which gendered bodies are included or excluded, privileged or disadvantaged, taken for granted or contested. Considers the articulations and contestations of diverse masculinities as expressed through gender, race, sex, ethnicity, sexuality, kinship, politics, popular culture, economics, nationalism, science and medicine, and violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only WST 615 or WST 691 (Masculinities)
WST	620	Advanced Feminist Theory in a Transnational Context	Concentrates on transnational feminist theory and its intersections with queer theory, postcolonial theory, and critical race theory. Also looks at the ways in which (or indeed, whether) academic discourses have anything useful to say about the worlds in which we live. Among the questions we'll need to have constantly in our minds are: In what ways has feminist theorizing changed over time? Does transnational feminist theory challenge or even undermine previous feminist theoretical discussions or the perspectives you might be familiar with from your undergraduate days? What kinds of engagements do our authors have with theorists in other areas (queer studies, postcolonial studies, critical race theory)? Can you discern any sort of new feminist grand narrative emerging from these works? In what ways might our authors' perspectives help you conceptualize and contextualize your own work?	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only WST 620 or WST 691 (Feminist Theory) or WST 791 (Feminist Theory)
WST	640	Visual and Narrative Culture	Feminist analysis of gender representations in visual and narrative culture, including film, dramatic literature, fiction, and autobiography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Degree-seeking graduate students only
WST	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Degree-seeking graduate students only
WST	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	701	Research Design and Proposal Development in Gender Studies	Prepares students for careers in gender studies by developing skills in research design, proposal writing, and identifying funding outlets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Degree-seeking graduate students only
WST	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Degree-seeking graduate students only
WST	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
WST	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		
WST	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		

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Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
AAD	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
AAD	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AAD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
AAD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AAD	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
AAD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
AAD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Building Design MS student
AAD	552	Architectural Management II	Organizational, human performance, and market influences on architecture firms and projects. Readings, case studies, and analysis of managerial problems and solutions.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Building Design MS, Master of Architecture, Master of Urban Design or Master of Landscape Architecture student
AAD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Herberger Institute of Design and the Arts Graduate student
AAD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
AAD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ABS	130	Introduction to Environmental Science	Introduces the interconnected nature of Earth's hydrosphere, lithosphere (soils and rocks), atmosphere, and biosphere.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	Credit is allowed for only ABS 130 or BIO 130
ABS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Liberal Arts and Sciences	College of Integrative Sciences and Arts	1-4		
ABS	207	Applied Plant Taxonomy	Introduces identification of vascular plants emphasizing seed plants. Surveys seed plant families.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: BIO 181 (BIO 188); BIO 182 (BIO 187)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	225	Soils	Fundamental properties of soils and their relations to plant growth, nutrition of man and animals, and environmental quality. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	Prerequisite(s): CHM 101 or CHM 113
ABS	226	Soils Laboratory	Selected exercises to broaden the background and understanding of basic soil principles. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	Pre- or corequisite(s): ABS 225
ABS	260	Fundamentals of Sustainable Horticulture	Principles and practices of horticulture, emphasizing development, growth, and propagation of horticultural plants and environmental factors that affect these processes.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SG	
ABS	270	Sustainable Biological Systems	Ecological foundations of sustainable biological systems, anthropogenic impacts on ecosystem structure and function, and ecological risk assessment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
ABS	271	Veterinary Medicine Today	Introduces the role of the veterinarian as related to the fields of food supply and veterinary medicine.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
ABS	274	Introduction to Wildlife Management	Managing wildlife in the Southwest, including life histories of small game, fur bearers, big game, and selected nongame specials.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Pre-requisite: BIO 182 (or BIO 187)
ABS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ABS	302	Ethical and Policy Issues in Biology	Policy environment and ethics in the practice of biology. Covers ethical reasoning, policy formulation, and regulatory agencies with examples from biotechnology and the environment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	2		
ABS	311	Molecular and Cellular Biology	Overview of the biology of the cell; emphasizes structure and function of biomolecules within the cell and their applications associated with recombinant DNA technology, genetic engineering, plant and agriculture biotechnology, and human pharmaceutical development.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: BIO 181 (or 188) ; BIO 182 (or 187) with C or better
ABS	312	Structure and Function	Surveys structural and functional attributes of plant and animals of particular importance in the applied biological sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Pre-requisite: BIO 182 (or BIO 187)
ABS	314	Applied Plant Physiology	Understanding control of plant growth and developmental processes through innovated technologies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: BIO 181 or BIO 182
ABS	350	Applied Statistics	Statistical methods with applications in the biological sciences and natural resource management. Uses computers and the Internet.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Pre-requisites: ASC 315, MAT 117, 142 or other course meeting General Studies MA requirement with C or better
ABS	355	Ecology and Adaptations of Vertebrates	Evolution, classification systematics, diversity, anatomical and physiological adaptations anatomy, and physiology, specializations and conservation status of the vertebrates.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: BIO 182 (or BIO187) , and BIO 181 (or BIO188)
ABS	360	Southwest Home Gardening	Multimedia course for nonmajors surveying contemporary topics in Southwest home horticulture, including landscaping, flower and vegetable gardening, citriculture, interiorscaping, and others.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	2		
ABS	362	Landscape Plants	Identification, design, and use of plants in urban landscapes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): minimum 45 hours
ABS	363	Sustainable Landscape Practice	Landscape technologies and practices including landscape design theory, job costing and bidding, sprinkler and drip irrigation design, landscape installation, landscape valuation techniques, landscape ordinances, and maintenance practices of commercial and residential landscapes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): ABS 260
ABS	364	Urban Forestry	Care, maintenance, and valuation of the urban forest, including public and private landscape codes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: ABS 260
ABS	368	Plant Propagation	Theory and application of sexual and asexual propagation techniques. Considers plant materials used both for urban horticulture and ecological restoration applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
ABS	370	Ecology	Interactions between organisms and their environments; structure and dynamics of populations, communities, ecosystems, and landscapes, with emphasis on vegetation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 182
ABS	376	Wildlife Ecology	Examines ecological principles underlying wildlife population dynamics with emphasis on physiology, genetics, nutrition, and habitat factors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre/Co-requisites: ABS 274; ABS 370
ABS	378	Animal Nutrition	Principles of nutrient metabolism in animal species; emphasizes understanding the interaction of animals with their environment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: BIO 181 or BIO 182; CHM 101 or CHM 113
ABS	380	Restoration and Wildlife Plants	Important wildland plants, including invasive and endangered species, wildlife food species, and species used for ecosystem restoration.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: ABS 207
ABS	381	Natural Resources Policy	Policies and regulations affecting management of natural resources, with emphases on wildlife and ecological restoration.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 45 hours
ABS	384	Natural Resources Measurements	Inventory, sampling and monitoring techniques of natural resources. Data evaluation and interpretation as related to management, restoration and conservation needs of natural resources.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): Minimum 45 hours
ABS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ABS	401	Intermediate Statistics	Analysis of variance, multiple comparisons, multiple regression.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
ABS	425	Soil Classification and Management	Principles of soil genesis, morphology, and classification. Presents management and conservation practices.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ABS 225

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ABS	430	Watershed Management	Hydrologic, physical, biological, and ecological principles applied to watershed management. Impact of ecosystem manipulations on water yield and quality.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 45 hours
ABS	434	Soil Ecology	Soils viewed in an ecosystem context, soil-plant relationships, nutrient budgets, and abiotic factors that influence soil processes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: ABS 370 or BIO 320; Credit is allowed for only ABS 434 or BIO 418
ABS	435	Applied Systems Ecology	Simulation modeling as a tool to study ecological processes and human impact on ecosystems and organisms.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: ABS 370, ABS 350 (or STP 420)
ABS	440	Ecological Restoration Techniques	Techniques for ecological restoration, riparian and wetland restoration, and monitoring restoration success.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre/Co-requisite: ABS 370; Credit is allowed for only ETM 440 or ASB 598 (Ecological Restoration Techniques)
ABS	441	Ecological Restoration Practicum	Field experience in the evaluation and monitoring of implemented ecological restoration projects.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre/Co-requisite: ABS 440
ABS	460	Organic Gardening	Applies principles and practices of organic gardening in the low desert, including environmental impacts of modern food production.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	2		
ABS	462	Greenhouse/Nursery Management	Greenhouse structures, environment, and nursery operations. Includes irrigation, nutrition, and other principles relative to production of nursery crops.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Pre-requisite: ABS 260
ABS	463	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: ABS 260
ABS	464	Desert Horticulture	Students learn about and practice the principles of sustainable horticulture in an arid climate. Includes capstone projects on sustainability issues related to horticultural practice in arid environments.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ABS 260; Credit is allowed for only ABS 464 or ABS 494 (Sustainable Desert Horticulture) or ABS 498 (Desert Horticulture)
ABS	470	Life History of Mammals	Evolution, classification, environmental, anatomical and physiological adaptations, ecology, and conservation of mammals worldwide. Emphasis on the identification, habitat relationships, conservation, and management techniques of Arizona and select North American mammals.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: ABS 355
ABS	472	Applied Herpetology	Systematics, evolution, ecology and life history of amphibians and reptiles emphasizing wildlife management methodologies.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: ABS 355 or BIO 370; Credit is allowed for only ABS 472 or 498 (Applied Herpetology)
ABS	474	Riparian Ecosystem Management	Management principles of riparian ecosystems based on fluvial geomorphological and ecological concepts. Discusses human impacts to riparian ecosystems.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): Minimum 45 hours
ABS	475	Habitat Management for Small Wildlife	Habitat management considerations and practices for small game and nongame wildlife species in North America.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Pre-requisite: ABS 376
ABS	476	Big Game Habitat Management	Habitat management considerations and practices for big game wildlife species in North America.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum junior standing
ABS	479	Ecosystem Management and Planning	Principles of ecosystem management, with emphasis on economic and policy constraints on the planning process. Risk assessment and management.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisite: Senior standing
ABS	481	Riparian and Wetland Restoration	Principles and problems in the restoration of degraded riparian and wetland ecosystems. Construction of wetlands.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ABS 370
ABS	482	Ecology and Planning for Restoration	Ecological principles and resource planning processes applied to the restoration of degraded landscapes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ABS 225; ERM 440
ABS	483	Restoration Planning Practicum	Field experience in ecological restoration techniques, selection of mitigation techniques, and implementation planning.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	2		Pre- or corequisite(s): ABS 482
ABS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
ABS	485	GIS in Natural Resources	Principles of Geographic Information Systems (GIS) utilized in natural resource management. Use of computers for spatial analysis of natural resources.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: ABS 350, STP 420, EGR 280 or PSY 230
ABS	486	Introduction to Remote Sensing	Remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery. Not for graduate credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): minimum 45 hours
ABS	489	Undergraduate Research	Undergraduate research under the supervision of an applied biological sciences faculty member.	N	RSC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		Pre-requisite: Junior or Senior standing
ABS	490	Applied Biological Sciences Seminar	Current literature and significant developments related to applications of the biological sciences. May be repeated for credit.	N	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre-requisite: Senior standing
ABS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
ABS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
ABS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ABS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7		Prerequisite(s): minimum 45 hours
ABS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
ABS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
ABS	541	Advanced Rangeland Ecosystem Management	Combines the principles of ecology, planning and restoration in the application of rangeland ecosystem management. Studies fundamental topics such as range plant physiology, range plant ecology, rangeland stocking-rates and grazing systems in considering management practices for rangeland ecosystems.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Pre-requisite: Degree-or non-degree seeking graduate; Credit is allowed for only ERM 541 or ABS 598 (Adv Rangeland Ecosystem Management)
ABS	542	Management of Fire Adapted Ecosystems	Fire adapted ecosystems which evolved with high-frequency and low-intensity fires now support a range of regimes from no fire to uncharacteristically large and intense fires, causing a concern about the current and future role of wildland fire as well as forest and rangeland health. Explores management considerations and techniques for reintroducing fire to these ecosystems.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ABS 598 (Fire Ecology), or ERM 542
ABS	550	Vegetation Dynamics	Dynamics of vegetation linking physiological, population, and community ecology. Collection and analysis of vegetation data.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	551	Advanced Environmental Analysis	Advanced statistical procedures and experimental design for the biological sciences. Techniques for analyzing data that do not meet statistical assumptions.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	553	Riparian Ecology	Review of recent literature, developments, and methods related to riparian ecology. Applies soil and landscape ecology to riparian systems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	555	Wildlife Dynamics	Explores major concepts in population and community ecology with an emphasis on their application to the study and management of wildlife species. Explores the theory and sometimes controversial nature of these concepts in the form of lectures and discussions. Instructor and student workshops and oral presentations of student research.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ABS 555 (or ERM 550) or ABS 598 (Wildlife Dynamics) or ETM 598 (Wildlife Population Ecology)
ABS	560	Ecological Modeling	Mathematical modeling of animal populations, food-web structural and ecological processes in space and time. May use modeling tools on computer clusters.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate (Degree and non-degree) students; Credit is allowed for only ABS, BIO 560 or MAT 561
ABS	570	Advanced Animal Nutrition	Metabolic and physiological interactions of nutrients in wild and domesticated animals consuming natural feeds.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	586	Remote Sensing in Environmental Resources	Principles and application of remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ABS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	101	Accountancy LEAP Program	The Leadership, Ethics, Accountability & Professionalism (LEAP) program aims to ensure a successful transition from high school to college and, ultimately, one's career. Based on the hallmarks of the accounting profession, provides the tools, resources, and expectations to succeed at ASU, W.P. Carey School of Business and the School of Accountancy.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1		
ACC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-3		
ACC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	231	Uses of Accounting Information I	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s) with C or better: CIS 105 (or CIS 236) or CSE 110 if Engineering Management major. Not open to Pre-BIS or Interdisciplinary Studies majors
ACC	232	Financial Accounting I	Develops an understanding of the theory, concepts, principles and practices underlying preparation, interpretation, and use of external financial reports. Emphasizes interpreting the economic substance of events and transactions and their association with contemporaneous and prospective events, relationships, and outcomes. Gains understanding of the accounting information model and develops an ability to analyze and record business transactions and analyze basic financial statements. Meant for prospective accounting and finance majors (and students who plan current majors in these areas) and develops skills and abilities facilitating success in higher-level accounting courses.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): Accountancy or Finance majors; CIS 105, 220 or 236 with C or better
ACC	241	Uses of Accounting Information II	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): ACC 231, 261, or 303 with C or better
ACC	242	Managerial Accounting I	Develops an understanding of the theory, concepts, principles, and practices underlying managerial accounting. Emphasizes three functions managers must perform within their organizations: plan operations, control activities, and make decisions. Explains what accounting information is necessary, how to collect it, and how to interpret it. Meant for prospective accounting and finance majors and students who plan current majors in these areas and develop skills and abilities facilitating success in higher-level accounting courses.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: Open to W. P. Carey Accountancy and Finance majors, and others with School of Accountancy approval; ACC 231, ACC 232, ACC 261 or ACC 303 with C or better
ACC	261	Honors Fundamentals of Financial Accounting	Covers basic financial accounting concepts and applications. Develops an understanding of the environment in which financial reporting choices are made.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey School of Business Honors student; CIS 105 or CIS 220 or CIS 236 with C or better
ACC	271	Honors Fundamentals of Managerial Accounting	Covers basic managerial accounting concepts and applications.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey School of Business Honors student; ACC 231, ACC 232, ACC 261 or ACC 303 with C or better
ACC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		

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ACC	340	External Reporting I	Financial accounting theory and practice related to external reporting.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s) with C or better: ACC 241, 242 or 271; ECN 221 or 231; MAT 211, 266 or 271; W.P. Carey Accountancy BS or Finance BS student; Pre- or corequisite(s): FIN 300, 302 or 303
ACC	350	Internal Reporting	Internal reporting systems for planning, control, and decision making.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 241, ACC 242 or ACC 271, AND ECN 221 or ECN 231 with C or better
ACC	360	Ethics for Professional Accountants	Addresses ethical obligations and responsibilities of professional accountants.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s) with C or better: ACC 241, 242 or 271; ECN 221 or 231; MAT 211, 266 or 271; W. P. Carey BS Accountancy major
ACC	382	Accounting and Financial Analysis	Introduces nonbusiness majors to financial accounting concepts related to operating, financing, investing, and ethical decisions.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: Non-Business student; must not have previously earned credit in ACC 230, 231, 232, 240, 241, 242, 261, 271 or BUA 381; min ASU cum GPA of 2.00 and min 56 total earned hours OR non-deg student with min ASU cum GPA of 2.00, OR grad student
ACC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	430	Taxes and Business Decisions	Federal income taxation of sole proprietors, partnerships, corporations, fiduciaries, and individuals with an emphasis on tax consequences of business and investment decisions.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): W. P. Carey Accountancy BS student; ACC 340 with C or better; LES 305 with C or better
ACC	440	External Reporting II	Continuation of ACC 340 with emphasis on the recognition, research, and resolution of financial reporting issues.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 340 with C or better
ACC	444	Enterprise Process Analysis and Design	Addresses the major business processes of an enterprise, the impact of recent technological innovations and requisite internal controls. Advances an understanding of the current regulatory environment as it pertains to process controls.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey Accountancy BS or Computer Info Systems BS student; ACC 241(or 242 or 271) with C or better; ECN 221 with C or better; FOR CIS MAJORS: CIS 235 or 236 with C or better
ACC	445	Honors Enterprise Process Analysis and Design	Analysis and design of efficient and effective business processes. Emphasizes taking advantage of new information technologies to improve managerial decision making.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey School of Business Honors student AND Accountancy BS or Computer Info Systems BS student; ACC 241, 242 or 271 with C or better; ECN 221 or 231 with C or better
ACC	450	Principles of Auditing	Standards and procedures in auditing. Planning, evidence gathering and accumulation, and reporting. Ethical and legal considerations.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey Accountancy BS student; ACC 440 with C or better
ACC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: W. P. Carey BS Accountancy major; 3.50 cumulative GPA; Minimum 72 hours; ACC 340, 350, 430, 440 and 450 with C or better
ACC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ACC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	W.P. Carey School of Business	School of Accountancy	1-6	L	Prerequisite(s): Barrett Honors student
ACC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Accountancy BS student
ACC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-6		Prerequisite(s): Barrett Honors student
ACC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-7		Prerequisite(s): Accountancy BS, Finance BS, or Economics BS major
ACC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-3		Pre-requisite: Accountancy BS student
ACC	502	Financial Performance Reporting and Analysis	Contemporary financial accounting and reporting systems; emphasizes the interpretation and evaluation of a company's external financial reports.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	1-4		Prerequisite(s): MBA degree program student
ACC	503	Internal Measures of Success: Managerial Accounting	Managerial accounting concepts and procedures for internal reporting applied to the decision making activities of the professional managers.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	1-4		Prerequisite(s): MBA degree program student
ACC	511	Taxes and Business Strategy	Economic implications of selected management decisions involving application of federal income tax laws. Recognition of tax hazards and tax savings.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	512	Advanced Auditing	Builds on the skills obtained in the beginning auditing (assurance) course and focuses on audit planning, risk assessment, evidence, and reporting procedures and fraud.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: Master of Accounting student
ACC	513	Advanced Financial Accounting	Focuses on advanced financial accounting topics along with their application in the financial reporting process.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: Specific Business Graduate majors
ACC	571	Taxation of Corporations and Shareholders	Tax aspects of the formation, operation, reorganization, and liquidation of corporations and the impact on shareholders.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	573	Taxation of Pass-Through Entities	Tax aspects of the definition, formation, operation, liquidation, and termination of a partnership. Emphasizes tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	575	Family Tax Planning and Wealth Transfer Taxation	Tax treatment of wealth transfers at death and during lifetime, with emphasis on tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	577	Tax Research, Professional Responsibilities & Property Transactions	Federal tax issues and consequences, tax authority, property transactions and tax consequences of acquiring, holding and disposing of property.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): Master of Taxation major. Credit is allowed for only ACC 577 or ACC 591 (Tax Research, Professional Responsibilities & Property Transactions)
ACC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	582	Information Security of Interorganizational Systems	Function and responsibility of the information security officer. Advanced topics in security methods and technology.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	585	Performance Measurement and Advanced Managerial Accounting	Applies quantitative techniques to accounting problems.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: Business Graduate student
ACC	586	Shareholder Value Creation and Financial Statement Analysis	Develops skills necessary to exploit financial reporting information in a business environment and appreciation of reporting issues faced by management.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	587	Multi-Jurisdictional Taxation I	Multistate taxation and interplay between multistate tax issues and federal and state constitutional limitations.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): Master of Taxation major
ACC	588	Professional Accounting Research	Applies the technical knowledge of accounting theory and principles developed in other academic courses through the use of "real life" case studies, where such knowledge and professional judgment is applied in resolving advanced accounting problems and issues.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: W. P. Carey Master of Accountancy student
ACC	589	Multijurisdictional Tax II	Addresses the U.S. taxation of U.S. individuals and businesses that do business outside the U.S. as well as the U.S. taxation of foreign persons and tax treaties, allocation of income, foreign tax credits, and transfer pricing. Emphasizes planning related to some of the tax issues that commonly arise in cross-border businesses.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: W. P. Carey Master of Taxation student

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ACC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Business Administration (Accountancy) PHD student
ACC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ACC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ACO	100	All About Data: Design, Query, and Visualization	Data modeling and design, spreadsheets, relational databases and querying, visualization and XML.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	
ACO	101	Introduction to Computer Science	Concepts of problem solving, structured and object-oriented programming in Java, fundamental algorithms, computer system concepts. Social and ethical responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s): MAT 117 with C or better OR Mathematics Placement Test with a score of 50% or higher
ACO	102	Object-Oriented Programming	Object-oriented programming using introductory algorithms and data structures. Overview of concepts in computer science.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisite: ACO 101 with C or better. Credit is allowed for only ACO 102 or CSE 205 or CST 200
ACO	201	Data Structures and Algorithms	Static and dynamic data structures, recursive and iterative sorting and searching, object-oriented design and programming, software design models and implementation/testing strategies, professional responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisites: ACO 102 and MAT 210 with C or better
ACO	220	Introduction to Database Systems	Introduces database management systems concepts. Entity-relationship and relational data models. Database design. Relational algebra, calculus, and SQL query languages. Query optimization.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s) with C or better: ACO 210; MAT 243. Credit is allowed for only ACO 220 or ACO 320 or CSE 412 or CST 433
ACO	320	Database Systems	Entity-relationship and relational data models. Database design theory. Relational algebra, calculus and SQL query languages. Query optimization. XML fundamentals. Transactions, recovery and concurrency control.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 201; Credit is allowed for only ACO 220 or ACO 320 or CSE 412 or CST 433
ACO	321	Database Development & Applications	Stored procedures and triggers. Security and authorization. Call-level interface. Database Web applications. Advanced topics.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 320 with C or better; Credit is allowed for only ACO 321 or CSE 414 or IFT 458
ACO	330	Computer Networks	Network architecture and protocols, principles of network applications, socket programming, flow and congestion control, switching and routing, link-layer technologies, traffic capture and analysis, security.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 201; Credit is allowed for only ACO 330 or CSE 434
ACO	331	Network Design	Fundamental network design principles, internetworking design, network architectures, network management, traffic analysis, security management, case study and hands-on experiments.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: ACO 330 with C or better
ACO	350	Systems Programming	Introduces operating systems as resource managers, processes, threads, memory allocation, file systems, protection, system calls, application program interfaces.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s): ACO 201 with C or better
ACO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
ACO	399	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	N	RSC	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		Prerequisite(s): ACO 102; minimum 30 hours
ACO	420	Large-scale Data Management	Modern technologies to manage, process and analyze big data. Data processing of large data sets with Map/Reduce. NoSQL data stores. NewSQL databases. Data visualization. Applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: ACO 320 with C or better
ACO	421	Data Mining and Warehousing	Introduces data mining from a database perspective, including classification, clustering, and association rules. Data warehousing methodologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: ACO 320 with C or better
ACO	422	XML and Databases	XML data model, schema specification and validation, querying, storage, indexing, and current research topics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: ACO 320 with C or better
ACO	430	Wireless Networks	Wireless transmission fundamentals, wireless LAN, cellular networks and systems, Bluetooth, mobile application development, sensor networks, performance analysis and recent advances.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 330
ACO	431	Network Security	Digital threats and attacks, cryptography, confidentiality, authentication protocols, message integrity, security in network applications, intrusion detection, malicious software countermeasures, firewalls.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 330
ACO	432	Distributed Systems	Distributed system models, distributed programming technique, clock synchronization, distributed snapshot, distributed mutual exclusion, concurrency control, fault tolerance, security, recent advances.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 330
ACO	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
ACO	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
ACO	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
ACO	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
ACO	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7	L	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ACO	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
ACT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
ACT	201	Introduction to Elements and Techniques of Actuarial Science	Introduces important aspects of actuarial work. Exposes the development of actuarial techniques in the context of life insurance, casualty and property insurance, superannuation and investment. Develops problem-solving skills and gives basic tools for risk management and financial modeling, including the use of Excel spreadsheets for both, calculations and simulations. Shows how studies in related disciplines (such as accounting, demography, economics, statistics, computing and mathematics) are essential to the education of an actuary. Guest speakers from the industry share their knowledge and insight on how to become a successful actuary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): CIS 105 with B or better; MAT 270 with B or better
ACT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
ACT	310	Mathematics of Finance	Prepares potential actuaries to master national exams. Provides an understanding of the fundamental concepts of financial mathematics and how those concepts are applied in calculating present and accumulated values for various streams of cash flows as a basis for future use in: reserving, valuation, pricing, asset/liability management, investment income, capital budgeting and valuing contingent cash flows. Topics include: mathematics of compound interest including annuities certain, amortization schedules, yields curves, sinking funds and bonds. Gives an introduction to financial instruments including derivatives and the concept of no-arbitrage as it relates to financial mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4		Prerequisite(s): ACT 201 with B or better; MAT 270 with B or better; Credit is allowed for only ACT 310 or MAT 340
ACT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
ACT	415	Probability for Risk Management	Prepares potential actuaries to master national exams. Develops knowledge of the fundamental probability tools for quantitatively assessing risk. Topics include: introduction to probability concepts including definition of probability, independence, conditional probability, random variables, specific discrete and continuous probability distributions, multivariate random variables, moments and moment generating functions, functions of random variables, sampling distributions and central limit theorem. Emphasizes the application of these tools to problems encountered in actuarial science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 201 with B or better; MAT 272 with B or better; Credit is allowed for only ACT 415 or STP 326
ACT	430	Mathematics of Financial Derivatives	Prepares potential actuaries to master the national exams. Develops knowledge of the theoretical basis of certain actuarial models and the application of those models to insurance and other financial risks. Topics include: option pricing, Black-Scholes formula, delta hedging, exotic options, Brownian motion, interest rate models and simulations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 310 with B or better; MAT 415 with B or better
ACT	435	Actuarial Business Forecasting	Business forecasting using statistical techniques such as: simple linear regression, multiple linear regression, hypothesis testing and confidence intervals in linear regression models, testing of models, data analysis and appropriateness of models, linear time series models, moving average, regression based and/or ARIMA models, estimation, data analysis and forecasting with time series models, forecast errors and confidence intervals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 342 or 343 with B or better; STP 420 with B or better
ACT	440	Life Contingencies I	Prepares potential actuaries to master the national exams. Develops knowledge of the theoretical basis of life-contingent actuarial models and the application of those models to insurance and other financial risks. Topics include: life tables, present value determination for life insurances and annuities, benefit premiums and reserves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 415 with B or better; MAT 343 with B or better
ACT	441	Life Contingencies II	Prepares potential actuaries to master the national exams. Develop the student's knowledge of the theoretical basis of life-contingent actuarial models and the application of those models to insurance and other financial risks. Topics include: multiple life functions, multiple decrement models and benefit reserves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 440 with C or better
ACT	450	Actuarial Models and Modeling I	Prepares potential actuaries to master the national exams. Helps student understand the steps involved in the modeling process and how to carry out these steps in solving business problems. Students analyze data from an application in a business context, determine a suitable model including parameter values and provide measures of confidence for decision making based upon the model. Topics include: survival, severity, frequency and aggregate models and their modifications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 415 with B or better; STP 427 with B or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ACT	451	Actuarial Models and Modeling II	Prepares potential actuaries to master the national exams. Helps students understand the steps involved in the modeling process and how to carry out these steps in solving business problems. Students analyze data from an application in a business context, determine a suitable model including parameter values and provide measures of confidence for decision making based upon the model. Topics include: construction and selection of parametric models, Bayesian estimation, credibility and simulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 450 with C or better
ACT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
ACT	491	Actuarial Exam Preparation Seminar	Provides potential actuaries with review and practice for an actuarial examination.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s) with B or better: ACT 310 (or ACT 415 or 430 or both ACT 440 and 441 or both ACT 450 and 451)
ACT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
ACT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
ACT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
ADE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
ADE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ADE	242	Introduction to Building Systems	Materials and methods of construction. Aesthetic, code and construction costs. Exposure to building information management (BIM).	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Architectural Studies major; Co-requisite: ALA 226. Credit is allowed for only ADE 242 or ATE 294, Building Systems
ADE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ADE	321	Architectural Studio I	Introductory building design problems. Emphasizes design process, communication methods, aesthetics, construction, and technology.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Architecture student; ALA 226 with C or better
ADE	322	Architectural Studio II	Site and building design problems. Emphasizes programmatic and environmental determinants and building in natural and urban contexts.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Architectural Studies student; ADE 321 with C or better
ADE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ADE	421	Architectural Studio III	Topical design problems of intermediate complexity, including interdisciplinary problems.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: ADE 322 with C or better; Co-requisites: APH 421, ATE 451
ADE	422	Architectural Studio IV	Topical design problems of advanced complexity, including interdisciplinary problems.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Architectural Studies student; ADE 421 with C or better
ADE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
ADE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
ADE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
ADE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ADE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ADE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
ADE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Master of Architecture, Master of Landscape Architecture, or Master of Urban Design
ADE	510	Foundation Architectural Studio	Fundamentals of architectural design, methodology, visualization, and representation.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	6		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	511	Core Architectural Studio I	Applies design fundamentals in architectural problems, including construction, technology, programmatic and environmental determinants.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	6		Pre-requisites: Master of Architecture student; ADE 510 with C or better
ADE	512	Core Architectural Studio II	Applies architectural design fundamentals to increasingly complex problems, including specific sites and activities.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	6		Pre-requisites: Master of Architecture student; ADE 511 with C or better
ADE	521	Advanced Architectural Studio I	Design problems emphasizing theory, aesthetics, and tectonics as influences on architectural form.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	522	Advanced Architectural Studio II	Design problems emphasizing the comprehensive integration of building systems and technologies as influences on architectural form.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Architecture student; ADE 521 with a C or better; Co-requisites: APH 505 and ATE 556
ADE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Herberger Institute of Design and the Arts Graduate student
ADE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
ADE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student

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ADE	621	Advanced Architectural Studio III	Design problems emphasizing the urban context, planning issues, and urban design theory as influences on architectural form.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Architecture student; ADE 522 with a C or better; Co-requisite: APH 515 OR Bldg Des(Energy Perform/Bldgs) MS student
ADE	622	Advanced Architectural Studio IV	Individual, student-initiated project reflecting a culminating synthesis of architectural ideas.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Architecture student; ADE 522 with a C or better; Co-requisites: APH 515 OR Bldg Des(Energy Perform/Bldgs) MS student
ADE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		
AEE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
AEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
AEE	313	Aircraft Dynamics and Control	Aircraft static stability; equations of motion; dynamic modes and stability; stability derivatives; response to controls; introduces automatic control of aircraft.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 (or MAE 360) with C or better; MAE 301 and 318 with C or better
AEE	325	Aerospace Structures and Materials	Applies structural analysis to aircraft and spacecraft structures. Loads on aerospace structures, buckling and stability, stiffened panels, primary wing and launch-vehicle structure, vibration of large structures, properties and selection of aerospace structural materials.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisites with C or better: Aerospace Engr major: MAE 213 & 384; MAT 267 or 272, OR Mat Sci & Engr major: MSE 211 & 415 (or 315); MAT 267 or 272; Credit is allowed for only AEE 325 (or MAE 325), MEE 322, or MAE 394 (Structural Materials in Aerospace)
AEE	344	Fundamentals of Aircraft Design	Aircraft performance, RFP's, Federal Aviation Regulations, aircraft sizing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 (or MAE 360) with C or better; MAE 214 and 384 with C or better; Pre- or corequisite(s): AEE 325 (or MAE 325) or MAE 394 (Aerospace Structures and Materials) with C or better if completed
AEE	360	Aerodynamics	Airfoils and wings, ideal flow, boundary layers, finite-difference solutions, wind-tunnel testing. Both AEE 360 and AEE 362 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4	L	Prerequisite(s): Fulton Engineering undergraduate student; ENG 102, 105, or 108 with C or better; MAE 240 and 384 with C or better; MAT 267 or 272 with C or better
AEE	362	High-Speed Aerodynamics	Compressible flow at subsonic and supersonic speeds; ducts, nozzles, and diffusers; normal and oblique shocks, transonic flow, numerical solutions; experimental applications. Both AEE 362 and AEE 360 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4	L	Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 (or MAE 360) with C or better; MAE 384 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
AEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
AEE	415	Vibration Analysis	Free and forced response of single and multiple degree of freedom systems, continuous systems; applications in mechanical and aerospace systems numerical methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 213 and 318 and 384 with C or better; Credit is allowed for only AEE 415 or MAE 598 (Vibration Analysis)
AEE	426	Design of Aerospace Structures	Flight vehicle loads, design of semimonocoque structures, local buckling and crippling, fatigue, aerospace materials, composites, joints, and finite element applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Aerospace Engineering BSE major; AEE 325 (or MAE 325) or MAE 394 (Aerospace Structures and Materials) with C or better; Credit is allowed for only AEE 426 or MAE 598 (Design of Aerospace Structures)
AEE	445	Fundamentals of Spacecraft Design	Spacecraft subsystems. Systems engineering, space mission design, space environment. Cost analysis. Risk and reliability analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Aerospace Engineering (Astronautics) BSE major; AEE 325 with C or better; AEE 462 with C or better; MAE 214 with C or better; MAE 318 with C or better; Credit is allowed for only AEE 445 or MAE 494 (Fundamentals of Spacecraft Design)
AEE	462	Space Vehicle Dynamics and Control	Attitude dynamics and control, orbital mechanics, orbital transfer/rendezvous, spacecraft control systems design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 301 and 318 with C or better
AEE	463	Aircraft Propulsion	Fundamentals of gas-turbine engines. Analysis and design of components. Alternative aircraft propulsion systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 362 with C or better; MAE 384 with C or better
AEE	465	Rocket Propulsion	Rocket flight performance; nozzle design; combustion of liquid and solid propellants; component design; advanced propulsion systems; interplanetary missions; testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): undergraduate Aerospace or Mechanical Engineering major; AEE 362 with C or better; AEE 462 with C or better
AEE	466	Rotary Wing Aerodynamics and Performance	Introduces helicopter and propeller analysis techniques. Momentum and blade-element, helicopter trim. Hover and forward flight. Ground effect, autorotation and compressibility effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 with C or better; Credit is allowed for only AEE 466 or MAE 566
AEE	468	Aircraft Systems Design	Group projects related to aircraft vehicle design, working from mission definition and continuing through preliminary design.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 313 and 344 with C or better; MAE 400 with C or better; Pre- or corequisite(s): AEE 463 with C or better if completed
AEE	469	Projects in Astronautics or Aeronautics	Various multidisciplinary team projects available each semester. Projects include design of high-speed rotocraft autonomous vehicles, liquid-fueled rockets, microaerial vehicles, satellites.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student
AEE	471	Computational Fluid Dynamics	Numerical solutions for selected problems in fluid mechanics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 or MEE 340 with C or better; MAE 384 with C or better; Credit is allowed for only AEE 471 or MAE 561

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AEE	478	Fundamentals of Autonomous Aircraft Systems	First of a two-semester capstone sequence. Introduces autonomous aircraft performance and operations, aircraft performance prediction, ground control and support, sensors, communications and telemetry, aerospace ethics and law, design methods.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s) with C or better: AEE 313, 360
AEE	479	Design of Autonomous Aircraft Systems	Interdisciplinary capstone design project for aerospace and electrical engineering students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: MAE 400 with C or better; AEE 478 with C or better
AEE	480	Space Systems Design	Group projects related to space systems design, working from mission definition and continuing through conceptual design.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 445 (or MAE 445) with C or better; EEE 350 with C or better; MAE 214 with C or better; Pre- or corequisite(s): AEE 465 (or MAE 465) with C or better if completed
AEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
AEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		Prerequisite(s): Barrett Honors student
AEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
AEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
AEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-7		
AEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		Prerequisite(s): minimum 45 hours
AEP	501	Practical and Professional Ethics	Acquaints students with practical and professional ethics. Assumes no prior experience in ethics, and provides practicable knowledge as well as theoretical knowledge. The first in a series of courses for the MA program in Applied Ethics and the Professions, the course is primarily intended to prepare students in that degree program for their subsequent courses. However, it has been designed to be useful to all graduate students who are interested in learning about practical and professional ethics. The beginning of the course is devoted to the more general subjects of practical ("everyday") ethics and professional ethics, while the remaining weeks are spent focusing on the ethical issues that occur in the context of specific professions, with particular emphasis given to those professions that seem most relevant to the aspirations and interests of the students enrolled in the course.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): graduate student or Barrett Honors student
AEP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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AEP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AES	101	Air Force Today I	Survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps (AFROTC). Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2		
AES	102	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Emphasizes common Air Force customs and courtesies, drill and ceremonies, health and physical fitness through group participation.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 101
AES	103	Air Force Today II	Introduce students to the United States Air Force and encourage participation in Air Force Reserve Officer Training Corps (AFROTC). Featured topics include: introduction to leadership, Air Force core values, introduction to interpersonal communication and team building, and a continuation of communication skills.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Aerospace Studies	2		
AES	104	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Emphasizes learning the environments and dynamics of an Air Force officer.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 103
AES	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AES	201	The Evolution of USAF Air and Space Power I	Focuses on facilitating the transition from Air Force ROTC cadet to Air Force ROTC candidate. Examines the general aspects of air and space power through a historical perspective. Utilizing this perspective, covers a time period from the first balloons and dirigibles to the modern technology currently used in overseas contingency operations. Featured topics include: Air Force heritage, Air Force leaders, introduction to ethics and values, group leadership problems and continuing application of communication skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2		
AES	202	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Provides application of advanced drill and ceremonies; issuing commands; knowing flag etiquette; and developing, directing, and evaluating skills to lead others.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 201

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AES	203	The Evolution of USAF Air and Space Power II	Provides knowledge-level understanding for general element and employment of air and space power. Furthermore, discusses the importance of Air Force Core Values with use of operational examples and historical Air Force leaders. Continues to develop communication skills. Topics include: the Air Force mission and organization, modern joint expeditionary Airmen, officer opportunities, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2		
AES	204	Leadership Lab	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Emphasizes preparation for field training.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 203
AES	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-4		
AES	301	Air Force Leadership Studies I	Study of communication skills, leadership and quality management fundamentals, leadership ethics, and professional knowledge required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3	L	
AES	302	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Advanced leadership experiences applying leadership and management principles to motivate and enhance the performance of other cadets.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 301
AES	303	Air Force Leadership Studies II	Continuation of AES 301. Topics include: communication skills, ethics, leadership, professional knowledge, and quality management required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3	L	
AES	304	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Emphasizes planning the military activities of the cadet corps and applying advanced leadership methods.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 303
AES	401	National Security Affairs	Examines advanced ethics, Air Force doctrine, national security process, and regional studies. Special topics include: civilian control of the military, military justice, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3	L	
AES	402	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Advanced leadership experience demonstrating learned skills in planning and controlling the military activities of the corps.	N	LAB	Y	GNA	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 401
AES	403	Preparation for Active Duty II	Continuation of AES 401. Topics include: civilian control of the military, doctrine, ethics, military justice, the national security process, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3		
AES	404	Leadership Lab	Continuation of AES 402 with emphasis on preparation for transition from civilian to military life.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0		
AES	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-7		
AES	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		
AES	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	210	Measurements and Testing	Measurement systems, components, system response, and the characteristics of experimental data.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): PHY 112; Pre/Corequisite(s): MAT 266
AET	215	Aircraft Systems	Principles and design features of aircraft structures, systems, and materials.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	2		
AET	300	Aircraft Design I	Applied aerodynamics, standard atmosphere, speed measurement, infinite and finite wings, airplane performance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: AET 215; MET 211, ECE 210, or MAE 212
AET	415	Gas Dynamics and Propulsion	Introduces compressible flow, internal and external flow, and aerothermodynamic analysis of propulsion systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): AET 300; MET 340 or MAE 340 or Fulton Schools of Engineering graduate student
AET	417	Aerospace Structures	Analysis and design of aircraft and aerospace structures. Shear flow. Semimonocoque structures. Effects of dynamic loading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MET 213, MET 313 (or ECE 313); MET 212, AET 312 (or ECE 312); AET 300

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AET	420	Experimental Aerodynamics and Wind Tunnels	Experimental applied aerodynamics related to aeronautical and mechanical design. Wind tunnel design and testing. Low speed flows.	N	LAB	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1		Pre-requisites: AET 300; MET 340
AET	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
AET	524	Application of Heat Transfer	Energy conservation, steady-state and transient conduction, convection transfer, free and forced convection Reynolds analogy, blackbody and environmental radiation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 432 or MAE 340; Credit is allowed for only AET 524 or AET 432
AET	525	Advanced Propulsion	Mechanics and thermodynamics of propulsion systems. Solid, liquid propellant rocket design performance. Electrical nuclear propulsion systems. Space missions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 434, AET 415 or MAE 340
AET	560	Numerical Methods in Engineering Technology	Analyzes problems in physical sciences, models physical problems, perturbation techniques, curvefitting, data analysis, numerical solutions, ordinary and partial differential equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Fulton Engineering students; Senior or higher academic level
AET	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	191	First Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AFR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	200	Introduction to Africana Studies	Introduces the study of African and African-descended peoples; theory, themes, and perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	
AFR	202	Immigration and Ethnic Relations in the U.S.	The ethnic and social consequences of international migration with a focus on the United States. Examines the impact of immigration on both American society and immigrant ethnic minorities over time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Credit is allowed for only AFR 202 (or AFS 202) or ASB 202
AFR	210	Introduction to African American Studies	Examines the political, historical, and cultural origins of African American studies as an academic discipline.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	
AFR	212	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only AFR 212 (or AFS 210) or APA 210 or JUS 210 or TCL 210

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
AFR	215	Bob Marley and Reggae: Lyrics of Resistance	Studies political content, influence, and impact of Caribbean popular music, in particular the music of Bob Marley.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Credit is allowed for only AFR 215 or AFR 394 (Bob Marley: Reggae and Resistance) or JUS 215
AFR	225	Black Movements in America	Survey course on the historical and political development of mass movements by African Americans and Black resistance in the United States. Traces nearly 400 years of Black resistance against injustices and mass struggles for equality and liberation. Topics include the anti-slavery movement, anti-lynching campaign, the Civil Rights movement, the Black Power movement, prison abolitionism, the reproductive justice movement, and movements for economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only AFR 225 (or AFS 225) or JUS 200 (Black Movements in America) or JUS 225
AFR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
AFR	300	Precolonial Africa	In-depth course study of contemporary Africa, providing thorough examination of the continent's pre-colonial history, particularly before 1900. The course will study the continent and its people, the way the history of the continent has been interpreted by non-Africans, how the continent's anatomy has affected historical development, and the methodology and interdisciplinary scholarship in the study of Africa	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 300 (or AFH 300) or ASB 310
AFR	301	Race and Racism in Africa/African Diaspora	Advanced study of the concepts of race and racism and how they manifest themselves in the USA, the Caribbean, and Africa. Examines the construction of race, racism, and race relations in Africa and the African Diaspora as well as practices to challenge ethnicity, racism, and racial oppression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 301 (or AFS 301) or JUS 300
AFR	302	History of Black Women in America	Advanced examination of the challenges that black women have faced historically in America and how they have responded to those challenges socially, politically, economically, and culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 302 (or AFS 302) or HST 335 or WST 302
AFR	304	Islands of Globalization: Caribbean Politics and Political Economy	In-depth study of the complexities of contemporary Caribbean politics and political economy. Examines the countries that constitute the Caribbean community and common market and the Caribbean Latin American countries such as Cuba and the Dominican Republic and analyzes the historical evolution of the region's political and economic systems and the impact of globalization. Traces the development of the region's political economy from the colonial period to the present; looks at the impact of globalization on contemporary politics, economics, and culture and the region's response.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 304 (or AFS 304) or JUS 304
AFR	305	The Global History of the Trans-Atlantic Slave Trade	Reading- and writing-intensive course that employs critical thought to look at the origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or HST 109 or minimum 45 hours; Credit is allowed for only AFR 305 (or AFH 305) or HST 326
AFR	310	African/African American Psychology	In-depth study of the historical development of African and African American psychology. Course will critically examine the African American frame of reference as well as examine African and African American psychology from a contemporary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	312	Contemporary African and African Diaspora Women	A critical analysis of recent literary, theoretical, and methodological themes concerning the study of African and African Diaspora women. Particular study will focus on the historical impact these themes have had on the phenomena of transformation by various African and African Diasporan women's populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	317	Genes, Race and Society	An in-depth examination of the biological and social construction of race in western societies. Special emphasis is placed on examining these constructs from a historical perspective	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H & C	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	318	African and African Diaspora Women Writers	Intersection of race, class, gender, and ethnicity in black women's fiction from the United States, the Caribbean, and Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit allowed only for AFR 318 (or AFH 318) or WST 318
AFR	320	Africa: Politics, Environment, and Development	An in-depth analysis of the African experience as a way to understand the consequences of human environment relationships, wealth and power differentials, and individual and global citizenship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours

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AFR	325	Music as Political Discourse: Reggae, Calypso, and Hip Hop	This is a reading and writing intensive course that employs critical thought that explores African Diaspora popular music as a medium of social and political expression. It examines the political content of Reggae, Calypso and Hip Hop and their role in triggering and influencing popular discourse in the Caribbean and the USA. Course material will analyze the interrelationships among the musical forms and their role in fostering Black and Pan African Cultural Identity, Political Consciousness and World Peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & H & G	Prerequisite(s): AFR 200 (or AFS 200); minimum 45 hours; Credit is allowed for only AFR 325 (or AFS 325) or JUS 326
AFR	327	Human Rights in Africa	In-depth study of the development of African organizations and instruments engaged in the dynamic processes of conceptualizing human rights that reflect its particular histories. It will also assess the effectiveness and appropriateness of efforts to address the human rights abuses and violations found in Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	330	Survey of African American Politics	In-depth study of the dynamics of the African American political experience. Examines the historical development of African American politics from the anti-slavery era to the Civil Rights breakthrough of the 1960's through the present political climate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 330 or JUS 330
AFR	331	Studies in African American Women Writers of Pre-Harlem Renaissance	In depth analysis and advanced comparative study of novels, short stories, essays, speeches, and dramas that gave voices to African American woman in the pre-Harlem Renaissance era.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) and ENG 101 or 105 or 107 with C or better OR ENG 101 or 105 or 107 with C or better and minimum 45 hours
AFR	332	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only AFR 332 (or AFS 332) or ASM 332
AFR	333	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
AFR	333	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
AFR	335	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and African Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 101 & ENG 102 with C or better. Credit is allowed for only AFR 335, HST 323 or TCL 335
AFR	336	African Art	Anthropological perspective of ancient visual art traditions of Africa. In-depth studies focus on several important themes and case studies that are pivotal to the understanding of the rich and diverse artistic heritage of the African continent.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Prerequisite(s): AFR 200 (or AFS 200) or ASB 102 or minimum 45 hours; Credit is allowed for only AFR 336 (or AFH 336) or ASB 336
AFR	340	The Making of Modern Africa	Advanced study of the events and processes leading up to the colonization of Africa and the subsequent changes in African societies under colonial rule and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	345	Peoples and Cultures of the Caribbean	Traces the socio-political history of the wider Caribbean from the 15th century to the present. Focuses on the following broad areas: the early years of European settlement and colonization; the construction of slavery and plantation society; and the transition from colonization to political independence. Critically examines the origins and building blocks of Caribbean society as well as analyzes the linkages between the region and the rest of the African diaspora.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 345 (or AFS 345) or JUS 345
AFR	350	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)

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AFR	352	Race, Space and the Production of Inequality	Explores how the relationship between race and space has been important to the development of broad patterns of social inequality in the United States. Through a variety of readings, films and other material, examines how ideas of race and space have been important to the making and maintenance of national boundaries, citizenship, regional histories and spatial typologies such as border, ghetto, suburb and prison.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): APA 200 or 210; minimum 45 hours; Credit is allowed for only AFR 352 (or AFS 352) or APA 352 or JUS 353 or TCL 353 or APA 394 (Race, Space and the Production of Inequality)
AFR	353	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 353 (or AFH 353) or ENG 353
AFR	354	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or ENG 354
AFR	355	Democracy and Civil Society in Africa	Advanced examination of contending perspectives on the state and civil society of Africa. Course will specifically analyze the democratic struggles in sub-Saharan Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	360	Black Families in the Diaspora: U.S. and Caribbean	Within a historical, cultural, social-economic, and international context, the institution of Black families begins with their lives in Africa, South America, and the Caribbean and follows the cultural continuities and adaptations impacting the structure and functioning of contemporary African America families. Theoretical models provide focus to studying voluntary and involuntary migration, family labor force involvement, gender roles, marital relations, parenting, kinship and community networks. Throughout the course attention is given to the role of social policies in shaping the well-being of Black families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): AFR 200 (or AFS 200) or FAS 101; Credit is allowed for only AFR 360 (or AFS 360) or FAS 360
AFR	363	African American History to 1865	In-depth examination of African Americans' roles in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H & C	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 363 (or AFS 363) or HST 333
AFR	364	African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
AFR	364	African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
AFR	365	Unruly Voices: Black Women and Cultural Narratives	In-depth study of African American women writers and how they (re)define female identities and engage a critical cross-cultural dialogue within the context of cultural history in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 365 (or AFH 364) or WST 364
AFR	366	African Archaeology: Precolonial Urban Culture	In-depth analysis of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data. Places special study on the evidence relating to dynamics of civilizations in ancient Africa, their foundation, growth, and failure, which spans a period of two million years	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 366 (or AFS 366) or ASB 366
AFR	370	Family, Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Credit is allowed for only AFR 370 (or AFS 370) or FAS 370
AFR	372	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 372 (or AFS 372) or REL 362 or SGS 366 or AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History)

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AFR	373	Islam and World Affairs	Advanced examination of complex trends to construct the roles of Islam as a belief, its institutions, leaders and ordinary believers in contemporary world affairs. Studies different developments, including the rise of (political Islam) fundamentalism, to subsequent changes in the Muslim world, challenges Muslims face, and domestic and international conflicts. Challenges students to reconceptualize and broaden their understanding of the powerful presence of religion in this era of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 373 (or AFS 373) or REL 363
AFR	375	Race, Gender and Sport	Advanced and interdisciplinary examination of the social concepts of race and gender and their economic impact on sports in America. In-depth studies will focus on the role of regulatory agencies, the impact of these regulatory agencies have on sport as well as multiple legal issues surrounding athletics	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	380	Health Issues in the African American Community	In-depth examination and discussion of African American health across the lifespan. Discusses the factors associated with disparities in health and healthcare.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 380 (or AFS 380) or 394 (Hlth Issues A/I/Am Community)
AFR	383	Blacks in Science, Medicine and Public Health	In-depth study of Blacks who have made significant contributions to science and medicine in the U.S. Begins with a critical examination of ancient African scientific contributions. Highlights specific individuals, analyzing their life's path to their respective careers. Also discusses the role of racism and discrimination and their efforts to overcome these.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 383 (or AFS 383) or AFS 394 (Blacks in Science, Medicine, and Public Health)
AFR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	418	Women of Color in Film	An in-depth analysis of the history and representations of women of color in film and the film industry through the intersections of gender, race, sexuality, class, and nationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 418 (or AFS 420) or FMP 420 or FMS 420 or WST 420
AFR	420	Race Ethnicity and Politics in the African Diaspora	Reading and writing intensive course that employs critical thought to look at the competition for political power among different ethnic groups in Africa, the Caribbean and the USA and the implications for political stability, economic development, democratic governance, democratization, nationhood and the empowerment of African and African Diasporan populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): AFR 200 (or AFS 200) and minimum junior standing OR minimum 9 upper-division hours in any classes with the following prefix: AFH, AFS, AFR, APA, JUS, POS, SGS, SOC, WST; Credit is allowed for only AFR 420 or JUS 421
AFR	428	Critical Race Theory	In-depth analysis of the ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only AFR, APA, JUS or SST 428
AFR	459	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & G	Prerequisite(s): ENG 200 and one other 200-level Literature course with C or better; Credit is allowed for only AFR 459 (or AFH 459) or ENG 459
AFR	460	Race, Gender and Media	Reading seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR non-JMC student with minimum 2.0 GPA OR ASU Online student with a minimum 2.00 GPA OR Graduate Mass Communications student; Credit for AFR or MCO 460
AFR	465	Harlem Renaissance: a Cultural History: 1877-1945	Socio-political, historical contexts and worldwide ramifications of the cultural productions (theater, music, visual arts, and literature) of the Harlem Renaissance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		
AFR	466	Peoples and Cultures of Africa	An in-depth study of the diversity of African people and culture from an interdisciplinary perspective. Emphasizes social, political, and economic relations, as well as inequality, art, gender roles, slavery, and slave trade.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 466 (or AFS 466) or ASB 466

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AFR	470	Women's International Human Rights	In-depth study of the core themes of a global movement for women's international human rights. Analyzes the historical evolution of the development of international human rights and women's rights within the United Nations and regional human rights systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): WST 100 or WST 300 or minimum 45 hours. Credit is allowed for only AFR 470 (or AFS 470) or AFR 494 (or AFS 494) (Women's International Human Rights) or AFR 598 (or AFS 598) (Women's International Human Rights) or WST 471
AFR	480	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AFR 480 (or AFS 480) or REL 461 or SGS 442
AFR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	490	Field Studies in the Diaspora	Introduces methods and principles of research applied to Black communities within and outside Arizona. Involves working with field officer and faculty.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		
AFR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
AFR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
AFR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
AFR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7	L	Prerequisite(s): 9 upper-division hours, or AFR 200 (or AFS 200) and minimum junior standing
AFR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
AFR	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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AFR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AFR	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	100	Introduction to Agribusiness	Overview of agribusiness industries and career opportunities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-3		
AGB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
AGB	250	Economics of Resource Allocation: Food and Agriculture	Beginning class that focuses on the specific microeconomic principles that are needed to understand the food industry, agricultural production, food safety and production of renewable natural resources. Focuses extensively on the detailed information that students need to understand the nuances of specific issues associated with the food, agriculture and renewable natural resources, including a keen understanding of monopolistic competition, the economic rationale for governmental regulation, effects of property rights on renewable resources, agricultural price supports, prospect theory and behavioral economics.	N	LEC	N	GNA	W.P. Carey School of Business	Morrison School of Agribusiness	3		Credit is allowed for only AGB 250 or AGB 294 (Economics of Resource Allocation)
AGB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
AGB	302	International Management and Agribusiness	Management and agribusiness issues in the transition of developing countries from subsistence to global operations and competition.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3	G	Prerequisite(s): ECN 212 or 214 with C or better; Credit is allowed for only AGB 302 or MGT 302 or BUA 394 (Perspectives in Global Business)
AGB	321	Agribusiness Marketing	Focuses on food and consumer products marketing at an intermediate level. Covers strategic concepts such as situational analysis, planning and objectives, and target marketing and positioning. Illustrates both the theory and application of strategic decision making through case analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 100
AGB	333	Agribusiness Finance	Introduces financial markets and institutions. Interest rate determination, money and banking, equity markets, farm credit system, vendor financing.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): ACC 231
AGB	340	Food Processing	Introduces processed food quality assurance, statistical sampling, and inspection procedures.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	360	Agribusiness Statistics	Statistical methods with applications in agribusiness and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3	CS	
AGB	366	Agribusiness Production Technologies	Examines methods for managing diverse crop and livestock enterprises with an emphasis on growth, development, marketing, and loss prevention.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	367	Agribusiness Processing Technologies	Biotechnology and other methods used in the production, processing, and distribution of food.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
AGB	410	Agribusiness Management	Principles of human resource management in agribusiness firms.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 100
AGB	414	Food and Agribusiness Policy Issues	Analysis of agribusiness firm decisions in the ecological, economic, social, and political environments. Special emphasis on ethical issues surrounding food production and consumption.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3	L	Prerequisite(s): minimum 87 hours
AGB	420	Food Advertising and Promotion	Focuses on advertising and promotional strategies in the food industry, with emphasis on consumer packaged goods.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321 or MKT 300 or MKT 302 or MKT 303 or MKT 390
AGB	422	Consumer Behavior	Applies behavioral concepts in analyzing consumer food purchases and their implications for marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321, FIN 300, or TMC 320
AGB	425	Food Supply Networks	Information, methods and resources used in the management of global food supply networks. Emphasizes systems of food marketing and distribution from the farm to the consumer.	N	LEC	N	GNA	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 250 or ECN 212
AGB	429	Marketing Research	Examines the marketing research process and its role in facilitating agribusiness decisions. Emphasizes problem identification, survey design, and data analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: AGB 321 and MKT 300 with C or better.
AGB	431	Agribusiness Financial Management	Comprehensive treatment of topics in financial management of agribusiness: capital structure, dividend policy, asset valuation, mergers and acquisitions, risk management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321, FIN 300 or TMC 320

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AGB	433	Agribusiness Financial Markets	Role and function of agribusiness in U.S. financial system. Topics include rural banking, farm credit system, monetary policy, and federal reserve.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 333 or FIN 300
AGB	435	Commodity Futures and Options Markets	Provides an understanding of how to use futures and options markets in a risk management and pricing context, especially as it pertains to the marketing and procurement of agricultural commodities by grain and livestock merchandisers, food manufacturers, and producers/distributors/consumers of natural resources.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 250 or ECN 212
AGB	440	Food Safety	Control, prevention, and prediction of microbial and chemical food-borne diseases.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	445	Food Retailing	Critical examination of trends, problems and management functions of food retail managers across various retail institutions. Emphasizes the biological nature of food products and the dietary preferences of consumers.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321 or MKT 300 or MKT 302 or MKT 303 or MKT 390
AGB	452	Global Food and Agricultural Policy	Applies international trade theory to analyze the effects of government policies and trade agreements on the global food and agribusiness sector.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): minimum 45 hours
AGB	454	Global Food and Agribusiness Trade	Business practices of multinational food and agribusiness firms in the cross border trading of agricultural commodities, technology and value-added products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 302
AGB	456	Food Product Innovation and Development	The food product development process and how it interfaces with food technology and packaging concepts. Emphasizes the team approach, which is prevalent in the food industry.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321 or MKT 300 or MKT 302 or MKT 303 or MKT 390
AGB	481	Strategic Pricing in Food Markets	By applying the basic concepts of microeconomics to real-world data, this course allows the student to not only gain a book-oriented understanding of how businesses in the food industry behave, but practical, hands-on experience that lasts far beyond the classroom.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 250 or ECN 212
AGB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		
AGB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-6		Prerequisite(s): Barrett Honors student
AGB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-6	L	Prerequisite(s): Barrett Honors student
AGB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
AGB	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-7		
AGB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-3		
AGB	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		
AGB	511	Advanced Agribusiness Management	Analysis of organization behavior, change, and resource requirements within agribusiness systems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	514	Advanced Agribusiness Analysis	Vertical integration and differentiation in food and agricultural industries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	528	Advanced Agribusiness Marketing	Theory and analysis of marketing strategy related to food and fiber products. Covers concepts of strategic market planning (e.g., segmenting, targeting and positioning), with application of these concepts at an advanced level. Also examines the broad social, cultural, political and economic issues that impact marketing.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	529	Advanced Agribusiness Marketing Channels	Analyzes agribusiness market channel systems. Formulation of marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	532	Advanced Agribusiness Finance	Financial management of agribusiness firms; agribusiness financial analysis, investment analysis, agricultural risk management, and introduction to agricultural financial intermediaries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	535	Commodity Analysis	Analysis of commodity markets.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	552	International Agricultural Policy	Uses international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agribusiness.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	554	Advanced International Trade	Advanced international practices in trading of agribusiness, technology, and resource products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AGB	560	Advanced Agribusiness Management Systems	Development and use of decision support systems for agribusiness management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	561	Applied Econometrics	Uses model building, hypothesis testing, and empirical analysis in solving agribusiness problems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	570	Managerial Economics for Agribusiness	Concepts in micro- and macroeconomics applied to agribusiness management environments: price formation, market structure, information economics, fiscal and monetary policy.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	589	Agribusiness Capstone	Strategic management of organizations focusing on developing value-creating strategies in dynamic environments.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Morrison School of Agribusiness	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	701	Advanced Agribusiness I: Advanced Agribusiness Analysis	Advanced topics include benefit-cost analysis, input-output analysis, consumer demand, agricultural policy, international trade, welfare economics and applied mathematical economics.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	702	Advanced Agribusiness II: Applied Econometrics	Econometric analysis techniques applied to multinomial and count models, welfare economics, demand models and maximum likelihood estimation using STATA.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	703	Advanced Agribusiness III: Advanced Empirical Models	Microeconomics applied to empirical models involving agribusiness including consumer and producer theory, empirical industrial organization, strategic choice and price behavior.	N	SEM	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AGB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	180	Introduction to American Indian Studies	Introduces the study of American Indian justice issues from an interdisciplinary perspective. Primary topics include sovereignty, law, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	
AIS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	280	American Indian Sovereignty and the Courts	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	H & C	
AIS	285	Federal Indian Policy	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	H & C	
AIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	320	American Indian Philosophies and World Views	Does it make sense to speak about American Indian intellectuals, thinkers or philosophers? Not only have Indians been thinking and thinking deeply for generations, but they have also produced a body of written works that have formed the foundation of contemporary American Indian studies. Covers some of the major figures, their works, and the ideas and opinions (many of which were controversial) that shaped their thinking.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	HU & C	Prerequisite(s): junior standing; ENG 102, 105 or 108 with C or better. Credit is allowed for only AIS 320 or 394 (American Indian Philosophical/World Views)
AIS	360	Issues in Urban Indian Country	In-depth examination of the historical, social, economic, and political implications of indigenous migrations to urban areas. Over 50% of Native people are living in cities. What are they doing? Why are they there? Are they still under the federal trust relationship? Evaluates the social, political, and economic structures built by American Indians living in the urban environment.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum Junior standing; Credit is allowed for only AIS 360 or 394 (Issues in Urban Indian Country)
AIS	370	American Indian Languages and Cultures	Emphasizes understanding of Indian language families and the relationship of oral traditions to culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	Pre-requisite: AIS 180 with C or better
AIS	380	Contemporary Issues of American Indian Nations	Surveys legal, socioeconomic, political, and educational state of contemporary reservation and urban Indians.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	
AIS	381	American Indian Women	Draws from a diverse range of Indigenous critical traditions to examine discourses of gender, identity, and sexuality as sites of cultural revitalization and conflict and theorizes the meaning of each of these categories from diverse Indigenous communities. Considers contemporary and traditional works by Indigenous women with a special emphasis on the historical, socio-cultural, and legal contexts of each work.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	Pre-requisites: WST 100, 300, or AIS 180 with C or better OR co-requisite if completed 30 hours or more: AIS 180, or WST 100 or 300. Credit is allowed for only AIS 381 or WST 382
AIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	420	American Indian Studies Research Methods	Surveys diverse research methods, including statistical, historical, interpretative, and narrative approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	L	Pre-requisite: AIS 180 with C or better
AIS	430	Contemporary Indigenous Spirituality	Why do so many indigenous people across North America want to revitalize their traditional ways when there is supposedly so much opportunity awaiting them in all segments of American society? What are the benefits of such an endeavor and what might be the consequences if this objective is not pursued? This course is premised on the hypothesis that indigenous customs and beliefs contain knowledge that is not only vital to the well-being of the communities in which this native wisdom is found, but also to those communities seeking a more sustainable way of living in the land they call home. After delving into a critique of the religious principles that went into the settling of America, complete with notions of manifest destiny, a way is opened for a more native-oriented discourse on community, nature, economy, and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum Junior standing; Credit is allowed for only AIS 430 or 494 (Ind Spirituality in Postmodern)

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AIS	440	Cultural Professionalism	Emphasizes professional and leadership skills to prepare students for academic and career endeavors after undergraduate degree completion. Explores indigenous perspectives on communication, research, professional and leadership skills. Research focuses on addressing the needs of Arizona Indian Nations and Tribes and culminates in a research paper, in-class presentation and community development poster presentation. Showcases research posters in a research symposium in which guests vote on the most innovative and practical poster proposal.	N	LEC	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3	C	Prerequisite(s): minimum junior standing; Credit is allowed for only AIS 440 or AIS 494 (Cultural Professionalism)
AIS	455	Human Rights and Cultural Resource Laws	Examines how U.S. laws, policies, executive orders, and court decisions have affected Indian nations and peoples in matters of cultural resources and burial rights. Considers the protests, legal battles, and political campaigns Indians have waged to reaffirm their fundamental human rights in the areas of repatriation and sacred sites protection. Examines the ways in which filmmakers and the media present these issues to the public. Assesses the present status of Indian religious rights and cultural resource laws. Sovereignty and its relationship to Indian spirituality is a theme that permeates the course.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum Junior standing; Credit is allowed for only AIS 455 or 494 (American Indian Cultural Resources)
AIS	470	Tribal Governance	Critical and historical examination of Indigenous governance and leadership. Includes a survey of historical policy developments and political change that laid the foundation for contemporary Indian government and an assessment of the effectiveness of modern tribal administrations and decision-making bodies. Explores the diverse approaches to tribal governance, community-based political strategy and local interpretations and assertions of sovereignty and self-governance. Project work facilitates focused student learning on the challenges and opportunities in government for a specific Indian nation. Case work and consultation with practitioners in Indian government complement textbook reading in law, history and policy.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3		Pre-requisite: AIS 285; Credit is allowed for only AIS 470 or AIS 494, Tribal Governance
AIS	480	Actualizing Decolonization	Provides an in-depth investigation of the theory and concepts of colonization, decolonization, and Indigenous peoples in America, with brief comparisons with global Indigenous peoples and experiences. Covers classic scholarly works on colonization and decolonization to understand the frameworks in which colonization and decolonization develops, expands, and impacts Indigenous peoples. Through that theoretical understanding, examines and formulates ways in which decolonization can impact and be integrated into Indigenous lives and communities. Students shift from theory to praxis by writing and presenting on an informal grant proposal for a decolonizing project that can be implemented in an Indigenous or non-Indigenous community.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	HU & C & G	Pre-requisites: ENG 101; ENG 102; Junior standing; Credit is allowed for only AIS 480 or 494 (Readings-Decolonization)
AIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		
AIS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-6		Prerequisite(s): Barrett Honors student
AIS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-6	L	Prerequisite(s): Barrett Honors student
AIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-7	L	
AIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-3		
AIS	501	American Indian Studies Paradigms	American Indian Studies emerged as an academic discipline in the late 1960s in part because of increasing dissatisfaction among Indians about the works of historians, anthropologists, and other scholars that was very often marred by methodological and conceptual flaws. Course provides an overview of ways of "doing" Indian studies from an American Indian Studies paradigm(s) through a critical examination of some of the most significant works emanating from this growing body of literature. Critiques paradigms that selected scholars have employed in the researching and writing of their topics. Seminar format allows students to take the lead in discussing each week's readings. Covers a range of scholarship dealing with American Indian issues; explores the development of American Indian Studies as an academic discipline, probes paradigms that Indigenous scholars have developed; and considers how those paradigms differ from those used by other disciplines.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AIS	502	American Indian Studies Research Methods	Prepares students for thesis research, writing, and completion. Surveys graduate research methods in the field of American Indian Studies including historical, interpretative, and narrative approaches. Focuses on methodological issues specific but not limited to American Indian and Indigenous Studies. Focuses on Indian-centered methodological approaches to research that are essential to qualitative writing of the various topics in Indian country and other issues.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	503	Contemporary Issues of American Indian Nations	Provides an overview of the current status of American Indian Nations with regard to sovereignty, policy, politics, economy, and society. An exploration of current issues illustrates the unique challenges and innovative solutions put forth by Indian communities.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	504	American Indian Film and Activism	Examines the American Indian film and activism with emphases on American Indian production, directing, editing, investigative journalism, documentary film, entertainment, and research. Exposes students to the development of activism in film and how film has been utilized to educate, inspire, and contribute to the challenges in Indian Country.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	505	Contemporary Visual Arts of American Indians	Focuses on a critical analysis of art, film, and media as they intersect with shaping the image and sustaining the culture of American Indians in North America. Examines the persistent and inappropriate stereotypes of American Indians as portrayed in film and media, including explanations for the persistence of negative stereotypes drawing on various aspects of critical race theory including power, politics, and race. Also introduces the scope and diversity of American Indian art and artists and highlights how native artists portray their views and culture through contemporary image making and representations. Stresses the interplay of art with sovereignty, identity, and politics. Emphasizes the powerful and significant connection between contemporary American Indian art and the persistence of indigenous cultures.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	506	Indigenous American Literature and the Tribal Community	Teaches Indigenous (Indian, Native American, First Nations) literature's role in Indigenous history, cultural history, philosophy, society, culture, and developing cultural traditions. Students learn how tribal communities articulate themselves intellectually and artistically through literature and its development locally, nationally, and internationally.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	508	Revitalizing Indigenous Languages	Critically examines Indigenous languages, their decline and revitalization from a language ecology and a self-determination perspective. Includes historical, sociopolitical, educational, linguistic, sociolinguistic, and cultural issues that have had and continue to impact Indigenous peoples and their languages worldwide and their reclamation efforts. Also examines various epistemologies, theories, ideologies, and practices of Indigenous people (including American Indian, Indigenous Alaskan, Hawaiian, Maori, Quechua). Topics include: language policy and planning, language acquisition, child language socialization, identity development, bilingual education, Indigenous language pedagogy, and current models and approaches for Indigenous language maintenance and revitalization (ILMR).	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	509	American Indian and Indigenous Rights	Examines the rights of American Indian peoples with an emphasis on asserting indigenous rights in national as well as international forums. Challenges students to address issues related, but limited to: treaty rights, land rights, water rights, self-determination, rights to a distinct culture, religion, language, spiritual practices, customs, ceremonies, nationhood, autonomy, to seek redress and justice, rights to education, rights to protect from destruction and violence, rights to economic development, rights to protect lands from military, ecological, cultural, and environmental threats, and other rights that may effect the lives of American Indian people.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	510	Social Change in American Indian Communities	Committed to the preservation of political autonomy and cultural identity, American Indian communities are increasingly gaining rule over the effects of social change impinged upon them. Recapturing their histories and redefining colonial relationships, they are forging a preferred future grounded in their own traditional institutions of community, religions, and strengthening of self-determination. Provides students with: (1) an understanding of the enduring struggle of American Indian communities to resist the movement of collective assimilation and retain the right of self-determination; (2) an examination over time of social changes in American Indian communities' social structures and their political and social movements towards the establishment of environmental, economic, and social justice; and (3) knowledge of strategies and tactic for achieving social change within American Indian communities that support Indian self-determination and self-governance.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AIS	511	Genders and Sexualities in American Indian Societies	Grounds students in the theory and concepts of American Indian genders and sexualities. In American Indian societies, there were more than two genders. With colonization through laws, boarding schools, and loss of culture, language, and land, these different genders were attacked and made to disappear. Examine the concepts of gender and sexuality from Native perspectives and theory, and through western imperial views. Also covers the ways in which decolonization plays a role in understanding indigenous genders and sexualities.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	512	Historical Trauma, Healing, and Decolonization	In recent years, scholars have begun to explore the prevalence of historical trauma among American Indian communities. This research argues that the genocide, violence, breakdown of customary cultures through external coercion; and oppression that Indians continue to face at the hands of foreign colonizers has left Indians with harmed with intergenerational self-destructive behavior, domestic violence, suicide, anxiety, depression, low self-esteem, and anger. As a result of this violence and oppression, they have developed models of recovering healthy nations while challenging violations of their human rights in the domestic and international arenas. This history has given rise to a widespread cultural revitalization movement often referred to as decolonization. Scholars from an array of academic disciplines are producing a growing body of literature about decolonization.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	513	Urban Indian Issues	According to the 2010 Census, 64.1% of the American Indian/Alaskan Native population resides in a place outside of tribal areas. Cities such as Los Angeles, New York, and Phoenix have historically counted more than 25,000 American Indian residents. What draws Indigenous families to urban areas? How does an urban address impact the federal trust relationship with nonreservation Indians? What are the social, political, and economic implications for a family who lives off the reservation and away from tribal homeland? Course explores these issues and dynamics and challenges the student to examine the unique identity and contributions of urban Indians. Students learn the history of Indigenous migrations to the city and assess current needs and concerns through consultation work coordinated with Phoenix area Indian Centers and nonprofit organizations.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	514	American Indian Intellectuals	Does it make sense to speak about American Indian "intellectuals," "thinkers," or "philosophers"? Not only have Indians been thinking and thinking deeply for generations, but they have produced a body of written works that have formed the foundation of contemporary American Indian studies. Course covers some of the major figures, their works, and the ideas and opinions (many of which were controversial) that shaped their thinking.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	515	The Work and Legacy of Vine Deloria, Jr	Vine Deloria, Jr, Standing Rock Sioux (1933-2005) has often been referred to as "Uncle Vine" for his role in the intellectual development of innumerable scholars, as well as legal and political figures, all of whom have striven along side Deloria at making the world a better and more just place for indigenous communities. As such, Deloria has also been labeled "the Dean of American Indian Studies" because of his work at shaping the intellectual and political agenda, which began in 1969 with the seminal publication of Custer Died for Your Sins: An Indian Manifesto and continued posthumously with works on the medicine man traditions throughout North America and a reflection on Carl Gustav Jung's analyses of american indian customs and beliefs. this seminar, the first of its kind, takes a comprehensive look at Deloria's philosophical and legalistic legacy by examining his major works and analyzing, in addition to critiquing, the ideas and opinions that shaped his intellectual career.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	516	Concepts of Power and Indigeneity	Grounds students in the theory and concepts of power and indigeneity with comparisons with global Indigenous peoples and experiences. Through that theoretical understanding, examines and understands ways in which these concepts impact Indigenous communities and formulates ways in which to develop practical ways to address these issues.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	517	Customary Tribal Law and Governance	Examines traditional governance systems, institutions, and cultures of American Indians, with emphasis on customary law, justice, and government.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	518	Tribal Jurisdiction	Examines traditional governance systems, institutions, and cultures of American Indians, with emphasis on customary law, justice, and government.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AIS	519	Burial Rights, Repatriation, and Sacred Places Matters	Probes U.S. laws and policies, court cases, and Indian struggles for dignity, burial rights, repatriation, and religious freedom from the late 1800s to the present. Examines developments in the United Nations and international arena pertaining to Indigenous human rights, religious freedom, repatriation, and sacred places protection. U.S. policies, laws, practices, court decisions, land developers, pot hunters, and archaeologists have restricted the human rights of American Indians in term of burial rights and religious freedom. Congress has enacted cultural resource and environmental protection laws, religious freedom, and reburial laws that aim to regulate the use and abuse of cultural resources and Indian rights.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	521	American Indian Leadership and Resistance	Examines the modern leadership struggles in American Indian communities with a foundation of traditional concepts of leadership. Topics include leadership qualities and systems pre-contact, federal-tribal relations, state-tribal relations, tribal politics, internal disputes, activism, mobilization, cultural continuity, social change, community leadership, political/elected leadership, diplomacy, political agendas, and other topics related to American Indian leadership and resistance.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	522	Tribal Governance	Explores American Indian leadership, political ideology, and the history and current state of tribal government. What makes tribal governments tick? Examines past and present challenges faced by leaders and members of indigenous communities. Brainstorms potential strategies for the further enhancement, protection, and assertion of this indigenous "brand" of governance. How do politics, policy development and the ever-changing face of indigenous sovereignty impact the way we think about governance? How can we educate and inspire tribal communities to have greater ownership and interest in government? Students engage with the current research, debate the issues, and learn from people who provide governance to indigenous communities. Case studies focus on specific issues in local communities. Individual portfolio project work facilitates learning and the articulation of leadership and governance as practiced by one particular tribe of your choice.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	523	Community Development with American Indian Communities	Tribal community development is more complicated than large urban population centers or even rural communities because tribal communities continue to struggle with years of colonial, paternalistic, and assimilationist federal policies that have impeded their efforts to become self-determined and self-governing nations. Provides students with the knowledge and skills they need to support community development in American Indian communities within a self-determined and self-governing context. Content includes: (1) a framework for review of current economic, political, social, and cultural issues facing American Indian communities; (2) an overview of community development theories, of the underlying values behind those ideas, and of the linkages between theory and practice in American Indian and other Indigenous communities; and (3) a sampling of intervention strategies and tactics for effective community development in American Indian communities.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	524	Indian Control of Indian Education: Tribal Colleges and Universities	Examines American Indian control of education from a tribal college and university perspective. Focuses on the tribal college movement, including the historical and contemporary political, policy, research, and best practices that have influenced and sustained tribal colleges and universities.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-12		
AIS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	American Indian Studies Program	1-12		
ALA	100	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H & G	Credit is allowed for only ALA or PUP 100
ALA	102	Landscapes and Sustainability	Surveys ideas relating to landscapes and sustainability and the role of landscape architecture in the creation of humanized environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & G	

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ALA	121	Design Fundamentals I	Development of visual literacy. Introduces drawing and graphic representation as methods of seeing and problem solving.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Architectural Studies or Environmental Design or Landscape Architecture major; Credit is allowed for only ALA 121 or INT 120
ALA	122	Design Fundamentals II	Exercises in basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): ALA 121 with C or better; Architecture, Environmental Design or Landscape Architecture major. Corequisite(s): ALA 124
ALA	124	Design Fundamentals II Lecture	Theory and applications of basic design principles, history and theory of how architecture and landscape architecture design is impacted by basic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): Architecture, Environmental Design or Landscape Architecture major. Corequisite(s): ALA 122
ALA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ALA	225	Design Fundamentals III	Applies history and theory of design fundamentals with an emphasis on architectural and landscape architectural design issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	4		Pre-requisites: Architecture or Landscape Architecture student; ALA 122 with C or better; Passed milestone; Co-requisite: ALA 235
ALA	226	Design Fundamentals IV	Basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	4		Pre-requisites: ALA 225 with C or better
ALA	235	Introduction to Computer Modeling	Fundamentals of computer operation, geographic information systems, geometric modeling of 3-D forms and rendering of light, mathematical modeling of processes using spreadsheets.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	CS	Prerequisite(s): Architecture or Environmental Design or Landscape Architecture major. Corequisite(s): ALA 225 (or EDS 200)
ALA	240	Sustainable Design in Built Environment	Reviews the physical principles used in the design of sustainable buildings, landscapes, and urban environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
ALA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ALD	101	Introduction to Aging Issues	Introduces students to general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in midlife and beyond, living options, caregiving, and retirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3	SB	
ALD	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	202	Field Placement I	Provides students an opportunity to work directly with older adults in a variety of settings.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	203	Field Placement II	Provides students an opportunity to work directly with older adults in a variety of settings.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1		Pre-requisites: ALD 101 with C or better; ALD 202
ALD	204	Field Placement III	Provides students an opportunity to work directly with older adults in a variety of settings.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1		Pre-requisites: ALD 101 with C or better; ALD 202; ALD 203
ALD	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	301	Research Methods in Aging	Examines social science approaches to the study of aging. Includes particular methodological issues that must be considered when studying older adults.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	403	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	404	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ALD	420	Health Issues and Older Adults	Analyzes and synthesizes the biological, social, and behavioral aspects of health and healthcare delivery in the later adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3	SB	Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC); Credit is allowed for only ALD 420, 520 or FAS 421
ALD	431	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC); Credit is allowed for only ALD 431, 531 or FAS 421
ALD	440	Social Policy and Aging	Critical analysis and evaluation of the historical, socio-political, and economic issues that are specific to older Americans. Includes federal, state, and local policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	460	Alzheimer's and Related Dementias	In-depth analysis of Alzheimer's disease and related dementias from a caregiver's perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	472	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-6	L	Prerequisite(s): Barrett Honors student
ALD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-7	L	
ALD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	505	Perspectives on Aging and the Life Course	Overview of general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in mid-life and beyond, living options, caregiving, and retirement. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	520	Health Aspects of Aging Adults	Examines biological, social, and behavioral aspects of health in the later years, and the organization and delivery of care. Includes an emphasis on wellness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); ALD 505 with a grade of C or better, or co-enrolled. Credit is allowed for only ALD 420 or 520
ALD	525	Mental Health in Midlife and Beyond	Focuses on the psychological, emotional, and cognitive changes as individuals age. Includes assessment and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	531	Caregiving Issues for Families and Professionals	Examines the issues of caregiving by family members, in-home aids, and professionals in care facilities. Focuses on issues related to providing care to older adults in a variety of settings. Includes social policy toward caregiving, caregiver stress and reward, the role of social workers, and cultural concerns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre/Co-requisites: ALD 505 with C or better if completed; Credit is allowed for only ALD 431, 531 or FAS 421
ALD	535	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	REC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	540	Public Policy Issues and Aging	Examines in detail the historical, socio-political, and economic issues that are specific to older Americans at the federal, state, and local levels. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	545	Elder Abuse and Neglect	Provides a comprehensive review of crimes against older adults. Includes all types of abuse and neglect, as well as prevention, intervention, and public policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	560	Dementia	Thorough examination of dementia and dementia syndromes, including Alzheimer's disease. Includes the complexity and diversity of behaviors that define dementia, and implications for planning interventions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ALD 460 or 560
ALD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ALD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	LEC	Y	Z2	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
ALT	360	Renewable Energy Technologies: Fundamentals and Integration	Technical fundamentals, economic, and social aspects of renewable energy technologies with emphasis on solar cells, hydrogen economy, and fuel cells.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MAT 266; PHY 112; CHM 113
ALT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
ALT	401	Hydrogen Generation, Storage, and Distribution	Overview of primary technologies, economic aspects, and social policy issues related to development of hydrogen systems and hydrogen economy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre- or corequisite(s): ALT 360. Credit is allowed for only ALT 401 or ALT 501
ALT	405	Power Conditioning	Fundamentals of power electronics; DC-DC converters and DC-AC inverters; battery charge controllers. Lab experience.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 310; Credit is allowed for only ALT 405 or 505
ALT	410	Solar Cells and Module	Basic device physics and engineering of solar cells. Lab experience on fabrication, characterization, and testing of solar cells and module.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: UET 331
ALT	412	Village Energy Systems	The role of energy resources in economic development. The need for and use of energy at the Base of the Economic Pyramid (BoP). Individual Problem Based Learning (PBL) investigations of potential solutions to energy-poverty at the BoP.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Senior Standing in Engineering, Engineering Technology, Mathematics or another Science-based curriculum. Credit is allowed for only ALT 412 or ALT 494 (Village Energy Systems)
ALT	420	Electrochemical Energy Technologies	Thermodynamic and electrochemical principles of fuel cells. Hands-on experience on fabrication and testing of fuel cells; problem solving skills.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: CHM 113; ALT 360
ALT	435	Applied Photovoltaics	Overview of solar radiation, operating principles of photovoltaics, qualitative analysis on influencing parameters. market trends, basics of PV systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: ALT 360; ALT 410 (not required for BAS students); Credit is allowed for only ALT 435 or 535

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ALT	445	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific application.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: ALT 360; CHM 113; Credit is allowed for only ALT 445 or 545
ALT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
ALT	502	Batteries for Portable Electronics	Theoretical and practical overview of primary, secondary, and lithium batteries. Key performance characteristics, construction materials, typical applications, recycling, and disposal.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALT	503	Fuel Cells for Portable Electronics	Overview of electrochemistry, portable electronics industry, principles of fuel cells, and prospects for micro fuel cells.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALT	505	Power Conditioning	Fundamentals of power electronics, DC-DC converters and DC-AC inverters, battery charge controllers.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Credit is allowed for only ALT 405 or 505
ALT	507	Evaluations of Photovoltaic and Fuel Cell Systems	Field testing, data collection, and evaluation of real-world photovoltaic and fuel cell systems available on campus and data analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALT	512	Village Energy Systems	Establishes leadership in the development of energy resources at the Base of the Economic Pyramid (BoP). Individual Problem-Based Learning (PBL) investigations of potential solutions to energy-poverty at the BoP.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Graduate Standing in Engineering, Engineering Technology, Mathematics or another Science-based curriculum; Credit allowed for only ALT 512 or ALT 598 (Village Energy Systems)
ALT	515	Alternative Energy Reliability and Standards	Alternative energy systems and their reliability issues, accelerated life and safety testing, standards and codes, regulatory requirements.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALT	535	Applied Photovoltaics	Term projects, overview of solar radiation, operating principles, qualitative analysis on influencing parameters, market trends, basics of PV systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status; Credit is allowed for only ALT 435 or 535
ALT	545	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status; Credit is allowed for only ALT 445 or 545
ALT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	101	ASU Digital Culture Experience	Orientation to the Digital Culture program with emphasis on resources for academic success.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1		Prerequisite(s): Herberger Institute for Design and the Arts Digital Culture BA major; Credit is allowed for only AME 101 or AME 194 (ASU Digital Culture Experience)
AME	111	Introduction to Digital Culture	Examines the effects of digital technology on the way we live, communicate, learn, and create. Proposes that we are moving towards a hybrid (physical-digital) existence and culture. Traces that evolution, looks at current examples of hybrid cultural processes and outcomes, and discusses possible future trends. Discusses how these changes are influencing the work and career possibilities of people involved in all aspects of human culture. Comprises diverse readings, media products, class interaction, group discussion and hands-on collaborative projects exploring concepts covered in class. Also includes a number of guest lectures from ASU faculty.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3	CS	Credit is allowed for only AME 111 or 194 (Introduction to Digital Culture)
AME	112	Computational Thinking for Digital Culture	Introduces fundamental concepts relevant for understanding computation. What are algorithms and how can computer code express them? Basics of how real-world signals are captured, encoded, recorded, retrieved and decoded. Designed for students with little or no background in programming.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Credit is allowed for only AME 112 or 194 (Computational Thinking for Digital Culture)
AME	120	Digital Culture Studio	Provides advice on career preparation and industry skills through a series of guest lectures. Sample topics include resumes, personal Websites and portfolios, how to pitch a project idea, and topics chosen by guest industry presenters.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1		Credit is allowed for only AME 120 or AME 194 (Digital Culture Studio)

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AME	130	Prototyping Dreams	How do you build your dreams? Explores the idea of inspirational prototyping across multiple media, including physical fabrication, science fiction, virtual worlds and film. Students create and iterate their own prototypes for visions of the future: new technologies, solutions to challenges, and tools or systems that expand the horizon of human potential. These prototypes do not have to be functional tools, but they must be functional stories, effectively sharing the creator's vision with others. Just as the Star Trek communicator inspired early cellphones, these prototypes will help shape new conversations about the future we want to build. Surveys a series of creative paradigms for inspirational prototyping, including design fiction, rapid fabrication and 3D printing, science fiction prototyping, gaming and virtual world-building.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Credit is allowed for only AME 130 or AME 194 (Prototyping Dreams)
AME	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	210	Media Editing	Introduces the fundamental principles of media editing including form, composition, structure, pattern, sequence and rhythm. Using a combination of open source, commercial and custom-designed tools and platforms, students design, construct, communicate and interpret rich media messages. Through creating and critiquing visual compositions, audiovisual artifacts, spatial narratives or generated graphs, students explore the practice of media editing as a spatial, temporal and dynamic process.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Credit is allowed for only AME 210 or AME 294 (Media Editing)
AME	220	Programming for the Web	Introduces a range of technologies used for Web development: marking up content with HTML, styling with CSS and interaction using Javascript. Explores the latest foundational Web standards such as HTML5 and CSS3 to learn how to create compelling content for the World Wide Web. Goes beyond simply coding a Web page to understanding how the Web works. The World Wide Web is used in an incredible variety of applications that we now find integral to our lives, from talking to our friends on Facebook to discovering music on the iTunes Music Store, paying bills from our bank's Web site to finding the route to our vacation destination on Google maps. Investigates how Web standards have enabled the creation of dynamic applications delivered over the Internet.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): AME 230; Credit is allowed for only AME 220 or AME 294 (Programming for the Web)
AME	230	Programming for the Media Arts	Introductory-level course in practical aspects of programming systems for media arts. Explores techniques in programming in the context of images, sounds, interaction, networking and data visualization. Uses the processing programming language, an accessible yet powerful environment for learning how to program. Students create images, animations and interactive programs, and learn how to use images, movies, sound files, microphones and cameras in their programs.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Credit is allowed for only AME 230 or AME 294 (Programming for Media Arts)
AME	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	310	Media Literacies and Composition	When we integrate computational systems into the core of our cultural and social practices, we reinvent how we tell stories. The roles of creators, critics and audiences are blurring at the same time that digital tools allow us to infinitely reproduce and remix narratives, radically changing what we mean by the "work" or "text." These new media platforms empower us to create, share and respond to cultural narratives that defy traditional notions of how stories operate, demanding new literacies. Explores our powers and responsibilities as readers, writers and creators of new cultural languages, including new forms such as games, digital video, electronic literature and social media. Students study relevant media narratives and cultural ecosystems from the 20th and 21st centuries, acquiring a set of literacies that they hone through practices of authorship, critique and collaboration, culminating in the presentation of their own digital media narratives.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; minimum 45 hours. Credit is allowed for only AME 310 or AME 394 (Media Literacies & Composition)
AME	320	Motion Capture for Integrative Systems	Presents the broad principles and techniques for movement study in oneself and others that includes applied, dynamic anatomy. Also presents the functional techniques for motion capture with a special emphasis on the capture of human movement from visual sensors. Students understand the technology behind motion capture; a high-level understanding of movement and anatomical systems; the ability to perform motion capture and customize it to suit the requirements of specific creative applications in animation, sound and live performance as well as applications in movement rehabilitation and education. Looks at the technology behind various modern motion capture systems based on markers, inertial sensors, accelerometers, and depth sensors, so the student appreciates the technical capabilities and limitations of each technique.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; minimum 45 hours. Credit is allowed for only AME 320 or AME 394 (Motion Capture for Integrative Systems)

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AME	330	Digital-Physical Systems	Hands-on course where students explore digital-physical systems by working with the fundamental building blocks of interactive technologies and examining exemplar works of media art. Basics of electronics, circuit design, sensors, actuators, simple mechanical design, the iterative design process and microcontroller programming. Emphasizes media and arts applications such as real-time interactive performance, robotic installations and tangible computer interfaces. Prior knowledge in hardware/circuit design is not required.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; minimum 45 hours; Credit is allowed for only AME 330 or AME 394 (How to Build a Digital-Physical System)
AME	340	Compositional and Computational Principles for Media Arts	In much of today's contemporary art practice there is a tight coupling of compositional form, content and underlying computational mechanisms. This integration holds the potential to yield new modes of expression and wholly new art experiences as is evident in emerging forms of real-time generative art, network-based art, game-based art, and interactive performance. As both practitioners and participants, we must develop a critical understanding of the relevant compositional and computational principles that frame this work. Students study relevant media art works from the 20th and 21st century, develop a working understanding of fundamental compositional and computational principles, and apply their understanding through the realization of exploratory media artworks that are presented at the end of the semester.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; minimum 45 hours. Credit is allowed for only AME 340 or AME 394 (Compositional & Computational Principles for Media)
AME	385	Collaborative Projects and Research I	Project-based class for experience in collaborative design principles, project pitching and research. Includes readings and small projects with teams formed at the outset of the class. Over the course, teams develop their own project along with a schedule for realization. Project themes vary, yet all projects must explore relationships of digital technologies and cultural products or processes. Includes presentations, discussion and analysis of team projects.	N	STO	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): BA in the Arts (Digital Culture) or BA Design Studies (Digital Culture) or Digital Culture major; Minimum 45 earned hours; Credit is allowed for only AME 385 or 394 (Collaborative Projects & Research I)
AME	386	Collaborative Projects and Research II	Project-based class for experience in collaborative design principles, project pitching and research. Includes readings and small projects with teams formed at the outset of the class. Over the course, teams develop their own project along with a schedule for realization. Project themes vary, yet all projects must explore relationships of digital technologies and cultural products or processes. Includes presentations, discussion and analysis of team projects.	N	STO	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Pre-requisites: AME 385; Credit is allowed for only AME 386 or 394 (Collaborative Projects & Research II)
AME	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	430	Mac Development for Media Arts	Explores native application development for OS X (Macintosh) for use in the domain of media arts. Project-based course covers the native Xcode development environment and the C and Objective-C programming languages. Native applications are able to achieve the highest levels of performance; they leverage the unique technologies built for a platform and they are able to participate in the native user experience (look and feel) that all users of a popular platform expect. To understand native apps for OS X, the course examines a number of code frameworks provided for developers by Apple (the core of which are often called Cocoa), including Foundation, AppKit, AV Foundation, Core Animation and SpriteKit.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): AME 230; Credit is allowed for only AME 430 or AME 494 (Mac Development for Media Arts)
AME	470	Programming for Social and Interactive Media	Web sites, desktop applications connected to the "cloud" and mobile applications depend on services supplied by server-based software that is the invisible center of users' networked experiences. Applications and data servered over the Web are at the core of popular software from social applications such as Facebook, Twitter or Instagram to networked media like iTunes, Netflix or Hulu. Investigates the development of Web applications and services. Creates modern dynamic Web applications using open source technologies.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; minimum 45 hours; Credit is allowed for only AME 470 or AME 570 or AME 494 (Programming for Social and Interactive Media) or AME 598 (Programming for Social and Interactive Media)
AME	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	485	Digital Culture Capstone I	Senior capstone projects in digital culture are interdisciplinary team projects that offer experience in diverse collaborations for solving complex problems, a proficiency widely demanded by employers. Students integrate, extend and apply information, principles, theories and/or methods learned in previous courses while supervised by the instructor.	N	STO	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): BA in the Arts (Digital Culture) or BA Design Studies (Digital Culture) or Digital Culture major or minor or certificate; minimum 45 hours. Credit is allowed for only AME 485 or AME 494 (Digital Culture Capstone I)

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AME	486	Digital Culture Capstone II	Senior capstone projects in digital culture are interdisciplinary team projects that offer experience in diverse collaborations for solving complex problems, a proficiency widely demanded by employers. Students integrate, extend and apply information, principles, theories and/or methods learned in previous courses while supervised by the instructor.	N	STO	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Pre-requisites: AME 485; Credit is allowed for only AME 486 or 494 (Digital Culture Capstone II)
AME	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6		Prerequisite(s): Barrett Honors student
AME	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6	L	Prerequisite(s): Barrett Honors student
AME	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-7	L	
AME	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-3		
AME	530	Experiential Media Methodology and Theory I	Engages students in the theory and practice of designing and evaluating experiential media systems. Building on ideas and concepts explored in the companion introductory course, students create and critique a variety of integrated media systems demonstrating technical competence, aesthetic knowledge, analytic rigor and theoretical relevance.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student. Credit is allowed for only AME 530 or 598 (Experiential Media Methodology and Theory I)
AME	531	Experiential Media Methodology and Theory II	Focuses on media arts and sciences in the 20th and 21st century, discussing issues surrounding the definition of the field, media art creation practices, methods of criticism and analysis, interdisciplinary/transdisciplinary work and research, collaboration and current trends. Also focuses on the methodology, theory and history behind the design and development of experiential media systems. Directed toward those interested in researching, designing, building or critiquing experiential media systems that are culturally provocative, socially meaningful and deeply essential.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): AME 530; credit is allowed for only AME 531 or 598 (Experiential Media Methodology and Theory II)
AME	532	Creating by Algorithm	Focuses on creation of media of all kinds using computation. Using algorithms it is possible to create complex media that is difficult or impossible by traditional methods. Some techniques can capture the unpredictable evolutionary and emergent behavior found in nature. Investigates influential algorithmic methods including stochastic processes and Markov chains, Perlin noise, cellular automata, fractals, L-systems and genetic algorithms.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	533	Realtime Data Analysis and Pattern Recognition for Interaction	Real-time computing is increasingly used in a variety of settings and scenarios--no more so than in mobile computing. Embedded within our mobile devices are a multitude of onboard sensors, including a three-axis accelerometer, magnetometers, microphones, cameras and GPS. Explores, through the frame of mobile computing, the foundations of employing real-time sensor, visual or audio signals to deliver novel media applications. Introduces computational techniques for classification, detection and recognition of these diverse signal sources through practical example and relevant literature, including signal smoothing, feature extraction, clustering, pattern recognition, neural networks and content classification. Introduces the technical possibilities for such systems as well as the considerations involved in designing and developing real-time solutions.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	541	Interactive Forms	This course explores how computational models can enhance the form, meaning, and engagement of interactive mediated experiences. Special emphasis is given on how new computational models (stochastic procedures, non-linear dynamics) can be used to mediate the complexity of our current experiences.	N	LEC	N	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	570	Programming for Social and Interactive Media	Web sites, desktop applications connected to the "cloud" and mobile applications depend on services supplied by server-based software that is the invisible center of users' networked experiences. Applications and data servered over the Web are at the core of popular software from social applications such as Facebook, Twitter or Instagram to networked media like iTunes, Netflix or Hulu. Investigates the development of Web applications and services. Creates modern dynamic Web applications using open source technologies.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only AME 470 or AME 570 or AME 494 (Programming for Social and Interactive Media) or AME 598 (Programming for Social and Interactive Media)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
AME	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	590	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	100	Introduction to Applied Mathematics for the Life and Social Sciences	Introduces quantitative techniques as applied to problems in the life and social sciences. Includes challenges like understanding the complexities of the human genome or the implications of globalization for infectious disease, human health, and economic stability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	MA	Prerequisite(s): MAT 117 with C or better or Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only AML 100 or SOS 101
AML	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		

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AML	253	Introduction to Mathematical Tools and Modeling for the Life and Social Sciences	Introduces the evaluation and construction of mathematical models used in the life and social sciences. Includes the basic steps in developing a model, analyzing it, and testing it with actual data. Covers the first steps concerning how to use formal mathematical techniques including developing equation-based relationships, plotting graphs, linear regression, and solving equations using computer software.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): AML 100 or SOS 101 with C or better
AML	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	330	Social Simulation	Students will apply computer simulation and agent-based modeling techniques to study social systems relating to concrete research questions.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4	CS	Prerequisite(s): AML 100 or MAT 142, 170, 210, 265, or 270 with C or better OR Mathematics Placement Test score of 50% or higher; minimum 56 hours; Credit is allowed for only ASB 430 or CPI 430 or AML 330
AML	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	406	Directed Reading and Research in Applied Mathematics for the Life and Social Sciences	Collaborative, practice-oriented course where students produce individual or team-initiated research project reports on pertinent topics in the life and social sciences. Students select topics, design, identify and formulate effective research ideas, and then translate them into clear and effective research plans.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: AML 100 and MAT 342 (or MAT 343); 86 minimum hours
AML	441	Mathematical Concepts and Tools in Sustainability	Explores various mathematical analysis and models pertinent to sustainability science drawn from both social and natural sciences and introduced in a problem-based context. Demonstrates basic concepts from game theory such as pure-strategy and mixed-strategy Nash equilibriums in such classic games as prisoner's dilemma, hawk-dove, coordination. Explores the evolutionary dynamics of these games through the replicator equations. Studies important concepts of stability and regime shift for selected problems. Also discusses some basic solution concepts in cooperative game theory (depending on interest and time).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s) with C or better: AML 253, or SOS 210(or SOS 294 Intro to Math Tools & Modeling). Credit is allowed for only AML 441 or 494 (Math Concepts & Tools in Sustainability) or SOS 441 or 494 (Mathematical Concepts and Tools in Sustainability)
AML	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
AML	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
AML	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Prerequisite(s): Barrett Honors student
AML	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
AML	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7	L	
AML	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	520	Agent-Based Modeling	Introduces agent-based modeling to simulate social and social-ecological systems. Topics include design, analysis, and empirical grounding of agent-based models to a variety of application domains including collective action, diffusion processes, resource use, health, and complex societies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
AML	540	Statistical Modeling for Sustainability	Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to begin conducting empirical analyses in their domains of interest; bring students to a high level of competency in using a cutting-edge statistical software package (Stata) for data management and data analysis tasks; expose students to applications of statistical methods in the economics/policy/social science sustainability literatures in order to develop an understanding for how statistical tools are operationalized in the research world; and develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations and command of statistical tools that constitute quality empirical research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: Graduate (degree or non-degree) student; Credit is allowed for only AML, ESS or SOS 540
AML	541	Mathematical Concepts and Tools in Sustainability	Explores various mathematical analysis and models pertinent to sustainability science drawn from both social and natural sciences and introduced in a problem-based context. Demonstrates basic concepts from game theory such as pure-strategy and mixed-strategy Nash equilibriums in such classic games as prisoner's dilemma, hawk-dove, coordination. Explores the evolutionary dynamics of these games through the replicator equations. Studies important concepts of stability and regime shift for selected problems. Also discusses some basic solution concepts in cooperative game theory (depending on interest and time).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit allowed for only AML 494 (Math Concepts & Tools in Sustainability), AML 541, SOS 494 (Math Concepts & Tools in Sustainability), SOS 541 or SOS 598 (Math Concepts & Tools in Sustainability)
AML	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	610	Topics in Applied Mathematics for the Life and Social Sciences	Introductory course in applied mathematics for the life and social sciences, combined with the first semester of a two-semester course in mathematical biology. Provides a solid introduction to the modeling of biological and social processes as well as to some of the mathematical approaches involved in their analysis and simulation.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	612	Applied Mathematics for the Life and Social Sciences Modeling Seminar	Presents and applies mathematical modeling principles and techniques for representing the structure and operation of complex life and social systems and processes. Helps students identify potential problems in the life and social sciences and the corresponding mathematical and statistical methods that can be used for their study.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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AML	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AMS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
AMS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
AMS	201	Introduction to American Studies	Provides an intellectual foundation for the interdisciplinary study of American culture, history, and society. Introduces students to ideas, methods, tools, and theories in the vibrant field of American studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
AMS	276	U.S. Women's Movements	Historical survey of sources influential in the development of the feminist movement in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AMS 276 or WST 276
AMS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
AMS	310	History of American Systems to 1865	First of a two-part survey of political, legal, and economic institutions, placed in the context of the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H	
AMS	311	History of American Systems Since 1865	Second in a two-part survey of political, legal, and economic institutions, placed in the context of a dynamic industrialist capitalist society, from the age of industrialism and modern America.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMS	320	American Cultural History I	First of a two-part survey of American culture, broadly defined as historically transmitted patterns of meaning expressed in symbolic forms, including ideas, ideals, the arts, and social and economic standards from the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 320 or HST 313
AMS	326	Popular Culture	Topics in American popular culture, including theories of popular culture; the history and analysis of mass media, including television, film, and the music industry; and vernacular art and the folk tradition.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	327	Regional Cultures	Examines the concept of regionalism and regional cultures in America with a special emphasis on the Southwest/Borderlands.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	330	American Lives	Examines American society through the study of autobiography and ethnography.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C	Prerequisite(s): minimum 30 hours
AMS	332	Studies in Race and Ethnicity	Topics relating to issues of race and ethnicity in American life. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	334	Class in America	Explores social class and inequality in the U.S. including history, culture, work, politics, globalization, and intersections of gender, race, ethnicity, and place.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): minimum sophomore standing
AMS	335	American Biography	Topics in biographies of individuals, comparative biographies, the art of biography, and the function of autobiography.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Minimum 45 hours
AMS	336	The American Southwest in Literature and Film	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AMS 336 or ENG 334 or ETH 334
AMS	380	Race, Gender, and Class	In-depth examination of how social inequalities are reproduced and perpetuated. Explores the intersections of race, class and gender in culture and society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only AMS 380 or ETH 380 or WST 380
AMS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
AMS	412	Studies in American Politics & Law	Topics in American political and legal systems, including social movements in the United States and women and the law. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	417	Religious Traditions of the American Southwest	Examines the sacred traditions that have evolved within the North American Southwest context.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
AMS	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
AMS	422	Studies in American Literature	Topics in American literature, including contemporary American comic fiction, literature of the American South, literature of American wars, Hispanic chronicles of the Southwest, literature of la Chicana, and American rhetoric. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	428	Chicano Cultures in the Southwest	Examines the history and cultures of people of Mexican descent in the Southwestern region of the United States through exploration of "cultural citizenship" and "belonging" as they relate to the pursuit of civil rights, equality, justice and cultural production.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AMS 428 or ETH 428 or LAS 428 or MAS 598 (Chicano Cultures in Southwest)
AMS	429	Interdisciplinary Topics	Senior-level seminar that examines issues relevant to two or more American cultures' fields. Topics may include Southwest/border Hispanic folklore, Southwestern corridors, American art and the city, and the West of the imagination. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	431	Gender Studies	Topics relating to issues of gender in American life. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	449	Hate Speech, Manifestos, and Radical Writings	Examines writings, speeches and texts that provoke radical or even revolutionary social change. At its core, this course asks: What is the radical and what does it do? How do radical writings function as texts, speech acts, inspirational documents, testimonies, accounts of madness, frightening moments, calls to arms, peacekeeping entities or speaking truth to power? Examines injurious speech and provocative writings that span a range of social movements and topics, including radical feminism, radical queer, Black power, indigenous rights, art and performance, anti-technology, animal rights, violence, madness and revolutionary resistance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): minimum 35 hours; minimum 2.50 GPA; Credit is allowed for only AMS 449 or ETH 449 or WST 449 or WST 394 (Hate Speech and Manifestos)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMS	450	Latina/os, Schooling and Social Inequality	Advanced interdisciplinary understanding of the issues facing Chicano, Mexican American and Latino communities in relation to K-16 schooling in the southwestern United States. Examines various schools of thought that have shaped social discourse and policies, develops a critical perspective on the social and political issues affecting education, and identifies issues--both historical and contemporary--affecting Chicanos in public education.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only AMS 450 or ETH 450 or LAS 450 or AMS 429 (Latino/a School & Social Inequty)
AMS	469	Abject Bodies and the Politics of Trash	Examines the possibilities inherent in "theorizing from the gutter"; looking at the world not from a lofty "Ivory Tower" but from the slime, the muck, the dumpster, the trash heap, the wasteland, the discarded and the downtrodden. Takes its theoretical framework from a radical 1960s manifesto called SCUM Manifesto by Valerie Solanas and from the French feminist philosophies of Julia Kristeva, who theorized the abject as a relationship with the grotesque that reveals the deep-seated fear of death. Uses these theoretical positions to examine trash, both abstractly and literally. Works through a variety of concepts ranging from actual trash, garbage, waste, toxic sludge, pollution and dirt, and tackles more abstract notions of trash such as the knowledge produced on the fringe in circuses, amusement parks, "trailer trash" zones, freak shows and the bodies of those marked as "Other" or different.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 36 hours; Credit is allowed for only AMS 469 or ETH 469 or WST 469 or WST 494 (Trash, Freaks and SCUM) or JHR 598 (Trash, Freaks and SCUM) or MAS 598 (Trash, Freaks and SCUM)
AMS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
AMS	490	Writing Certificate Portfolio	Preparing a portfolio demonstrating advanced writing skills. Limited to and required of students in the Writing Certificate Program.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1		
AMS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
AMS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
AMS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
AMS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	Prerequisite(s): ENG 101 or 105 with C or better; AMS 301 with C or better
AMS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
AMS	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
AMS	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
AMS	502	American Studies: Theory and Method	Explores some of the major themes in American studies scholarship by considering American cultural formation and change over the last two centuries.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): MA American Studies major
AMS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AMS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AMS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
AMS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
AMS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AMS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
AMS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
AMT	101	Introduction to Aeronautical Management Technology	Facilitates entry into aeronautical management technology programs. Emphasizes General Catalog; major and concentration requirements, registration, careers, and Polytechnic campus resources. Introduces various learning styles and strategies that assist students in becoming successful learners. Emphasizes time management techniques and academic integrity.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	1		
AMT	105	Flight Operations and Safety I	Supervised private pilot operations, flight instruction, flight safety briefings and recurrent aviation subjects appropriate for private pilots. Flight instruction is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons and FAA Practical Exam(s) within the appropriate flight training syllabus and satisfactorily completing all academic requirements. Flight instruction costs are not included in university tuition and fees. Students following the single engine flight training track earn their Single Engine Private Pilot certificate. Students following the multiengine flight training track earn their Single Engine Private Pilot Certificate and their Multiengine Private Pilot certificate.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Professional flight program secondary application; Pre- or corequisite(s): AMT 182 and AMT 220 with C or better if completed
AMT	110	Flight Operations & Safety II	Concludes supervised private pilot operations and flight training and introduces students to supervised commercial pilot operations, flight training, flight safety briefings, and recurrent aviation subjects appropriate for private and commercial pilots. Flight instruction costs are not included in university tuition and fees.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 105 with C or better; Pre- or corequisite(s): AMT 222 with C or better if completed
AMT	150	Flight Operations & Safety III	Continuation of supervised instrument pilot operations, flight instruction, flight safety briefings and recurrent aviation subjects appropriate for instrument pilots. Flight instruction is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons and the FAA practical exam within the appropriate FAA-approved Part 141 training syllabus and satisfactorily completing all academic requirements. Flight instruction costs are not included in university tuition and fees. Students earn their Instrument Rating.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 110 with C or better
AMT	170	Introduction to Unmanned Aircraft Systems	Introduces the history of unmanned aircraft systems and current and future developments in civil and military operations. Specific blocks deal with elements that form an unmanned aircraft system: unmanned vehicles, communication, navigation, launch and recovery, control stations, payloads, and support equipment. Explores other current issues in unmanned aircraft operations: aviation regulatory system and integration, safety and human factors, ethical and legal issues, and the future unmanned aircraft systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		
AMT	182	Private Pilot Ground School	Ground school preparation for Private Pilot Certificate. Aerodynamics, navigation, performance, and regulations.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		
AMT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		
AMT	201	Air Traffic Control	Ground and air operations; weather services communications and routing; flight plans, IFR operations, departures and arrivals; and airport conditions and emergencies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: BAS Applied Science (Aviation Management Technology) OR BS Aeronautical Management Technology OR BS Air Traffic Management major
AMT	205	Flight Operations and Safety IV	Continuing introduction to commercial pilot flight operations. Flight instruction, lecture, quizzes and discussion of the current flight syllabus topics, student handbook/general operations manual, monthly safety and informational briefings. Students must maintain enrollment in the appropriate flight operations and safety course while engaging in flight training activities. The flight training is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons within the appropriate FAA-approved Part 141 training syllabus, and satisfactorily completing all academic requirements.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) student; AMT 150 with C or better
AMT	210	Flight Operations and Safety V	Covers instrument pilot flight operations. Flight instruction, lecture, quizzes and discussion of the current flight topics, student handbooks, operations manual, monthly safety meetings, informational briefings. Students must maintain enrollment in the appropriate flight operations and safety course while engaging in flight training activities. The flight training is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons within the appropriate training syllabus, and satisfactorily completing all academic requirements.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) student; AMT 205 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
AMT	214	Commercial Pilot Ground School	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 1 of 2). 10 hours ground trainer included.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): Aeronautical Management Technology major; AMT 182 and 220 with C or better
AMT	220	Aviation Meteorology	Evaluation, analysis, and interpretation of atmospheric phenomena. Low- and high-altitude weather from the pilot's viewpoint.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		
AMT	222	Instrument Pilot Ground School	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 2 of 2). 10 hours ground trainer included.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: Pre-requisites: Aeronautical Management Technology (Professional Flight) major; AMT 105 and AMT 182 with C or better, OR nonmajor: AMT 182 with C or better
AMT	250	Flight Operations and Safety VI	Continuing introduction to commercial pilot flight operations and begins to introduce the student to certified flight instructor flight operations. Primary activities include flight instruction, lecture and discussion of the current flight syllabus topics, handbooks and general operations manual as well as monthly safety and other informational briefings. The flight training is considered to be the laboratory for this academic class. Course completion requirements are based upon completion of lessons within the appropriate flight training syllabus.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 210 with C or better
AMT	270	Unmanned Aircraft	Introduces elements comprising the unmanned aircraft system (UAS). Includes review of UAS, Unmanned Aerial Vehicle (UAV); system development and certification, selection and design, aerodynamics and airframe configurations, characteristics of vehicle types, design standards and regulatory aspects, airframe design, payload types, and control and stability. Students apply concepts acquired in classroom sessions and construct various unmanned aircraft, train to operate using existing simulators, and conduct flight-testing. The final course project is the design, development and construction of a group 1 unmanned aircraft, serving as the core unmanned vehicle used in subsequent UAS courses. Incorporates UAS data collection and analysis throughout the course. Course concepts enable UAS student pilots to become knowledgeable of aerodynamic aspects of UAV to ensure safety of flight and improved maneuverability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 170 with C or better
AMT	280	Aerospace Structures, Materials and Systems	Basic aerodynamics, incompressible/compressible airflow, wind tunnel testing, wing theory; analysis of aircraft structures; properties and applications of materials, and aircraft systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	4		Pre- or corequisite(s): PHY 111, 113
AMT	285	Flight Instructor Ground School	Ground school in preparation for the FAA Flight Instructor Certificate.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s) with C or better: AMT 150, 214
AMT	286	Multiengine Pilot Ground School	Ground school preparation for the FAA Multiengine Rating.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	1		Pre- or corequisite(s): AMT 150 with C or better if completed; Aeronautical Management Technology (Professional Flight) major
AMT	287	Aircraft Powerplants	Theory and performance analysis of gas turbine and reciprocating aircraft engines. Engine accessories, systems, and environmental control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	4		Pre/Co-requisite: PHY 111 or PHY 121
AMT	292	Flight Instructor Instrument Ground School	Ground school preparation for the FAA Instrument Flight Instructor Rating.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 205 and 222 with C or better; AMT 285 or 385 with C or better
AMT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		
AMT	305	Flight Operations & Safety VII	Continuation of supervised multiengine commercial pilot operations, introduction of single engine commercial pilot operations, flight instruction, flight safety briefings and recurrent aviation subjects appropriate for commercial pilots. Flight instruction is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons within the appropriate FAA-approved Part 141 training syllabus and satisfactorily completing all academic requirements. Flight instruction costs are not included in university tuition and fees. Students earn their Commercial Multiengine and Commercial Single Engine certificates.	N	LEL	Y	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Pre-requisites: Aeronautical Management Technology Professional Flight major; AMT 250 with C or better
AMT	308	Air Transportation	Studies the historical and international development of air transportation and its social, political, and economic impact upon global interrelationships.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3	G	Pre-requisite: Minimum 50 hours

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AMT	310	Flight Operations and Safety VIII	Covers certified flight instructor instrument (CFII) and multiengine flight operations. Flight instruction, lecture and discussion of the current flight topics, student information handbooks, general operations manual (GOM), monthly safety, informational briefings. Requires enrollment in appropriate flight operations and safety course while engaging in flight training activities. Flight training is considered to be the laboratory for this academic class. Course completion requirements are based upon completion of lessons within the appropriate flight training syllabus.	N	LEL	Y	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 286 and 305 with C or better. Pre- or corequisite(s): AMT 292 (or AMT 392) with C or better if completed
AMT	350	Aircraft Design and Logistics Management	Fundamental aircraft design principles, including performance factors associated with mission profiles and the identification of basic logistical support requirements.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: AMT 280 with C or better; Pre/Co-requisite: AMT 287 with C or better if completed
AMT	360	Aircraft Dispatch Ground School	Aeronautical knowledge areas required for Aircraft Dispatch certification, as well as preparation for the Aircraft Dispatch knowledge examination. Regulations, aerodynamics, emergencies, flight physiology, weight and balance, navigation, aircraft performance, meteorology, and flight operations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 214; AMT 220; AMT 222; Credit is allowed for only AMT 360 or AMT 394 (Airline Dispatcher Ground School)
AMT	370	Unmanned Aircraft Systems	Students build upon gained knowledge, skills and experience by exploring unmanned aircraft avionics, autopilot systems, first person video (FPV), on-screen displays (OSD), communication systems, command and control (C2), ground control stations (GCS), flight software, and UAV launch and recovery systems. Students continue flight training and gain proficiency in unmanned aircraft operation using simulators and hands-on flight-testing. Students demonstrate their abilities to upgrade and modify their previously constructed unmanned aircraft in order to operate and conduct actual flight-testing. Incorporates UAS data collection and analysis throughout the course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 270 with C or better
AMT	382	Air Navigation	Theory and application of modern advanced navigation and flight instrument systems. Introduces crew resource management in multiplace cockpits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: Aeronautical Management Technology (Professional Flight) major; AMT 250 with C or better; Minimum 64 hours
AMT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		
AMT	396	Aviation Professional	Career focus for management and flight students, including internships, writing, interviews, and employment search in aviation industry.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): BAS or BS aviation program major; junior standing
AMT	408	National Aviation Policy	Examines aviation and airspace policies and policy process, including agencies involved in formulation, implementation, and evaluation of aviation policy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: AMT 308 with C or better
AMT	410	Aviation Safety and Human Factors	Aviation accident prevention, human factors, life support, fire prevention, accident investigation, and crash survivability. Development and analysis of aviation safety programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 182 with C or better; AMT 308 with C or better
AMT	442	Aviation Law and Regulations	Aviation within context of U.S. Common Law system. Public law, administrative rule making, sovereignty, enforcement, and case law analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 308 with C or better
AMT	444	Airport Management and Planning	Orientation to administration and management of modern public airports, including overview of planning, funding, and development of airport facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: AMT 308 with C or better
AMT	456	Introduction to Organized Labor	Introduces labor relations, unions, federations, collective bargaining, grievances, and labor legislation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): MGT 301 or TMC 330 (TMC 346)
AMT	460	Aircraft Dispatch Capstone	Capstone for aircraft dispatch whereby students are engaged in practical applications of regulations, aerodynamics, emergencies, flight physiology, weight and balance, navigation, aircraft performance, meteorology and flight operations. Uses various scenarios in which students can employ the strategies and procedures necessary for safe flight.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 360
AMT	470	Unmanned Aircraft Payloads, Sensors, and Control Stations	Builds on previously gained knowledge and experience. Student pilots utilize long-range communication and data links, UAS sensors, geospatial data collection, and still-imaging mosaicking. Students continue flight training using existing simulators and flight-tests during the course. Students apply concepts acquired during classroom sessions and construct a ground control station, modify and upgrade existing unmanned aircraft with payloads/sensors, train to operate sensors using existing simulators, and conduct flight-testing. Incorporates UAS data collection and analysis throughout the course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 370 with C or better
AMT	482	Airline Instrument Procedures	Advanced instrument flight using airline instrument procedures and airline crew and cockpit resource management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: Aeronautical Management Technology (Professional Flight) major; AMT 382 with C or better

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AMT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): AMT 308 with C or better; junior standing
AMT	486	Regional Jet Aircraft Systems	Regional jet airline aircraft systems and flight procedures. Includes theoretical education for regional jet commercial passenger aircraft.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 382 with C or better; Aeronautical Management Technology (Professional Flight) student
AMT	488	Regional Jet Aircraft Systems II	Regional jet systems, with emphasis on air navigation systems, including Flight Management System (FMS), Selective Calling (SELCAL), and flight profiles.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: Aeronautical Management Technology (Professional Flight) student; AMT 382 with C or better
AMT	489	Airline Administration	Administrative organizations, economics of airline administration, operational structure, and relationship with federal government agencies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: Minimum Junior status; AMT 308 with C or better
AMT	490	Regional Jet Operations Capstone	Regional jet aircraft operations and flight procedures. Includes theoretical education for RJ aircraft, FTD and full-motion simulator time.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 205 and 482 and 486 with C or better
AMT	491	Aviation Management Capstone	Integrated group project with industry partner to address current problems in either air carrier or airport management focus area.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): junior standing. Pre- or corequisite(s): AMT 489 with C or better if completed
AMT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-6		Prerequisite(s): Barrett Honors student
AMT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Aviation Programs	1-6	L	Prerequisite(s): Barrett Honors student
AMT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		Pre-requisite: Minimum 2.25 GPA
AMT	495	Unmanned Aircraft Systems Operations	Capstone course applies student pilots' knowledge and skills gained in previous UAS courses to safely deploy a UAS in response to real-world situation or research. Students collaborate with other university departments, state or federal agencies, and other organizations and conduct actual or simulated missions in geospatial data collection, search and rescue, and near-space operations. Course blocks include flight planning and preparation, aircraft preflight and maintenance, launch and recovery operations, payload operations, normal and emergency procedures, and mission planning and execution. Students continue flight training using existing simulators and flight-tests. Students use real-world situations which require deployment of equipment and systems developed during previous course. Places specific emphasis on aircraft and payload selection based upon proposed mission analysis. Incorporates UAS data collection and analysis throughout the course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 470
AMT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-7	L	
AMT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-3		
AMT	522	Aviation Law	Examines the U.S. legal system with a focus on the aviation perspective, administrative agencies, FAA enforcement, and case law.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	523	Intermodal Transportation Management	Systems theory applied to intermodal transportation networks. Surveys air and ground transportation infrastructure, institutional frameworks, and intermediaries promoting connections between modes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton Schools of Engineering with a University Cum GPA 3.0 or greater
AMT	525	Airport Planning and Design	Completion of various phases of airport master planning process. Provides guidance for logical and timely development of airports. Project work groups assigned.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AMT	526	Aviation Labor Relations	Investigates labor-management relations in the aviation industry, including laws, unionism, collective bargaining, public sector relationships, grievance procedures, and conflict.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	527	Airline Management Strategies	Since deregulation, airlines have undergone profound changes through mergers, consolidation, and acquisition. In-depth look at airline management strategies for the 21st century.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	533	Training Systems & Simulation	Provides an overview of simulation and its various uses in aviation instruction. Three main focus areas: simulation, learning and human performance, instruction and evaluation of instructional effectiveness. Focuses on research findings in these areas and practical application and implementation of simulation to improve learning and performance.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	534	Airline Pricing and Yield Management	Focuses on the fundamentals of airline economics and the volatility of industry performance at the operating level. Topics include the structure of the airline industry and the various historical and current operational strategies; demand, traffic, price and yield; operating revenues and operating costs. The airline industry is affected by various economic, environmental, political and regulatory conditions. Reviews the implications of these conditions on airline pricing, capacity, fleet selection and scheduling. Analyzes current and predicted future conditions to develop potential strategies for successful revenue management within the industry.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: degree- or nondegree-seeking graduate student. Credit is allowed for only AMT 534 or AMT 598 (Airline Pricing and Yield Management)
AMT	541	Aviation Physiology	Surveys human physiology and human performance principles related to modern aircraft and aircraft systems operating in multiple environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	546	Crew Resource Management/Line-Oriented Flight Training	Evaluates in-depth, multicrew coordination issues for commercial aviation pilots. Stresses importance of critical thinking, decision making, integrated resource utilization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	565	Safety in Complex Systems	Evaluates human error in aerospace systems. Discusses different theories of error and taxonomies as well as safety management systems to help identify hazards and risks and then help mitigate and/or eliminate them. Extensively uses case studies to highlight human failures as well as demonstrate organizational changes that resulted in safe and successful operations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	570	Unmanned Aerial Systems	Examines the system design, operations and employment of unmanned aerial systems (UAS), beginning with an overview of the system and human factors and specific issues involved with UAS design and operations. Communication, remote operations, operator display interface, and situational awareness and teamwork required for successful employment. Evaluates accident data to understand technology and human error concerns.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
AMT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
ANB	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	600	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	601	Research Strategies in Animal Behavior	Using hands-on experiences, teaches key concepts underlying the control and function of animal behaviors and contemporary methods for measuring, analyzing, and reporting animal behaviors. Combines introductory classroom lectures on concepts and methods with direct application in observations and experiments on animal behavior in the field and the lab. Topics include communication, mating behavior and systems, parental care, kin selection, cooperation and competition, migration and dispersal, foraging, and anti-predator strategies.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: Animal Behavior PhD student

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ANB	602	Current Issues In Animal Behavior	Student-led seminar course centers on discussions of contemporary literature in the field of animal behavior. Takes a student-driven approach, with course participants selecting a target theme for the semester, selecting individual papers to discuss each week, and leading discussions about relevant merits and shortcomings of each article. Additional topics may include: conceptual frameworks and results from the dissertation projects of participating students, career options and strategies in the behavioral sciences, responsible research conduct in the field, and tactics in manuscript publication and grantsmanship.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Pre-requisites: Animal Behavior PhD student
ANB	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ANB	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
ANP	194	Special Topics		Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ANP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ANP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ANP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
ANP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
ANP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
ANP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ANP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
ANP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
ANP	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Building Design (Energy Perform/Bldgs) MS, Building Design (Facilities Dev/Mgt) MS or Building Design (Knowledge/Compng) MS student
ANP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ANP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ANP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ANP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student
ANP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student
ANP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ANP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Building Design Knowledge and Computing MS student; ANP 592 with a grade of Y
ANP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Building Design Knowledge and Computing MS student
APA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisite: Freshman status
APA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	200	Introduction to Asian Pacific American Studies	Examines historical and contemporary issues facing Asian Americans and Pacific Islanders in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(HU or SB) & C	
APA	210	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only AFR 212 (or AFS 210) or APA 210 or JUS 210 or TCL 210
APA	220	Introduction to Social Transformation	Introduces key concepts in the study of social change, social innovation, and social transformation. Studies examples of social movements, social activism, community organizing, and coalition building and how such efforts have transformed society and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only APA 220 or JUS 220 or SST 220
APA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
APA	310	Asian Pacific American Arts and Cultures	In-depth exploration of Asian Pacific American cultural expression in art, literature, film, theatre, dance, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisite: APA 200 or APA 210 or minimum 30 hours. Credit is allowed for only APA 310 or FMS 310
APA	315	Asian Pacific American Literature	In-depth exploration of the literary history, critical reception, and major theories in Asian Pacific American poetry, fiction, and prose.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisite: APA 200 or 210 or 30 minimum hours
APA	330	Asian Pacific American Genders and Sexualities	In-depth exploration of gender and sexuality issues as they relate to Asian Pacific American experiences, including interracial relationships, stereotypes, feminism, queer theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites:APA 200 or 210 or 30 minimum hours. Credit is allowed for only APA 330 or WST 331
APA	340	Asian Pacific Americans and Media	Advanced study of the social construction of Asian Pacific American media images and resistance to those images in various historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisite: APA 200 or APA 210 or 30 hours
APA	345	Asian Pacific Americans and Film	In-depth examination of the representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C & H	Pre-requisite: APA 200, APA 210, or FMS 100, or minimum 30 hours. Credit is allowed for only APA 345 or FMS 345
APA	347	Immigration, Education and the Family	Cultural processes related to immigration and their impact on the social construction of the immigrant family and the education of other children. Immigration theories, immigration debates and discourses, the immigration landscape of the 21st century, conceptualizations of the family, and the methodological challenges family researchers face. Topics include issues pertaining to education and the family and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only APA 347, JUS 347, APA 394 (Immigration, Education & Family) or JUS 394 (Immigration, Edu. & Family)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APA	350	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
APA	352	Race, Space and the Production of Inequality	Explores how the relationship between race and space has been important to the development of broad patterns of social inequality in the United States. Through a variety of readings, films and other material, examines how ideas of race and space have been important to the making and maintenance of national boundaries, citizenship, regional histories and spatial typologies such as border, ghetto, suburb and prison.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): APA 200 or 210; minimum 45 hours; Credit is allowed for only AFR 352 (or AFS 352) or APA 352 or JUS 353 or TCL 353 or APA 394 (Race, Space and the Production of Inequality)
APA	356	Race and Child Development	Reviews the current research and literature about the particular role of race in child development. Even though race is not a valid biological construct, it has significant social implications as it shapes how children interact and are treated by others. Through primarily class discussions/activities, presentations and papers, addresses: (1) What are the research and theoretical issues in studying race? (2) What does race and racism mean? (3) How does race influence developmental processes?	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): APA 200 or APA 210 or 30 hours. Credit is allowed for only APA 356 or CDE 356 or APA 394 (Race and Child Development)
APA	360	Asian Pacific American Experience	Advanced study of the historical and contemporary experiences of Asian Pacific American racial/ethnic groups in the United States.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(HU or SB) & C	Pre-requisite: APA 200 or APA 210 or 30 hours
APA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisite: APA 200 or APA 210 or 30 hours
APA	428	Critical Race Theory	In-depth analysis of the ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only AFR, APA, JUS or SST 428
APA	450	Asian Pacific American Contemporary Issues	Advanced study of the issues shaping Asian Pacific American communities, including immigration, politics, education, health, family, gender, youth, interracial relations, and other contemporary topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisite: APA 200 or APA 210 or minimum 45 hours
APA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
APA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
APA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
APA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisite: APA 200 or APA 210 or minimum 45 hours
APA	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
APA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7	L	
APA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
APA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
APA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
APH	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
APH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
APH	212	Culture of Place	Explores contemporary conditions in the built environment as they are shaped by cultural phenomena.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	
APH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
APH	300	World Architecture I/Western Cultures	Historical and contemporary built environments of Western civilizations: Mediterranean, Europe, and the Americas as manifestations of cultural history and responses to environmental determinants.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	2-3	HU & H & G	Pre-requisite: May not be Pre-Architectural Studies or Architectural Studies BSD student
APH	313	History of Architecture I	Intensive study of history of architecture from earliest traces to 1300. Examines cultures from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	(L or HU) & G & H	Pre-requisites: Architectural Studies major with ALA 100 or ALA 102 and passed degree milestone review or non-majors with junior standing
APH	314	History of Architecture II	Intensive introduction to history of architecture from roughly 1300 to present day. Examines cultures from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	(L or HU) & G & H	Pre-requisites: APH 313 with C or better
APH	336	20th-Century Architecture I	Architecture in Europe and America from the foundations of the modern movement to the culmination of the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	Pre-requisites: Minimum Junior standing or Digital Culture: Design major
APH	337	20th-Century Architecture II	Developments in architecture since the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	Pre-requisite: APH 336
APH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
APH	405	Contemporary Architecture and Urbanism 1970 to the Present	Addresses issues of global architecture and urbanism in the late 20th and early 21st centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Prerequisite(s): APH 313 and APH 314, or graduate standing
APH	414	Great Cities	Historical survey of great cities from antiquity to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	(L or HU) & H	Prerequisite(s): minimum ASU cumulative 3.00 GPA; minimum 60 hours; Credit is allowed for only APH 414 or MUD 598 (Great Cities)
APH	421	First Concepts: What is... The Writing, Philosophy, and Culture of Architecture	Examines the major writings and concepts that surround the history of architecture. Focuses on (but not exclusively) work in the 20th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	L or HU	Pre-requisites: APH 313 & APH 314 with C or better; Architecture or Digital Culture Design student
APH	441	Ancient Arch	Architecture of the ancient Mediterranean world with selective emphasis on major historical complexes and monumental sites.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
APH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
APH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
APH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
APH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
APH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
APH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
APH	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APH	505	Foundation Theory Seminar	Foundation of conceptual architectural inquiry, stressing the reciprocal and interdependent relationship between design and theory.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Master of Architecture student; Co-requisites: ADE 522; ATE 556
APH	509	Foundation Seminar	Historical, technical, theoretical, environmental, and professional issues in architecture.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Master of Architecture; Co-requisite: ADE 510

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APH	515	Current Issues and Topics	Critical examination of current architectural issues, topics, and discourse.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: APH 505 with a C or better; Co-requisite: ADE 621
APH	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	581	Contemporary Urban Design	Explores contemporary city and urban design issues related to contemporary cities.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Herberger Institute of Design and the Arts Graduate student
APH	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Herberger Institute of Design and the Arts Graduate student
APH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
APH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	518	World Englishes	Examines the implications of the global spread of English, including its diverse forms and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only APL 518 or APL 591 (World Englishes) or APL 691 (World Englishes)
APL	555	Disciplinary Discourses	Professional and disciplinary issues in linguistics and applied linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	557	Computer-Assisted Language Learning	Explores the field of computer-assisted language learning. Traces the development of computer-assisted language learning (CALL) over the last three decades. Focuses on research that explores how computer technology can help facilitate second language development; relies primarily on empirical data to do so. Examine established as well as new research methods in CALL. Participants participate in one research study and apply theoretical and practical aspects of CALL in these projects.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only APL 557, ENG 557 or LIN 591 (Intro to Computer Assisted Language Learning)
APL	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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APL	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	588	Spanish Language Acquisition	Examines Spanish language acquisition in children and adults in the context of monolingual and bilingual language acquisition.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only SHS 588 or APL 588
APL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	601	Introduction to Applied Linguistics	Overview of the field of applied linguistics. Applies linguistic knowledge to the resolution of language-related issues facing multilingual societies (e.g., second language acquisition and ultimate attainment, literacy, language assessment, bilingualism, heritage and indigenous languages, language attitudes, language planning and policy, language and politics, world Englishes).	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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APL	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	501	Differential Equations I	Linear and nonlinear ordinary differential equations. Existence and uniqueness of solutions, limit sets, stability, Lyapunov functions, linear systems with constant coefficients. Geometry of behavior in two and three dimensions, including Poincare-Bendixon theorem, Lorenz equations, linearization, sensitive dependence on initial conditions, bifurcations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	502	Differential Equations II	Partial differential equations, including classification, method of characteristics, separation of variables, boundary value and initial value problems, Green's functions, maximum principle, distributions, and weak solutions. Students must have already taken or be concurrently enrolled in Differential Equations 1.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	503	Applied Analysis	Convergence sequences and series of functions; metric space topology, compactness, completeness and the Ascoli-Arzelà Theorem; Contraction Mapping Principle, Implicit Function Theorem; intro to Lebesgue integration leading to L^p -spaces; properties of Hilbert spaces, Fourier transform. Students should have knowledge of linear algebra, multivariable calculus, and analysis at the undergraduate level.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	504	Applied Probability and Stochastic Processes	Markov chains, Martingales, probability measures, SDE, Brownian motion, Monte Carlo methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	505	Applied Linear Algebra	Fundamentals of linear algebra and numerical linear algebra, including decompositions (LU, QR, SVD), Eigen values, spectral theory, least squares problems. Programming with MATLAB.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	506	Computational Methods	Covers interpolation, solution of nonlinear equations and systems, numerical differentiation, numerical integration, numerical solution of ordinary and partial differential equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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APM	520	Advanced Numerical Linear Algebra	Extends topics of APM 505. Introduces essential iterative methods, Gauss-Seidel, conjugate gradients. Methods for SVD, total least squares and root-finding applications in image analysis. Students should have basic knowledge of numerical linear algebra and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	522	Numerical Methods for Partial Differential Equations	Numerical methods for parabolic, elliptic, and hyperbolic partial differential equations, including finite difference/volume, finite element, and spectral methods. Mathematical concepts of stability, consistency, and convergence. Applications to scientific, biomedical, and industrial problems. Students should have a basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	523	Optimization	Building on a fundamental undergraduate background in linear algebra and calculus, covers continuous optimization, constrained/unconstrained and linear/nonlinear, as well as selected topics in discrete optimization. Some programming experience is needed for course projects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	524	Spectral Methods	Extends approximation theory to global methods, including Fourier and orthogonal polynomial expansions. Applications to imaging and hyperbolic, parabolic, and elliptic partial differential equations. Students should have previous graduate courses in ordinary and partial differential equations, basic programming skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	525	High-Performance Computing	Supercomputer architectures, parallel programming environments, languages, libraries, and algorithms for high-performance numerical simulations. Instructor/Department approval is required for this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only APM 525, MAE 494 (High-Performance Computing) or MAE 598 (High-Performance Computing)
APM	526	Advanced Numerical Methods for Partial Differential Equations	Partial content will vary from semester to semester, but may include hyperbolic conservation laws, finite element methods, multigrid methods, and parallel algorithms for partial differential equations. Applications to scientific, biomedical, and industrial problems. Students should have basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	530	Mathematical Cell Physiology.	Mathematical modeling of dynamical aspects of cell physiology. Diffusion, membrane transport, intracellular calcium channel kinetics, calcium oscillations and waves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	531	Mathematical Neuroscience I	Mathematical modeling of electrochemical processes in nerve cells. Dendritic modeling, dendritic spines and synaptic plasticity, bifurcation analysis of excitable membrane models, deterministic and stochastic methods for threshold dynamics and bursting, relaxation oscillations. Students should have had a previous graduate-level PDE course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	533	Mathematical Population Biology I	Selectively covers population biology models in the forms of systems of difference equations or ordinary differential equations. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous graduate-level course in ODE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	534	Mathematical Population Biology II	Selectively covers population biology models in the form of partial differential equations and systems. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous basic graduate-level course in ODE and PDE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	535	Mathematical Models in Medicine	Mathematical models for the etiology, epidemiology, pathogenesis, morphology and treatment of disease. Covers dynamical models of cancer and viral infections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	541	Stochastic Modeling in Biology	Markov processes, random walks, martingales, branching processes, logistic growth model, Wright-Fisher model, Kingman's coalescent, bound and site percolations, contact processes, voter models. Students should have previously taken course work in probability and/or stochastic processes (or have a recommendation from their advisor). Recommendation from advisor is typically for students in biology or physics that have not taken statistics courses but have a good background in mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	553	Dynamical Systems	Center manifolds, structural stability, normal forms, averaging, chaos, control and synchronization. Students should have a previous graduate course in ODE or applied analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	560	Applied Dynamical Systems	Bifurcations, normal forms, pattern formations, mixing, Lagrangian chaos, and applications to fluid dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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APM	570	Applied Linear Operators	Bounded linear and compact operators on Hilbert spaces. Linear integral equations, Fredholm and Hilbert-Schmidt theory, and approximate methods. Distributions. Completion of a course in Applied Analysis is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	575	Perturbation Methods in Applied Mathematics	Regular and singular perturbation methods for ordinary and partial differential equations, Boundary layer theory, matched asymptotic expansions, multiple-scale, homogenization, and WKB methods. Application to nonlinear oscillations, bifurcation and stability problems. Completion of a course in Differential Equations II or Partial Differential Equations in Engineering is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: APM 502 or MAE 502; Credit is allowed for only APM 575 or MAE 505
APM	576	Theory of Partial Differential Equations I	Existence and uniqueness theorems, boundary value and initial value problems, characteristics, Green's functions, maximum principle, distributions, and weak solutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	577	Theory of Partial Differential Equations II	Continuation of existence and uniqueness theorems, boundary value and initial value problems, characteristics, Green's functions, maximum principle, distributions, and weak solutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): APM 576
APM	581	Geometry and Control of Dynamical Systems I	Manifolds, tangent and cotangent bundle, Lie theory, integrability and controllability, and feedback control. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	582	Geometry and Control of Dynamical Systems II	Variational principles, Euler-Lagrange equations, Hamiltonian systems, optimal control, connections and curvature. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP4	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ARA	101	ASU: The Art Experience	Introduces the culture, challenges and opportunities of the School of Art. Addresses essentials for academic and personal success within the university.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	1		Credit is allowed for only ARA 101, 194 (ASU Art Experience) or HDA 194 (ASU Herberger Inst Experience)
ARA	110	Sculpture Safety	Introduces safety and environmental health in the sculpture studios. Pre- or corequisite for all sculpture classes.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	1		
ARA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	195	Art in My World	Basic concepts and fundamental questions that provide insights into art making and that affect one's understanding and appreciation of art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	
ARA	202	Understanding Photographs	Slide lecture course in understanding photography as a fine art form.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		

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ARA	218	Art and Visual Learning	Broad-ranging introduction to art and the visual world, focusing on art and artifacts from diverse cultures and eras, various two- and three-dimensional media, meaning and purpose in art, as well as community and internet art resources.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3	HU	Credit is allowed for only ARA 218 or 294 (Art and Visual Learning)
ARA	240	Encounters with Contemporary Art	Each year a committee of School of Art faculty and graduate students works together to bring important international artists to ASU to give lectures and meet with graduate students. Undergraduate students have the opportunity to attend those lectures, which are free and open to the public. The goal of this required class is to make sure that students get in the habit of taking advantage of this opportunity to hear first-hand from some of the world's most important and visionary artists and learn to write think and write about the work of other artists.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	1		
ARA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	309	Photography Now	Explores contemporary practice through lectures, readings, exhibition visits, screenings and discussions. Explores work created within the past thirty years up to the present. Students act as a collective "ear to the ground" for the medium, engaging in first-hand experiences and research and being responsible to share those experiences with the class as active agents of discovery. Requires reading current periodicals, attending and discussing photographic lectures and exhibitions both in-class and beyond within the local community.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): minimum 2.00 GPA; minimum 45 hours. Credit is allowed for only ARA 309 or 394 (Photography Now)
ARA	311	Art Appreciation and Human Development	Foundations of art for children and young adults. Emphasizes learning, development, and understanding art in historical and cultural contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Prerequisite(s): non-ART student; ENG 101; ENG 102; minimum junior standing
ARA	330	Issues in Intermedia	Critical survey of recent theory and practice in "intermedia" art. Created specifically to provide a common historical and theoretical framework for students majoring in the intermedia area, as well as to anyone seeking to broaden his or her understanding of non-traditional media, performance, installation, computer art, video, social practice, Webart and interactivity and their relationship to contemporary society and discourse.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 216 or minimum 45 hours; Credit is allowed for only ARA 330 or ARA 494 (Issues in Intermedia)
ARA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ARA	396	Professional Practices for Design and the Arts	Prepares young designers, artists and individuals in other creative fields to successfully enter the professional world of art and culture beyond the support system of the university. Through examining contemporary artists' models of practice and creative entrepreneurship, participating in hands-on exercises, field trips, engaging with guest lecturers from local cultural institutions and initiatives, student artists learn how they can shape their lives to sustain their artistic practice once they graduate.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): minimum 56 hours. Credit is allowed for only ARA 394 (Professional Practices for Artist) or ARA 396
ARA	460	Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Credit is allowed for only ARA 460 or 560
ARA	460	Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ARA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARA	489	Writing Art and Design Criticism	Arts writing workshop designed to help develop critical voice in written form. During the course of the semester, students learn about art and design criticism by reading work in a variety of contexts, looking at examples of art and design in person and discussing them, and writing and revising their own pieces of criticism.	N	SEM	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Minimum 2.00 GPA; Minimum 45 hours; Credit is allowed for only ARA 489 or 494 (Writing Art and Design Criticism)
ARA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ARA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7	L	
ARA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		

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ARA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
ARA	560	Gallery Exhibitions	Provides practical experience in all phases of art gallery operations. Students learn professional art gallery practices through hands-on experience in the School of Art Student Galleries including Harry Wood, Step, and Gallery 100. Class members assist BFA and MFA candidate students in many phases of exhibition preparation and execution as well as assist with the curation and design of group exhibitions.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking): Credit is allowed for only ARA 460, 560 or 598 (Gallery Exhibitions)
ARA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	589	Writing Art and Design Criticism	Arts writing workshop designed to help develop critical voice in written form. During the course of the semester, students learn about art and design criticism by reading work in a variety of contexts, looking at examples of art and design in person, analyzing and discussing them, and writing and revising their own pieces of criticism.	N	SEM	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Graduate student (degree seeking or non-degree seeking). Credit is allowed for only ARA 489 or ARA 589 or ARA 598 (Writing Art & Design Criticism)
ARA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ARA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ARB	101	Elementary Arabic I	Reading, writing, speaking, and understanding basic Arabic.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Credit is allowed for only ARB 101 or MSA 101
ARB	102	Elementary Arabic II	Reading, writing, speaking, and understanding basic Arabic.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Credit is allowed for only ARB 102 or MSA 102
ARB	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Maximum 24 earned hours
ARB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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ARB	201	Intermediate Arabic I	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Credit is allowed for only ARB 201 or MSA 201
ARB	202	Intermediate Arabic II	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Credit is allowed for only ARB 202 or MSA 202
ARB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	311	Advanced Arabic Skills I	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	321	Arabic Conversation I	Emphasizes spoken Arabic and conversation skills. Simultaneously develops communicative skills, vocabulary, and cultural awareness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	331	Arabic/Islamic Culture and Literature	General introduction to the Middle East that synthesizes cultural, social, and literary information. Focuses on the experiences of ordinary Middle Eastern people to convey a grassroots sense of the Middle East.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	335	Arabic Culture and Islam	Develops awareness of Arabic culture and Islam. Covers a variety of cultural topics, including family, status of women, food, music, and Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	
ARB	336	Introduction to the Qur'an	Introduces the Qur'an and examines the historical, contextual, religious and interpretive dimensions wherein the Qur'an developed. Deals with the structure of the Qur'an, the different sections, suras (Qur'anic chapters), and some of the verses. Also includes an introduction to the idea of revelation, its history, the content and some of the different themes of the Qur'an, and discusses aspects of the Qur'an as a source of law. Taught in English; requires no knowledge of Arabic or Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ENG 101, ENG 105, or ENG 107 with C or better; Credit is allowed for only ARB 336 or 394 (Introduction to the Qur'an)
ARB	337	Hadith and Prophetic Tradition	Considers the Hadith as a literary text and as the prophetic tradition in Islam. Focuses on the development of the Hadith as a vast subject in Arabic literature, its collection methodology, Hadith science, and its contents. Gives special attention to the relationship of the Hadith as the second source, after the Qur'an, of Islamic knowledge, Islamic theology, Islamic philosophy and Islamic law. Explores the various ways and approaches in which Muslims employ the Hadith along with the Qur'an in their search for meaning, identity and knowledge. All readings are in English; requires no prior knowledge of Arabic language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ENG 101, ENG 105, or ENG 107 with C or better; Credit is allowed for only ARB 337 or 394 (Arabic Hadith and Prophetic Tradition)
ARB	341	Quran Text and Women	Addresses Muslim women scholars' argument that it is not the religion but the patriarchal interpretation of the Quran that have kept Muslim women oppressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	351	Classical Arabic Literature	Provides a survey in classical Arabic literature. Focuses on the development of classical Arabic poetry and prose since their interceptions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	352	Modern Arabic Literature in Translation	Surveys the major trends, themes and genres of modern Arabic literature in translation. Provides a foundational knowledge of modern literature in the Arabic language. Focuses on continuity and change, cultural diversity and multiplicity in the Middle East, and the social, religious and historical aspects of modern Arab culture. No knowledge of Arabic language is required for this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only ARB 352 or 394 (Introduction to Modern Arabic Literature)
ARB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	411	Advanced Arabic Skills II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	421	Arabic Conversation II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ARB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
ARB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
ARB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARE	250	Teaching Inquiry in Art	Issues in teaching and learning through directed, guided, and independent inquiry about artworks and through art making.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: ARS 101, ARS 102, and 6 hours (2 classes) from ART 111, 112, 113 or 115 with a C or better or currently enrolled
ARE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	301	Studio Art and Human Development	Study of human development in studio art from early childhood to adult years.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ARE	370	Teaching Visual Culture	Explores issues and applications of everyday aesthetics that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: BA or BFA Art major; ARE 250 OR BIS Interdisciplinary Studies (Studio Art concentration) or Studio Art minor; ARS 101 or ARS 102; ART 110; ART 112 (or ART 113, 115 or 116)
ARE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	440	Interdisciplinary Art Education	Explorations in art education's disciplines, history, and people's artmaking development at diverse age levels and abilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): BIS Interdisciplinary Studies (Studio Art concentration) or Herberger Institute major or Studio Art minor; minimum 2.00 GPA; minimum 55 hours
ARE	446	Multicultural Issues in Art Education	Explores multicultural issues, ethnicity and cultures related to art and education. Discussion course on facts and sometimes controversial interdisciplinary materials draws upon knowledge from various disciplines. Emphasizes art educational issues and teaching. Also explores international and global issues concerning multiculturalism.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Minimum 45 hours; Credit is allowed for only ARE 446, 494 (Multicultural Issues in Art Education), 546 or 598 (Multicultural Art Education)
ARE	482	Teaching Art Processes	Art traditions of the 20th century as a basis for studio and art history instruction. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Fine Arts Art student
ARE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARE	486	Art Education: Strategies and Applications	Implementation and evaluation of art instruction for K-12 population. Includes teaching of Saturday classes in the Children's Art Workshop. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Art student; ARE 482 with C or better
ARE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		Prerequisite(s): Barrett Honors student
ARE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequisite(s): Barrett Honors student
ARE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	496	Methods and Assessment of Learning in Art	Individual or group research on the assessment of art learning incorporating theory and practice. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Art student; ARE 250 with B- or better
ARE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7	L	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ARE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisites: Minimum 90 hours
ARE	510	Visual Culture Research	Research on instruction of everyday aesthetics and related issues that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	520	Issues in Teaching Inquiry in Art	Issues in teaching and learning focused both on inquiry about artworks and on inquiry through art making.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	525	Research on Art Instruction	Research methods and assessment of learning in art. Pilot studies on the effects of instruction on learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	530	Issues in Teaching Studio Art	Critical examination of issues concerning teaching multicultural art to different populations of students. Historical and philosophical foundations reviewed. Recommended to be taken before ARE 535.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	535	Research on Teaching Studio Art	Review of empirical and historical research methods, learning theory, and assessment of learning in studio art, including developmental studies and their limitations. Pilot studies on the effects of instruction upon learning. Recommended to be taken after ARE 530.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	540	Teaching Art in Cultural Contexts	Relationship of multicultural perspectives to teaching/learning art criticism, aesthetics, studio art, and art history.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	546	Multicultural Issues in Art Education	Explores multicultural issues, ethnicity and cultures related to art and education. Discussion course on facts and sometimes controversial interdisciplinary materials draws upon knowledge from various disciplines. Emphasizes art educational issues and teaching. Also explores and analyzes international and global issues concerning multiculturalism.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only ARE 446, 494 (Multicultural Issues in Art Education), 546 or 598 (Multicultural Art Education)
ARE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
ARP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ARP	451	Architecture Field Studies	Organized field study of architecture in specified national and international locations. Credit/no credit. May be repeated for credit with director approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-6		
ARP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: ADE 322 with a C or better; Co-requisite: ADE 421; ATE 451
ARP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ARP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
ARP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
ARP	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Master of Architecture student; ADE 522 with a C or better
ARP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Herberger Institute of Design and the Arts Graduate student
ARP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
ARP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Master of Architecture student
ARS	100	Introduction to Art	Provides an introduction to the understanding and enjoyment of art through the study of painting, sculpture, design, photography, and the decorative arts. Students gain an awareness of meaning, functions, and significance of art, while learning an art-related vocabulary and a set of analytical tools for discussing and understanding art from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: Non-Art majors; Credit is allowed for only ARS 100, 101, 102, or 300
ARS	101	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	
ARS	101	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	
ARS	102	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	
ARS	102	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	
ARS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	201	Art of Asia	History of the art of the Asian cultures, with emphasis on China, Japan, and India. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H & G	
ARS	202	Art of Africa, Oceania, and the Americas	History of art of Africa, Oceania, and the New World. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H & G	
ARS	250	History of Photography	History of photography from the 19th century to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	
ARS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	300	Introduction to Art	Parallels ARS 100 course content but requires a higher level of accomplishment and comprehension. Introduces visual culture, the purpose of art, and the relationship between art and visual culture. Students learn how visual culture pervades our everyday lives and how understanding visual literacy can help us participate more fully in the world around us.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: Non-Art major; Minimum 55 hours; Minimum 2.00 GPA; Credit is allowed for only ARS 100, 101, 102 or 300; Graphic Design majors: Minimum 2.00 GPA; Minimum 55 hours; Graphic Design majors with credit for ARS 100 may not enroll in ARS 300
ARS	302	Art/ Africa,Oceania & Americas	Issues in the art of Africa, Oceania, and the Americas related to ritual, gender, transformation of tradition, and encounters with Europeans.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H & G	Pre-requisite: ENG 102, 105, or 108
ARS	310	The Renaissance in Tuscany	Course taught in Florence, Italy. History of arts in Tuscany with focus on city of Florence from 14th through 16th centuries. Completion of ARS 101 and 102 suggested.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARS	330	The Portrait	Examines the history and production of portraits in contexts of social hierarchies, historical events, gender, politics, class, morality and aesthetics with a focus on the 15th to the 21st centuries in painting, sculpture and photography.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3	HU	Prerequisite(s): Any 200-level or higher course in APH, ARS, ENG, FMS, HST, MHL with B or better; Credit is allowed for only ARS 330 or 394 (Genre: Portraits)
ARS	340	Art in America	American art from colonial times through the Second World War. Not available to students who have completed ARS 542.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: BA or BFA Art major: ARS101; ARS 102 with C or better OR BIS Interdisciplinary Studies (Studio Art concentration) or Studio Art minor: ARS 101. Credit is allowed for only ARS 340 or 542
ARS	345	Art and Television	Critical introduction to the interrelation of technology and visual art using the tools of art history and media/cultural studies. Students read theorists of the relation between visual art and the mass media, and use them to analyze early presentations of visual art and art history on television of the 1960s and 1970s. Examines the contemporaneous and parallel development of video art--an artistic medium appropriated from television technology--through the study of key video artworks.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: minimum 2.00 GPA; minimum 45 earned hours; Credit is allowed for only ARS 345 or ARS 394 (Art & Television)
ARS	362	Pre-Columbian Art I	Art history of the Aztecs, Maya, Inka and their ancestors before the arrival of Europeans. Covers their prolific artistic production starting with their earthworks in the deserts of Peru and ending with their stone pyramids and painted codices of Guatemala and Mexico. Meets non-Western Art History Requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Prerequisite(s): minimum 45 hours
ARS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ARS	402	Art of Ancient Egypt	Aesthetic, philosophical, and cultural basis of Egyptian art from pre-Dynastic period through New Kingdom. Emphasis on sculpture and architectural monuments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: ARS 101 or ARS 102 with C or better; Credit is allowed for only ARS 402 or 502
ARS	404	Greek Art	History of art, architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Prerequisite(s): ARS 101 with C or better; Credit is allowed for only ARS 404 or 504
ARS	406	Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: BA or BFA Art major: ARS101; ARS 102 with C or better OR BIS Interdisciplinary Studies (Studio Art concentration) or Studio Art minor: ARS 101
ARS	410	Early Christian and Byzantine Art	Art and architecture of the early church and the Byzantine Empire from the 4th to the 15th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	412	Early Medieval Art	Painting, sculpture, architecture, and the minor arts from Migration, Carolingian, and Ottonian periods considered within religious, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Prerequisite(s): ARS 101 (or ARS 102) OR any 200-level or higher course in ASB, ENG, FRE, GER, HST, ITA or REL with B- or better
ARS	414	Romanesque Art	Sculpture, painting, architecture, and minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Prerequisite(s): ARS 101 (or ARS 102) OR any 200-level or higher course in ASB, ENG, FRE, GER, HST, ITA or REL with B- or better. Credit is allowed for only ARS 414 or ARS 514
ARS	416	Gothic Art	Painting, sculpture, and architecture in western Europe during the Gothic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	417	Late Gothic Art in Central Europe	Sculpture, painting, and architecture of the late-Gothic style, ca. 1350-1525, considered within religious, social, economic, and political contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ARS 101 (or ARS 102) OR any 200-level or higher course in ASB, ENG, FRE, GER, HST, ITA or REL with B- or better. Credit is allowed for only ARS 417 or ARS 517

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARS	418	German Renaissance and Reformation Art	Graphics, painting, sculpture, and architecture, ca. 1450-1550. Reformation themes and Renaissance style considered within religious, political, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	ARS 101 (or ARS 102) OR any 200-level or higher course in ASB, ENG, FRE, GER, HST, ITA or REL with B- or better. Credit is allowed for only ARS 418 or ARS 598 (German Renaissance and Reformation Art)
ARS	422	Italian High Renaissance Art and Mannerism	History of Italian art during the 16th century, including the achievements and influence of Leonardo da Vinci, Raphael, and Michelangelo.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 422 or 522
ARS	424	Italian Baroque Art	Italian painting, sculpture, and architecture of the 17th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	426	Art of the 17th Century in Northern Europe	Baroque painting, sculpture, and architecture in Flanders, the Netherlands, France, and England.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	434	Art and Visual Culture of 19th Century	History of European art (all media) from French Revolution to Paris World Fair of 1900.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: At least one course in APH, ARS, ENG, FMS, HST or MHL with B or better; Credit is allowed for only ARS 434 or 534
ARS	435	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): one course in ARS, ENG, or HST at 200 level or higher with B or better; Credit is allowed for only ARS 435 or ARS 533 or ENG 428
ARS	436	The Artist, War, and Revolution (Versailles to Vietnam)	Critical study of artistic responses to war and revolution in Europe and United States from French Revolution to Vietnam conflict.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	438	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisite: ARS 102 with B- or better or one course in ARS, ENG or HST at 200 level or higher with B or better
ARS	438	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Pre-requisite: ARS 102 with B- or better or one course in ARS, ENG or HST at 200 level or higher with B or better
ARS	439	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: ARS 102 or ARS 438 with B- or better; Credit is allowed for only ARS 439 or ARS 539
ARS	439	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Pre-requisites: ARS 102 or ARS 438 with B- or better; Credit is allowed for only ARS 439 or ARS 539
ARS	440	Identity and World Film	Examines how films around the world represent gender, race, ethnicity, and sexual orientation through the lens of genres and their variations and how genres reinforce or critique stereotypes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Minimum 55 hours; At least one 200-level course in literature, art history, history, OR film and media studies with a grade of B- or better; Credit allowed for only ARS 440, FMS 427, ENG 465, ARS, ENG or FMS 494 (Identity and World Film)
ARS	441	Public Art	Explores the lively field of contemporary public art, particularly as defined by percent-for-art programs established through city ordinances during the last forty years. Also considers historical precedents, including Civil War monuments and the City Beautiful Movement.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Minimum 50 hours; Minimum 2.00 GPA; Credit is allowed for only ARS 441, 498 (Public Art), 541 or 591 (Public Art)
ARS	442	Critical Issues in American Painting	Explores issues of national identity and western expansion, Manifest Destiny, through images of race and violence in western American painting from 1800 to the early 20th century. Includes "claiming and settling the wilderness," cultures in conflict, the cowboy, and visions of an enchanted land.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 442 or 542

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ARS	443	Artists in Film: Artists' Biopics	Examines artists' "biopics," biographical films about artists, chronologically from the subgenre's first appearance in 1936 to recent films. Explores relationships between film and history and between film and myths of creativity; major directors' attraction to artists' biopics; stereotypes of artists (e.g., genius, deviant); and how notions of creativity are inflected by gender, race and national identity. Assignments include weekly readings and film viewings and one short paper; optional documentaries and films are also available.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): a least one course at the 200 level or above in ARS, ENG, FMS, HST with B or better; Credit is allowed for only ARS 443, 494 (Artists Biopics) or FMS 430
ARS	444	Films of India	Examines classic, Bollywood and diasporic films of India from 1950 to the present.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ARS 444, ARS 544, FMS 426, ARS 494 (South Asian Cinema) or ARS 494 (Films of India)
ARS	451	20th Century Photography	Personalities, processes, images, and ideas in photography from 1914 to present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ARS	456	Introduction to Museums	Broad scope of what museums do by exploring their history and the critical issues they face. Acquaints students with the basic functions of specific museum departments and staff, including the role of director, curator, registrar, preparator, as well as fund raising, marketing, audience development, education, exhibitions, conservation, ethics, cultural/heritage tourism and public art. Guest speakers and field trips enhance classroom material.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ARS 101 or ARS 102 OR any 200-, 300- or 400-level course in ASB, ENG or HST with B- or better
ARS	458	Critical Theories in the Visual Arts	Examines current critical theories through their application to all visual arts. May include new historicism, Marxism, deconstruction, post-structuralism, semiotics, Lacanian psychoanalysis, feminism, postmodernism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	459	Writing Art Criticism	Traditional and contemporary approaches to the criticism of art. Students write critical essays. Latter half of the semester stresses the criticism of contemporary art in various media.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: ARS 458
ARS	460	Art Now	Critical overview of major issues and controversies of the last 10 years within the global, national, and local art scene.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: ARS 102 with B- or better or one course in ARS, ENG or HST at the 200 level or higher with B or better; Digital Culture major
ARS	465	Native Art of North America	Native American art forms of the United States and Canada from prehistoric times to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & C & H	Pre-requisites: Minimum 45 hours; Minimum 2.00 GPA; Credit is allowed for only ARS 465 or 565
ARS	466	Native American Art of the Southwest	American Indian art in the southwestern states from its origins to the present day. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & C & H	Pre-requisites: Minimum 45 hours; Minimum 2.0 GPA
ARS	468	Art of the Arctic and Northwest Coast	Art associated with ceremony, shamanism, and daily life in the Arctic and on the Northwest Coast. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & C & H	Pre-requisites: Minimum 45 hours; Minimum 2.0 GPA
ARS	469	Mexican Art	Art of Mexico and related Central American cultures from the prehistoric to the contemporary schools. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	472	Art of China	Study of major forms in Chinese art: ritual bronze, sculpture, ceramic, calligraphy, painting, and architecture. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: Minimum 50 hours; Minimum 2.00 GPA
ARS	473	Art of Japan	Japanese art from the Joman period to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisite: Minimum 55 hours; Credit is allowed for only ARS 574 or ARS 473
ARS	475	Chinese Painting	From Ku K'ai-chin to Ch'i Pai-shih. Major artists, styles, and movements in Chinese painting. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: Minimum 50 hours; Minimum 2.00 GPA; Credit is allowed for only ARS 475 or 575
ARS	480	Research Methods	Methodology and resource material for art historical research. Techniques of scholarly and critical writing and evaluation of bibliographic sources.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3	L	Pre-requisites: Museum Studies or Art History student; Junior standing; ARS 101 and ARS 102 with B- or better
ARS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
ARS	485	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	L	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 485 or 585

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ARS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		Prerequisite(s): Barrett Honors student
ARS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequisite(s): Barrett Honors student
ARS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ARS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7	L	
ARS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
ARS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisite: Minimum 90 hours
ARS	501	Methodologies and Art History	History of the discipline and an exploration of various methodologies, critical theory, and bibliographies used by art historians.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	502	Critical Studies in Egyptian Art	Egyptian art from pre-Dynastic to New Kingdom periods. Focus on aesthetic, philosophical, and cultural contexts. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 402 or 502
ARS	504	Critical Approaches to Greek Art	Art and architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 404 or 504
ARS	506	Critical Studies in Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire. Research paper and/or supplemental readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	514	Critical Approaches to Romanesque Art	Sculpture, painting, architecture, and the minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts. Requires research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 414 or 514
ARS	533	The Pre-Raphaelites	Explores Pre-Raphaelite culture, both literature and art, and relevant social history, from the Pre-Raphaelite Brotherhood through Aestheticism and early twentieth century, focusing on interactions between images and texts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ARS 435 or ARS 533 or ENG 428
ARS	534	Art and Visual Culture of the 19th Century	Critical study of visual arts using primary source material from mid-19th century to WWI within philosophical, socioeconomic, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 434 or 534
ARS	538	Art of the 20th Century I	Charts how the avant-garde in the early 20th century developed different strands of modern art as it sometimes grew closer to, and at other times veered away from, radical politics.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 438, 538 or 598 (Art of 20th Century I)
ARS	539	Art of the 20th Century II	General introduction to major trends and issues of Euro-American art created between 1955 to around the turn of the 21st century.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking). Credit is allowed for either ARS 439 or ARS 539 or ARS 598, Art of 20th C

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ARS	540	Identity and World Film	Examines how films around the world represent gender, race, ethnicity, and sexual orientation through the lens of genres and their variations and how genres reinforce or critiques stereotypes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 540, FMS 527 or (ARS 494, ENG 465, FMS 494 or ARS 598 Identity and World Film)
ARS	541	Public Art	Explores the lively field of contemporary public art, particularly as defined by percent-for-art programs established through city ordinances during the last forty years. Considers historical precedents including Civil War monuments and the City Beautiful Movement.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 441, 498 (Public Art), 541 or 591 (Public Art)
ARS	542	Critical Issues in American Painting	Explores themes and social issues in American art with a critical study of American painting from the 18th century to 1850.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 340, 442 or 542
ARS	543	Artists in Film: Artists' Biopics	Examines artists' "biopics," biographical films about artists, chronologically from the subgenre's first appearance in 1936 to recent films. Explores relationships between film and history and between film and myths of creativity; major directors' attraction to artists' biopics; stereotypes of artists (genius, deviant, etc.); and how notions of creativity are inflected by gender, race and national identity. Assignments include weekly readings and film viewings and one short paper; optional documentaries and films are also available.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ARS 443 or ARS 543 or FMS 430 or FMS 543 or ARS 598 (Artists in Film: Biopics)
ARS	544	Films of India	Examines classic, Bollywood and diasporic films of India from 1950 to the present.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking). Credit is allowed for only ARS 444, ARS 544, ARS 598 (Films of India) or FMS 426
ARS	565	Native Art of North America	Critical examination of Native American art within culture, prehistory to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 465 or 565
ARS	574	Studies in Japanese Art	Critical examination of the nature and history of Japanese art, its rich heritage and its indebtedness to foreign sources.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 473 or 574
ARS	575	Approaches to Chinese Painting	Critical history of Chinese painting from Eastern Chou to 1911. Emphasis on masters, regional developments, and conceptual underpinnings.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Minimum 108 hours; Senior or Postbaccalaureate Undergraduate or Graduate; Credit is allowed for only ARS 475 or 575
ARS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	585	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 485 or 585
ARS	586	Theories of Contemporary Art	Upper-level introduction to a variety of issues in contemporary art theory. Over the course of the semester, students travel through a different thematic segment each week. Topics covered include globalization, activism, relational aesthetics, art and ecology, as well as other themes that have found increased relevance as new art forms, media and theory proliferate in the 21st century.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ARS 586 or ARS 591 (Theories of Contemporary Art)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ARS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree-seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree-seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree-seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Pre-requisites: Graduate student (degree seeking or nondegree-seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ARS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ART	110	Drawing as Seeing and Thinking	Immerses students from a broad range of non-art disciplines in the practice of drawing. Considers and reflects on drawing in its most expanded form: as a primary tool of communication and creative problem solving, as movement, as sensory experience and as its own unique method of cognition. Divides class meetings among lectures, exercises, field excursions and opportunities for critical dialogue. Students leave with an appreciation of the unique power of mark-making and an improved understanding of its application in their lives.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3	HU	Credit is allowed for only ART 110 or 194 (Drawing as Seeing and Thinking)
ART	111	Drawing I	Fundamental, technical, and perceptual skills using common drawing media and their application to pictorial organization. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	112	2-D Design	Fundamentals of pictorial design. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art, Art-Exploratory, Minor in Studio Art, or BIS concentration in Studio Art student
ART	113	Color	Principles of color theory as related to the visual arts. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	115	3-D Design	Fundamentals of 3-D form. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	116	Introduction to Digital Media	Concentrates on the fundamentals of digital media, including imagery, sound, video, animation, and the Web. Assignments are given to engage students in the technical, conceptual, and aesthetic aspects of digital media. Students employ a diverse range of techniques and software as they become familiar with contemporary artistic processes involving the use of the computer and/or other technologies. Consists of hands-on experimentation and production supplemented by slide lectures, videos, visiting artists, and academic research.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Credit is allowed for only ART 116 or 194 (Introduction to Digital Media)
ART	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ART	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	201	Photography I	Development of skills and techniques of black and white photography. Emphasis on camera work and darkroom procedures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Corequisite(s): ART 202
ART	202	Photography I Lab		N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	0		Corequisite(s): ART 201
ART	204	Photography II: Black and White	Photography as an art medium with additional exploration into personal photographic aesthetics. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: ART 201, 202
ART	205	Photography II: Color	Uses both film and digital capture to explore color photography in depth. Emphasizes computer editing and printing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: ART 201, 202
ART	206	Digital Photography I: The Still Image in Digital Culture	Through readings, lectures, discussion and studio assignments, explores the ways in which digital technology affects how we read and use still photographic imagery. Asks how digital technology has changed the functions and meanings of the photograph. Explores the new options but also ponders the new responsibilities and complexities that accompany electronic imagery. Works toward an integrated understanding of what the translation to digital means for still photography. Beginning with an introduction to using digital cameras, sorting, storing and developing a work flow, exposes students to a variety of digital applications to create, disseminate and reflect on images through a variety of formats including social media, personal Web pages and one-to-one electronic conversation. Addresses other non-Web-based presentations such as print-to-order books, CD/DVDs, projections and large format prints.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Credit is allowed for only ART 206 or ART 294 (The Still Image in Digital Culture)
ART	207	Digital Photography II: The Photograph in the Age of Information	Considers social, historical and political context of images, image-to-image relationship and media theory as applied to creating and understanding images.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206
ART	211	Drawing II	Continued development of technical and perceptual skills. Emphasizes materials and pictorial content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 111 and ART 112 with C or better
ART	214	Life Drawing I	Development of skill and expressiveness in drawing the basic form, construction, and gesture from the human figure. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 111 and ART 112 with C or better

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ART	216	Intermedia Practices	Investigates the multidisciplinary practice of Intermedia within a fine art context and functions as a bridge between foundation courses and the Intermedia degree area specialty. Relying on principles and techniques from foundation level classes, students learn to choose appropriate media for a particular idea and construct work that is concept-driven and incorporates cross-disciplinary approaches. Students develop individual and diverse approaches to fusing traditional art disciplines with experimental, performative, spatial, and digital technologies. Students explore the full range of options available to contemporary artists and discuss the ever-shifting definition of intermedia and new media. Students may work in media including drawing, photography, mixed media, video, sculpture, networked, multimedia, electronic arts, digital sound manipulation, image processing, performance, and installation.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre/corequisite(s): ART 113, 116 or 194 (Intro to Intermedia) with C or better; 2 from ART 111, 112 or 115 with C or better OR Art Digital Culture major; ART 111, 112 or 113 with C or better; credit for only ART 216 or 294 (Intermedia Practices)
ART	217	Introduction to Computer Animation	Prepares students for the exciting world of digital animation. Looks back at animation through history and how it has developed into what we understand today. Looks at history, theory, principles, practices and animation techniques. Expands the student's current knowledge of 3D digital animation and how it has changed and affected society through time. Students use learned techniques to create art in animation.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Credit is allowed for only ART 217 or ART 294 (Introduction to Animation)
ART	218	3D Tools	Introduces 3D data capture, 3D modeling and rendering, and 3D prototyping and fabrication through creative/research activities using CNC and rapid prototyping tools. Projects are given to engage students in the technical, conceptual, and aesthetic aspects of digital media. Students employ a diverse range of techniques, software tools, and hardware in the course of making their creative/research projects, becoming familiar with contemporary artistic and engineering processes involving the use of the computer and/or other technologies. Consists of hands-on experimentation and production supplemented by slide lectures, videos, visiting artists, and academic research.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	3		Credit is allowed for only ART 218 or 294 (3D Tools)
ART	223	Painting I	Fundamental concepts and materials of traditional and experimental painting media. Emphasizes preparation of painting supports, composition, and color. Lab. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 111 and ART 113 with C or better
ART	227	Watercolor I	Fundamental concepts, materials, and techniques of watercolor. Emphasizes problem solving, basic skills, composition, and color. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART major; ART 111 with C or better; ART 113 with C or better, OR Studio Art minor or BIS Studio Art emphasis: ART 110 with C or better
ART	231	Sculpture I	Explores sculptural forms through concepts related to basic materials. Students learn how to create original sculptures using mold-making, wood-working and sheet metal construction. Focuses on studio production, safety, aesthetic criticism and history of sculpture. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	253	Introduction to Printmaking	Introduces basic monotype, intaglio, relief, and related techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 113 with C or better
ART	261	Ceramic Survey	Handforming methods, throwing on the wheel, decorative processes, and glaze application. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 112 and ART 115 with C or better
ART	272	Introduction to Metals and Jewelry	Emphasizes metal fabrication. Basic techniques of cutting, piercing, forging, soldering, and forming of non-ferrous metals.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; maximum junior standing; ART 112 and ART 115 with C or better
ART	274	Wood I	Fundamental woodworking techniques to produce creative functional 3-D objects. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	276	Fibers I	Explores traditional and contemporary materials and basic techniques related to fibers. Embroidery, feltmaking, dyeing, block printing, plaiting, 3-D structures.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: ART 112, 115; undergraduate Art major; maximum junior standing OR The Arts (Fashion Design) major with ART 110 with C or better
ART	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		

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ART	300	Photo Editing: Narrative/Non-Narrative	Explores how structure in images can be created both within the image (by setting up a picture) and by sequencing images that may or may not have had any relation when they were created. By exploring two prevalent ways in which images function in the art world--the directoral mode and sequencing mode--students gain valuable tools in terms of understanding how to construct meaning with their images. Emphasizes creating cohesive and complete sequences both narrative and non-narrative.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207
ART	301	Alternative Processes	Recognition Alternative Processes of the inherent characteristics of nonsilver processes and their use in communicating ideas. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major with completed portfolio; ART 204 with C or better
ART	302	The Still and Moving Image: Digital Photography and Video	Through screenings, readings, discussion and practical assignments, explores the differences between the still and the moving image coming from the perspective of a still photographer. How does the addition of time, sound and movement affect the way we experience images? How have the histories of photography and cinema overlapped and how are they different? How does the fact that video and film are no longer prohibitively expensive for most people affect the approach that people take to creating videos? How can photographers make engaging video using their photo skills? Looking at practitioners and learning basic video editing tools--as well as various methods for output--students create video and still images with an understanding of the intersections, variations and potential of the similar yet markedly different languages of film, video and still photography.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207
ART	304	Junior Photographic Projects	Interpretation and manipulation of light as a tool in the performance of expressive photography. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; completed portfolio milestone (if required); ART 204 (and ART 101, ART 201) with C or better
ART	307	View Camera	View camera and darkroom techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART204 (and ART101, ART201) with C or better
ART	311	Drawing III	Emphasizes composition and exploration of drawing media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major or completed studio milestone; ART 211 with C or better or Studio Art Minor or BIS (Studio Art): ART 110 with C or better; ART 112 with C or better
ART	314	Life Drawing II	Drawing from the model with greater reference to structural, graphic, and compositional concerns. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: ART 110, 112, 214 (or Studio Art concentration or minor); Art student or completed portfolio milestone
ART	317	Advanced Digital Photography: The Virtual and the Physical Image	Thoroughly examines the distribution, interaction of physical and virtual aspects of the photograph. Emphasizes creating work and interacting with an audience--examining the relationship between the physical and the virtual in terms of photographic imagery.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206
ART	323	Painting II	Development of competency in skills and expression. Assigned problems involve light, space, color, form, and content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student with portfolio; ART 223 with C or better OR Studio Art minor: ART 110 with C or better; ART 113 with C or better
ART	325	Figure Painting	The human figure clothed and nude as the subject for painting in selected media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 214 and ART 323 with C or better
ART	327	Watercolor II	Explorations of personal expression in watercolor. Continued development of watercolor skills using traditional and experimental materials and techniques. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 227 with C or better
ART	331	Sculpture II	Emphasizes metal fabrication as an expressive sculptural process. Techniques in welding, cutting and bending of metals and their aesthetics. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major or completed studio milestone: ART 231 with C or better OR BIS (Studio Art) or Studio Art minor: ART 110, 115 with C or better
ART	332	Sculpture III	Explores diverse media with a focus on mold-making processes. Development of the sculpture portfolio. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 331 with C or better

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ART	333	Foundry Casting Methods	Fine art and techniques of metal casting: mold making, foundry safety, finishing techniques, application of patinas, and history of casting. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 332 with C or better OR Studio Art minor; ART 110 and 115 with C or better
ART	345	Visualization and Prototyping	Studio/seminar introduces concepts of computer visualization, modeling, and rapid prototyping in an interdisciplinary manner.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Digital Art OR Intermedia student
ART	346	3-D Computer Imaging and Animation	3-D modeling and animation. Emphasizes concepts and fine arts applications.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3	CS	Prerequisite(s): ART major or Digital Culture (Art) major; ART 111, ART 112 or ART 113 with a 'C' or better OR Minor in Studio Art (HISTARTMIN): ART 110 with a 'C' or better, and ART 112 or ART 113 or ART 115 or ART 116 with a 'C' or better.
ART	348	Animation Motion Studies	Principles and applications of 3-D animation for fine arts. Emphasizes animation techniques for expressive effects.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 346 with C or better
ART	351	Intaglio I	Introduces concepts and techniques of intaglio processes, including non-acid and acid techniques such as drypoint, line etch, aquatint, photo etching; introduces multiple plate printing ala poupee wiping, chine colle, and basic color. Idea-generating exercises include visual signifiers of identity, democratic multiple, time and space, the disembodied gaze, and reconsidering beauty. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 253 with C or better OR Studio Art minor; ART 110 with C or better; ART 112 or 113 with C or better
ART	352	Lithography I	Monochromatic and color planographic printmaking utilizing stone and aluminum plate processes. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 253 with C or better, or Studio Art Minor; ART 110 with C or better; ART 112 or 113 with C or better
ART	354	Screen Printing I	Introduces paper, direct, and photographic stencil techniques. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; two from ART 111, 112, 113 with C or better OR Studio Art minor; ART 110 with C or better; ART 112 or 113 with C or better
ART	360	Ceramic Throwing	Design analysis and production of functional pottery. Emphasis on throwing techniques, surface enrichment, and glaze application.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: BA Art major; ART 261 OR Studio Art minor (or BIS Studio Art emphasis); ART 110 and 115
ART	364	Ceramic Handbuilding I	Search for form using handbuilding techniques. Kiln firing and related problems.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 261 with C or better or BIS Studio Art emphasis or Studio Art minor; ART 110 and 115 with C or better
ART	365	Ceramic Handbuilding II	Continuation of ART 364 with an additional focus on large-scale works, surface treatments, and glaze decoration with related kiln firing applications.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 261 and 364 with C or better or BIS Studio Art emphasis or Studio Art minor; ART 364 with C or better
ART	372	Casting and Jewelry Techniques	Covers lost wax casting for jewelry scale work and alternative casting methods and mold making as well as other techniques such as chain making and marriage of metals.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 272 with C or better
ART	373	Form Emphasis in Metals	Covers forming non-ferrous metals using techniques such as anticlastic and sinclastic forming, raising, fold forming. Projects focus on hollow forms using these various techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 272 with C or better
ART	374	Wood II	Individual and directed problems in wood related to the production of unique functional art objects. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 274 with C or better
ART	376	Woven Structures I	Explores weaver- and loom-controlled structures with an emphasis on formal issues, historic precedence, and contemporary investigations.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 276 with C or better OR Studio Art minor; ART 110 with C or better; ART 112, 113, 115 or 116 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	377	Surface Design	Application of dyes and pigments on cloth exploring techniques, formal issues, and content. Cyanotype, monoprinting, painting on silk, resists, stenciling.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 276 with C or better OR Studio Art minor; ART 110 with C or better; ART 112, 113, 115 or 116 with C or better
ART	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ART	400	The Photobook	Photographers have long seen the photobook as an excellent way to showcase their work. From the mid 1960s art photographers have used self-publishing through methods as simple as a photocopier to disseminate their work. Recent advances in the accessibility of high-quality reproduction capacities have resulted in an explosion of flexible and creative ways for photographers to execute their ideas and contribute to a wide range of conversations. Practical and theoretical course on the photobook. Students learn about the history of the photobook and the multitude of contemporary applications from the major photography publishers such as Aperture, through to the small press and self-publishing and the exciting world of art book fairs. Students also create a handmade photobook and create and order a print-to-order book of their own work.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207; ART 300
ART	402	Traditional Genres in Photography	Through practical assignments, lectures, readings, discussion and critique, investigates traditional photographic genres such as portrait and landscape. Students create works in the genre in question and contextualize these images in historical and contemporary art. Addresses such questions as what defines a genre and the social, political and cultural impacts these genres have had on photography and art. Also addresses how genres have been transformed with the advent of digital technology explores how this affects images in a broader cultural and social history. Emphasizes the students' work and a final portfolio of portraits.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207; ART 300
ART	403	Senior Photographic Projects	Technical and philosophical refinement of personal aesthetic with various photographic media. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 204 (and ART 101, ART 201) with C or better
ART	404	Portraiture Photography	Photographing people. Critical discussions and slide lectures on issues in portraiture. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 204 (and ART 101, ART 201) with C or better
ART	406	New Genres in Digital Photography	Explores the ways in which contemporary technology and the key changes-ubiquity, speed and reproducibility--have spawned new genres in photo-based art. Explores these emerging and changeable genres and examines the potential they present for creative expression and in-depth conversation about new ideas. Defines these new genres: selfie sticks, Instagram, screenshots from Google Streetview or remote cameras that we control from our home computer. Students are given weekly assignments and at the end of the course create a project within one of the new genres.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207; ART 300
ART	407	Digital Photography Capstone	Culminating class of the online Digital Photography degree. It is organized around a single, major self-directed project. Students will submit work once a week for critiques and will participate in their classmates' critiques as well. Classmates and instructor will guide each student towards the best execution of their vision. Students will complete course with a portfolio of images that may be realized in a variety of forms including but not limited to: an online gallery, a website, or a printed portfolio or a photobook. Students will also write an artist statement to accompany the work and conduct research where there is an audience for their work.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207; ART 307
ART	408	Experimental Film	Facilitates the exploration of 16 mm motion picture film as material and methodological fodder for artists. Students use original, found, and hand-altered footage to create projects of their own design. Covers basic techniques including camera operation, film exposure, and analog editing practices. Explorations also include in-class experiments, readings, discussions and screenings. For upper-division undergraduate and graduate art students attracted to the material and theoretical issues embodied in film and who are curious about how film might inform their own ongoing advanced artistic pursuits.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): minimum 3.00 GPA; minimum 45 hours. Credit is allowed for only ART 408 or ART 508
ART	409	Photographic Exhibition	Care of photographic prints, print presentation, and exhibition. Practical experience in gallery operations. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	410	Landscape Photography	Photographing landscapes. Critical discussion and presentations on issues in landscape photography. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ART	411	Drawing IV	Visual and intellectual concepts through problem solving and independent study. Emphasis on the individual creative statement. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 211 and ART 311 with C or better
ART	412	Advanced Techniques in Digital Photography	Highly technical course consists mainly of technical applications, readings, quizzes and discussion. Focuses on learning advanced image-editing software such as Photoshop, and photo management and manipulation software. Covers montage and color management systems including profiling for color printing and monitors. Students also learn about using digital backs on medium format and view cameras.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207; ART 317
ART	414	Life Drawing III	Various media and techniques on an advanced level. The human figure as an expressive vehicle in various contexts. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 314; credit is allowed for only ART 414 or ART 514
ART	423	Painting III	Further exploration of techniques and concepts of painting.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 223 with C or better; ART 323 with C or better; Art major; credit is allowed for only ART 423 or 523
ART	425	Advanced Figure Painting	The human figure clothed and nude as the subject for painting in selected media. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 223, 323 and 314 with C or better; credit is allowed for only ART 425 or 525
ART	427	Art on Paper	Advanced techniques, concepts, and processes with water media and mixed painting and drawing media on paper.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Herberger Institute student; min 55 hours; min 2.00 GPA or BIS Studio Art emphasis or Studio Art minor; ART 110 and ART 112 (or ART 113, 115, 116) with C or better; min 2.00 GPA; min 45 hours. Credit is allowed for only ART 427 or 527
ART	428	Video and Sound as Sculptural Materials	Students learn to incorporate video and sound into sculptures and installations. Covers basic video and sound capturing and editing. Emphasizes new techniques for controlling and presenting video and sound: Max/MSP programming language, Arduino microcontrollers and Blackberry Pl. The latest developments in video and sound for sculpture and sculpture for video and sound.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art BA or BFA major; ART 231 with C or better; Credit is allowed for only ART 428 or ART 494 (New Systems-Sculpture) or ART 528
ART	430	Advanced Sculpture: Materials and Techniques	Encourages individual investigation in sculpture with an emphasis on the development of a personal approach to materials and techniques. Students have acquired a strong background in the basic techniques and materials in sculpture in previous classes and now are working toward the development of a portfolio or body of work.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 331
ART	431	Special Problems in Sculpture	Development of a personal approach to sculpture. Emphasis on form, individual problems, and related color technology. Professional practices and presentation. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 231, ART 331 and 332 with C or better
ART	432	Neon Sculpture	Techniques for creating neon in an art context. Glass tube bending and fabrication. Construction of artworks utilizing light-generating gasses. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 231 with C or better or BIS Studio Art emphasis or Studio Art minor; ART 110 and 115 with C or better
ART	433	Foundry Casting Methods	Thorough and directed course for the professional preparation of sculptors. Requires participation in all aspects of the foundry process, including serving on both a casting and foundry process maintenance team. Provides a history of the use of cast metal in the visual arts and an understanding of how casting processes can be applied to contemporary sculptural concepts. Requires participation in special projects such as exhibitions, iron casting, and field trips to local foundries as the semester course schedule dictates.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre/Corequisite(s): ART 332 with C or better
ART	434	Advanced Sculpture: Context and Content	Studio-based class offers an opportunity for guided individual study with an emphasis on content, context and professional practices. Students work on developing a series of related works on a theme of their choosing. Assignments help students gain a greater understanding of the themes and ideas that are important in their art and expand their awareness of historical and contemporary artist working along similar lines. Requires students to develop a packet for self-promotion including a resume, portfolio and artist statement and to submit these materials to a competitive exhibition, commission, residency, scholarship or similar opportunity.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 331

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ART	435	Foundry Research Methods	Research in foundry techniques.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Prerequisite(s): minimum 45 hours
ART	436	Architectural Sculpture	Sculptural concepts as related to architecture and other man-made environments. Scale drawing, models, and relief sculpture. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 231 with C or better; ART 331 with C or better; ART 332 with C or better
ART	437	Film Animation	Production of short 16mm films that feature articulated sculptural objects, models, dolls, puppets, and graphics through the use of single-frame filming techniques. 6 hours a week. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 231 with C or better
ART	438	Moving and Interactive Systems in Sculpture	The incredible world of moving and interactive artworks. Covers techniques for incorporating color changing LEDs, motors, sensors and audio components in original artworks. Students learn to build electronic circuits and program Arduino micro controllers to create works that light up, move, make noise and respond to viewers. Students learn to use the laser cutter, milling machine and lathe to create enclosures and connectors. Introduces historical and contemporary artworks that incorporate technology. Covers methods for designing and prototyping complex systems. Regular technique demonstrations, slide lectures and hands-on studio work.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 231 with C or better; Credit is allowed for only ART 438 or 538
ART	439	Intermedia Studio	Exploring visual effects by combining traditional and nontraditional methods, techniques, and concepts. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student or Digital Culture (Art) student; ART 111, ART 112 or ART 113 with C or better or Studio Art minor (or BIS Studio Art emphasis), ART 110 and 116; credit is allowed for only ART 439 or 539
ART	440	Experimental Video Art	Explores creative possibilities through the production of experimental video art works referencing new approaches to concept, theory and art practice. The Experimental Video Art curriculum emphasizes the use of metaphor and simulation to depict reality and linear story telling. Students study relational aesthetics, content, stylistic formats and presentation issues as they reference time-based media. The textbook entitled, "Video Art" by Michael Rush serves as a research tool for experimentation. The technical component concentrates on the use and operation of equipment for video recording, audio mixing, lighting, video editing and computer graphics. Students create stand-alone video works, video installations, multimedia time-based performances, through individual and group projects.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 116 with C or better, or Art minor or non-Art major; minimum 45 hours
ART	441	Video Art	Utilizing video and audio equipment essential to the production of broadcast quality video art. 2 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): Art portfolio completed; corequisite ART 440
ART	442	Art and Community	Explores through studio practice, research and presentations intermedia social art practice, public practice, art/life practice, relational aesthetics, community-based projects, and other critical theories and conventions that engage art and community.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Minimum 45 hours or Studio Art minor (or BIS Studio Art emphasis); ART 110 and 116 with C or better; credit is allowed for only ART 442 or 494 (Art and Community)
ART	443	Intermedia Performance	Experimental, conceptual, and interdisciplinary studio art with emphasis on performance and new media practices. May be repeated once for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student or Studio Art minor (or BIS Studio Art emphasis); ART 110 and 116 with C or better; credit allowed for either ART 443, 543 or 598 (Intermedia Performance)
ART	444	Web Art	Explores Web technology as a medium to create interactive art works for the Internet. Concept-driven curriculum wherein the idea for each work and its development is emphasized. The technical aspect of the work supports the concept. Students create storyboards and flowcharts to facilitate the application of the concept to the technology. The technical emphasis is on interactivity and time-based Net art. Students use existing software, learning the interface and programming associated with the software.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Intermedia majors eligible for upper-division credit; credit is allowed for only ART 444 or 494 (Web Art)
ART	445	Digital Processes for Printmaking	Introduces digital applications and processes as they relate to all areas of photo-mechanical printmaking processes. Comprised of three smaller sections to give a broad overview of possibilities and how they relate to analog printmaking techniques, including image capture, film generation and analog processes, and digital and inkjet printing.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): 50 minimum hours; credit is allowed for only ART 445 or 494 (Digital Process for Print)

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ART	449	Computer Animation and Video	Integrates 3-D fine arts animation with video and compositing. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 346 and ART 348 with C or better
ART	451	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 351 with C or better; credit is allowed for only ART 451 or 551
ART	452	Advanced Lithography	Continuation of ART 352. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student or completion of portfolio milestone; ART 253 and ART 352 with C or better
ART	453	Experimental Printmaking: Expanding the Matrix	Alternative methods of working with print techniques, including installations, actions or performances, and other nontraditional formats.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 351, 352, or 354 with a C or better; credit is allowed for only ART 453, 553 or 598 (Experimental Printmaking)
ART	454	Advanced Screen Printing	Continuation of paper, direct, and photographic stencil techniques. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 354 with C or better
ART	456	Letterpress Studio	Equipment, techniques and applications of letterpress printing. Students hand set type and create photopolymer plates and are encouraged to integrate the tactile quality of letterpressed type and image with other media. Discusses conceptual and material aspects of letterpress.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 253 with C or better OR non-art major with 56 hours; minimum 2.50 GPA; Credit is allowed for only ART 456 or ART 556 or ART 598 (Fine Printing and Bookmaking I)
ART	457	Fine Printing and Bookmaking II	Continuation of ART 456. Bookbinding, book design and printing, advanced typography, theory, and presswork. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Art student; ART 253 and ART 456 with C or better; Credit is allowed for only ART 457, 557 or 598 (Fine Printing and Bookmaking II)
ART	458	Papermaking	History, theory, demonstrations, sheet forming, collage treatments, and 3-D approaches. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 253 with C or better, or non-majors with 56 minimum credit hours; minimum 2.50 GPA. Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ART 458 or ART 558
ART	459	Monoprinting	Nonmultiple printed image using a variety of technical approaches. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): BA or BFA Art major, minimum 45 hours; or OR BIS Interdisciplinary Studies (Studio Art concentration) or Studio Art minor; ART 110, ART 112 (or ART 113, 115 or 116) with C or better
ART	460	Ceramic Clay	Research into various clay body formulations, local natural materials, slip glazes, and engobes.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 261 with C or better; Pre- or corequisite(s): ART 360 and ART 364 with C or better if completed
ART	461	Polymer Plate Prints	Explores the creative process of polymer plate printmaking as a fine art medium.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Minimum 50 hours; credit allowed for only ART 461 or 494 (Polymer Plate Prints)
ART	463	Ceramic Glaze	Glaze calculation and formulation using various glaze colors and surfaces.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 261 with C or better
ART	466	Special Problems in Ceramics	Emphasis on personal expression within structure of seminars, critiques, and studio work. Professional methods of presentation/documentation of work. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 261 and ART 364 with C or better

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ART	472	Advanced Jewelry and Surface Techniques	Covers jewelry forms and techniques including surface embellishment such as granulation, keum-boo and filigree to be used as tools for aesthetic expression and expand student awareness of historical and contemporary jewelry/metalwork.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 272 and ART 372 with C or better
ART	473	Advanced Metals and Mechanisms	Covers new techniques and develops existing skills in non-ferrous metal forming and mechanism fabrication while further refining fitting and finishing techniques, incorporating concept with craft and emphasizing professional practices/portfolio development.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 272 with C or better; ART373 with C or better; credit is allowed for only ART 473 or 598 (Adv. Metals & Mechanisms)
ART	474	Advanced Wood	Extended experience and advanced techniques in the use of wood to create functional works of art. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 274 and ART 374 with C or better
ART	476	Woven Structures II	Emphasizes personal expressions and continues technical exploration in woven structures. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 276 and ART 376 with C or better
ART	477	Printed Textiles	Techniques for screen printing on fabric exploring pattern as a compositional element. Various stencil methods including photographic processes. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 276 and ART 377 with C or better
ART	478	Advanced Surface Design	Emphasis on personal expression with advanced problems in stitch resist, arashi shibori, transfers, indigo, vat and disperse dyes, and pigments.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student with portfolio completed; ART 276, ART 377 and ART 477 with C or better
ART	479	3-D Fibers: Construction and Content	Explores hand-constructed fiber techniques through the context of the history and communities from which they came, as well as contemporary applications. Emphasizes research and the development of one's work through studio and social practice.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Art major or Studio Art minor; ART 276 with C or better; Credit is allowed for only ART 479 or ART 579 or ART 598 (3-D Fibers)
ART	482	Senior Exhibitions/Portfolio	Capstone course required of all BFA studio art majors. Students participate in a group exhibition and focus on professional practices, including exhibition display and advertisement, career planning, and development of a professional packet with artist statement, CV, and digital portfolio.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): BFA student; minimum 100 hours; credit is allowed for only ART 482 or 494 (Senior Exhibition/Portfolio)
ART	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): Art student
ART	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	STO	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		Prerequisite(s): Barrett Honors student
ART	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	STO	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequisite(s): Barrett Honors student
ART	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ART	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7	L	
ART	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
ART	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		Prerequisite(s): Art student
ART	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		Prerequisite(s): Art student

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ART	501	Cross-Practice Critique	Engages graduate students in deep, sustained critical discussion about artwork made by students in the class. Students investigate together the process(es) of critiquing artwork and consider and discuss the underlying assumptions and values they bring to this method of communication and pedagogy. Helps students develop and improve their critical voice at whatever level they are at, including the ability to receive and accept critical feedback of their work. Encourages students to hone their sense of personal agency in the context of "the crit."	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate
ART	508	Experimental Film	Facilitates the exploration of 16 mm motion picture film as material and methodological fodder for artists. Students use original, found, and hand-altered footage to create projects of their own design. Covers basic techniques including camera operation, film exposure, and analog editing practices. Explorations also include in-class experiments, readings, discussions and screenings. For upper-division undergraduate and graduate art students attracted to the material and theoretical issues embodied in film and who are curious about how film might inform their own ongoing advanced artistic pursuits. Graduate level focuses on the development of a personal approach.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ART 408, 494 (experimental Film), or ART 508, or ART 598 (Experimental Film)
ART	514	Graduate Life Drawing	Advanced study of the human figure as an expressive vehicle in various contexts. Graduate level focused on the development of personal approach. Timed poses of short and long duration with emphasis on using the figure to enhance the students individual research. Art historical component will be included to enable the student to fit themselves into the context of the use of the figure as it relates to the study of the history of art.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 414 or 514
ART	523	Graduate Painting	Concentrates on formal and conceptual skills and explores a variety of topics, including historical and contemporary painting issues, visual literacy, critical thinking, and professional practices.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student OR Senior or Postbaccalaureate undergraduate with minimum 108 hours; credit is allowed for only ART 423 or 523
ART	525	Advanced Figure Painting	Advanced study of the human figure clothed and nude as the subject for painting in selected media. Graduate-level study focuses on the development of personal expression.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ART 425 or ART 525
ART	527	Art on Paper	Exploration focused on conceptual and technical approaches combining mixed media painting and drawing on paper and related surfaces.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Herberger Institute for Design and the Arts graduate student; Credit is allowed for only ART 427 or ART 527
ART	528	Video & Sound as Sculptural Materials	Uses video and sound as tools to explore sculptural ideas. The emphasis is not on advanced techniques and technologies for the creation of video and sound, but rather on the creative use of these tools to arrive at an enlivened relationship to the physical world and thus to sculpture.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ART 428, ART 528, or ART 598 (New Systems Sculpture)
ART	529	Experimental Video Art	Explores creative possibilities through the production of experimental video art works referencing new approaches to concept, theory and art practice. The experimental video art curriculum emphasizes the use of metaphor and simulation to depict reality and linear story telling. Students study relational aesthetics, content, stylistic formats and presentation issues as they reference time-based media. The textbook entitled, "Video Art" by Michael Rush serves as a research tool for experimentation. The technical component concentrates on the use and operation of equipment for video recording, audio mixing, lighting, video editing and computer graphics. Students create stand-alone video works, video installations, multimedia time-based performances, through individual and group projects. Graduate students create a collaborative Video anthology.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ART 529 or ART 598 (Experimental Video Art) or ART 598 (New Media Concepts)
ART	530	Digital Compositing	Fine arts digital compositing of computer animation, video, and video editing of composites with audio.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student OR senior OR postbaccalaureate undergraduate with minimum of 108 earned hours

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ART	532	Neon Sculpture	Emphasizes techniques for creating neon in an art context, including glass bending and fabrication.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 532 or ART 598 (Neon Sculpture)
ART	533	Foundry Casting Methods	Thorough and directed course for the professional preparation of sculptors. Students are expected and required to participate in all aspects of the foundry process, including serving on both a casting and foundry process maintenance team. Students deepen their knowledge of the history of the use of cast metal in the visual arts and understanding of how casting processes can be applied to contemporary sculptural concepts, participating in special projects such as exhibitions, iron casting, and field trips to local foundries as the semester course schedule dictates.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 533 or 598 (Foundry Casting Methods)
ART	538	Moving and Interactive Systems in Sculpture	Students create sculptures that incorporate movement, sound and interactivity while also developing their personal expression as artists.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 438, 538 or 598 (Exp. Systems in Sculpture)
ART	539	Intermedia Studio	Investigates how intermedia practice can expand the realm of conversations within contemporary art, life and society. Encourages investigation of social art practice, art/life practices, conceptual art, digital art, emergent media, installation, new genre public art, performance, and visual art with emphasis on research, production and theory. Students expand their ability to assess interdisciplinary strategies. Through reinforcing artistic rigor, students deepen their ability to employ intermedia methods as artistic communication, to express a personalized point of view.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 439, 539 or 598 (Intermedia Studio)
ART	542	Art and Community	Through studio practice, research and presentations, explores intermedia social art practice, public practice, art/life practice, relational aesthetics, community-based projects, and other critical theories and conventions that engage art and community. Graduate students, in conjunction with the instructor, create their own workplan for the course.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 542 or 598 (Art and Community)
ART	543	Intermedia Performance	This concept-driven course explores intermedia as a contemporary art practice from a performance/live art perspective. Students create performance and time-based work connected to their individual artistic interests while making connections among art, life, and society. Students working in a diverse range of disciplines and artistic genres discover new processes of working and negotiate unexpected connections inherent in interdisciplinary production and cross-disciplinary collaboration. Student projects depend on particular specializations and passions brought to the class and may produce a range of multimedia performance work including performing for the camera, interactive networks, analogue/digital sound, video, sculpture, and installation. Semester I addresses the body as material exploring the body, subjectivity, and cultural histories. Semester II focuses on the body in public space exploring intervention and the everyday.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 543 or 598 (Intermedia Performance)
ART	544	Graduate-Level Web Art	Students research Web art and apply this to their own art practice. Concepts and content of the Web art class projects parallel individual aesthetic preferences. Explores Web technology as a new medium to create interactive Internet works. Technical emphasis on interactivity and time-based net art. Utilizes existing software, learning the interface and programming associated with it. Includes articles and essays by professional Web artists and theorists in required reading.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 494 (Web Art), ART 544, or ART 598 (Web Art)
ART	545	Digital Processes for Printmaking	Introduces digital applications and processes as they relate to all areas of photo-mechanical printmaking processes. Course is comprised of three smaller sections to give a broad overview of possibilities and how they relate to analog printmaking techniques: image capture, film generation and analog processes, and digital and inkjet printing.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 545 or 598 (Digital Processes for Printmaking)
ART	551	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or post-baccalaureate undergraduate with minimum of 108 earned hours; credit is allowed for only ART 451 or 551

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ART	553	Experimental Printmaking: Beyond the Matrix	Focuses on the development of concepts in printmaking beyond the traditional two-dimensional image on paper that is contained in a portfolio or frame. Explores alternative techniques and materials, methods of extending the print beyond 2 dimensions, and expanding the concept of what is a print. Students are encouraged to understand printmaking within the wider context of contemporary art, especially those directly related to the student's main artistic emphasis (if not printmaking).	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum 108 hours; credit is allowed for only ART 553, 453
ART	554	Graduate Screenprinting	Focuses on the development of screenprinting techniques and the ability to utilize these techniques as an expressive visual method of exploring and developing individual research concepts.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 554 or 598 (Advanced Screen Printing)
ART	556	Fine Printing and Bookmaking I	Offers instruction in the techniques of fine printing--letterpress--and using typography and printing as a fine art medium, as well as evaluating text as image and content in the aesthetics of print. Also considers bookforms, binding techniques and artists' books for the expansion of that aesthetic.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ART 456, ART 556, or ART 598 (Fine Printing and Bookmaking I)
ART	557	Fine Printing and Bookmaking II	Continuing study of letterpress in fine art--the book arts--with emphasis on the book.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only ART 457, 557 or 598 (Fine Printing and Bookmaking II)
ART	558	Papermaking	History, theory, demonstrations, sheet forming, collage treatments and 3-D approaches.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only ART 458, ART 558 or ART 598 (Papermaking)
ART	559	Monoprinting	Investigates monoprint/monotype printmaking and its aesthetic possibilities. Students acquire basic and advanced skills in the medium through demonstrations, problem solving exercises, and experimentation.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum 108 hours; credit is allowed for only ART 559 or 598 (Monoprinting)
ART	561	Polymer Plate Prints	Explores the creative process of polymer plate printmaking as a fine art medium.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum 108 hours; credit is allowed for only ART 561 or 598 (Polymer Plate Prints)
ART	576	Woven Structures	Expanding upon prior woven techniques, develops methods in warp manipulation through material explorations, dye techniques and structure applications. Dye methods include ikat, warp painting and over-dyeing. Complex structural investigations include loom controlled double weave, over-shot, computer-aided design, and the compu-dobby loom. In addition to learning technical skills, also provides theoretical and historical readings with in-class discussions that provide impetus for conceptual developments within the assignments.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: degree- or nondegree-seeking graduate. Credit is allowed for only ART 476, 576, or ART 598 (Woven Structures)
ART	577	Printed Textiles	Provides advanced instruction in surface design techniques, focusing on screen printing on fabric. Explores a variety of stencil methods. Studio problems explore structured pattern and single edition prints. Emphasizes conceptual development with technical proficiency.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 577 or 598 (Printed Textiles)
ART	578	Advanced Surface Design	Explores advanced surface design methods and the expressive potential of fabric. Critical analysis of the integration of materials, process, and concept. Emphasizes conceptual development with technical proficiency.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 578 or 598 (Advanced Surface Design)
ART	579	3-D Fibers: Construction and Content	Explores hand-constructed fiber techniques through the context of the history and communities from which they came, as well as contemporary applications. Emphasizes research and the development of one's work through studio and social practice.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only ART 479, 579 or 598 (3D Fibers)

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ART	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ART	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ART	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ART	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ART	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ART	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ART	621	Studio Problems	Advanced study. 3 hours a week each section.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ART	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ART	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ASB	100	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; comparative health systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Credit is allowed for only ASB 100 or SSH 100
ASB	101	Anthropology: Understanding Human Diversity	Provides an integrated understanding of biological, historical, and cultural evolutionary processes that account for human variation. Specifically examines how humans evolved and how they obtained the characteristics that make us a unique species. Considers cultural and biological models of cooperation, resource acquisition and distribution, sex and marriage, parenting, conflict and warfare, political structures, power and status, sex roles, ritual, religion, and language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	
ASB	102	Culture in a Globalizing World	Introduces concepts and methods of sociocultural anthropology, with illustrative materials from a variety of communities in a globalizing world. Explores the concept of culture and examines a variety of social, political and economic dimensions of how humans organize their lives.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
ASB	102	Culture in a Globalizing World	Introduces concepts and methods of sociocultural anthropology, with illustrative materials from a variety of communities in a globalizing world. Explores the concept of culture and examines a variety of social, political and economic dimensions of how humans organize their lives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	

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ASB	102	Culture in a Globalizing World	Introduces concepts and methods of sociocultural anthropology, with illustrative materials from a variety of communities in a globalizing world. Explores the concept of culture and examines a variety of social, political and economic dimensions of how humans organize their lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
ASB	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Freshman standing, Maximum 25 hours
ASB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	202	Immigration and Ethnic Relations in the U.S.	The ethnic and social consequences of international migration with a focus on the United States. Examines the impact of immigration on both American society and immigrant ethnic minorities over time.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Credit is allowed for only AFR 202 (or AFS 202) or ASB 202
ASB	202	Immigration and Ethnic Relations in the U.S.	The ethnic and social consequences of international migration with a focus on the United States. Examines the impact of immigration on both American society and immigrant ethnic minorities over time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & C	Credit is allowed for only AFR 202 (or AFS 202) or ASB 202
ASB	210	Human Sexuality: Anthropological Perspectives	Examines the sexual nature and behavior of humans from both a biological and an anthropological point of view across various cultures around the globe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	
ASB	211	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & G	
ASB	211	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & G	
ASB	211	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(HU or SB) & G	
ASB	220	The Expressive Culture of Latin America and the Caribbean: A Transborder Perspective	Interdisciplinary social science introduction to various forms of cultural expressions found throughout Latin America and the Caribbean region and in Latina/o communities within the United States. Uses a transborder perspective to examine how migration, race, ethnicity, gender, power, history and identity shape and influence different aspects of Latina/o culture and identity. Focuses on the study of a wide array of expressive practices including music, dance, verbal arts, myths and folktales, festivals, sports and food in Mexico, the Spanish Caribbean and their counterpart Latina/o communities in the United States. Class lectures and readings introduce basic concepts such as ethnography, ethnomusicology, culture, representation and globalization. The Expressive Culture of Latin America and the Caribbean: A Transborder Perspective	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or HU or SB) & C	Credit is allowed for only ASB 220 or TCL 230
ASB	222	Buried Cities and Lost Tribes	Archaeology through its most important discoveries.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & H	
ASB	222	Buried Cities and Lost Tribes	Archaeology through its most important discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & H	
ASB	223	Aztecs, Incas and Mayas	Archaeological and historical study of the three best-known ancient cultures of Mesoamerica and South America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & G & H	
ASB	230	Beginning Social Research	Introduces basics of social research design; fosters independent thinking and critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASB	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
ASB	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
ASB	252	Sports and Culture	Cross-cultural examination of symbolic and social dimensions of sports past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	
ASB	272	Environmental Justice	Surveys key environmental justice issues and movements. Uses interdisciplinary social science perspectives to review and analyze U.S. and international case studies.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Credit is allowed for only ASB 272 or SOS 272
ASB	275	Culture, Language and Learning	Examines the dynamic and complex interplay of language, culture and learning within and across individuals, groups, institutions and cultures in diverse multicultural, multilingual and transborder contexts.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Credit is allowed for only ASB 275 or TCL 275
ASB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student

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ASB	300	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & C	Pre-requisites: ENG 101, 105, 107, or ENG 111; Credit is allowed for only ASB or SSH 300
ASB	301	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 301 or HST 301 or SSH 301
ASB	302	Ethnographic Field Study	Fieldwork study of cultural adaptation through ethnographic research methods and local culture. Taught in Latin America or other international locations.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Pre-requisite: ASB 102, 222, 223, or ASM 104
ASB	305	Poverty and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 305 or SSH 305 or WST 305
ASB	310	Precolonial Africa	In-depth course study of contemporary Africa, providing thorough examination of the continent's pre-colonial history, particularly before 1900. The course will study the continent and its people, the way the history of the continent has been interpreted by non-Africans, how the continent's anatomy has affected historical development, and the methodology and interdisciplinary scholarship in the study of Africa	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 300 (or AFH 300) or ASB 310
ASB	311	Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	
ASB	311	Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G & H	
ASB	314	Comparative Religion	In-depth study of origins, elements, forms, and symbolism of religion; an advanced comparative survey of religious beliefs and ceremonies; the place of religion in culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASB 102, ASB 222, or ASB 223
ASB	316	Money and Culture	Using the fundamentals of economic anthropology, investigates how culture shapes our relationship to money and decision making. Provides a foundation for thinking about how production, exchange and consumption can be explained by looking at human behavior, thought and culture, and encourages students to apply anthropological knowledge to real-world situations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
ASB	319	The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASB 102, ASB 222, or ASB 223
ASB	319	The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: ASB 102, ASB 222, or ASB 223
ASB	321	Indians of the Southwest	The advanced study of cultures among the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H & C	Pre-requisites: ENG 101 and ASB 102 or ASB 222 or ASB 223
ASB	321	Indians of the Southwest	The advanced study of cultures among the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & H & C	Pre-requisites: ENG 101 and ASB 102 or ASB 222 or ASB 223
ASB	322	Peoples of Latin America	Indigenous, mestizo, and national cultures, rural and urban peoples in the region that today we call Latin America. Covers historic and contemporary events and cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Pre-requisites: ASB 102 with C or better or minimum 45 hours
ASB	324	Peoples of the Pacific	Peoples and cultures of Oceania focusing particularly on societies of Melanesia, Micronesia, and Polynesia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	G	
ASB	325	Peoples of Southeast Asia	Cultural-ecological perspective on the peoples of mainland and insular Southeast Asia. Subsistence modes, social organization, and the impact of modernization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	G	
ASB	326	Human Impacts on Ancient Environments	World survey of successful and unsuccessful ancient societies and their impacts on the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & H	
ASB	327	Disaster!	Examines the causes of disasters, such as famines and pandemics, throughout human history. Explores cases in which social responses to disaster have helped people survive or led to their demise. Through hands-on activities, students gain experience with popular tools to understand human responses to disasters.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & C	Prerequisite(s): ASB 102 with C or better or minimum 45 hours
ASB	328	Rules, Games, and Society	Concepts and practical tools to study the relation between groups of people and their common resources and public goods. Methods for identifying the diversity of institutional arrangements and analyzing their effectiveness. Example topics include sports, digital commons, environmental management, and urban environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	Pre-requisites: ENG 101; Minimum 45 hours
ASB	330	Understanding Archaeology	In-depth study and critique of theories and methods for reconstructing the lives of prehistoric peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): minimum 45 hours

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ASB	335	Ancient Ruins of the Southwest	Archaeological exploration of the the major cultural developments in the prehispanic Southwest, including Mesa Verde, Chaco Canyon, Mimbres, Hohokam and Rio Grande.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H & C	Prerequisite(s): ASB 102 or 222 or 223 or minimum 45 hours
ASB	335	Ancient Ruins of the Southwest	Archaeological exploration of the the major cultural developments in the prehispanic Southwest, including Mesa Verde, Chaco Canyon, Mimbres, Hohokam and Rio Grande.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & H & C	Prerequisite(s): ASB 102 or 222 or 223 or minimum 45 hours
ASB	336	African Art	Anthropological perspective of ancient visual art traditions of Africa. In-depth studies focus on several important themes and case studies that are pivotal to the understanding of the rich and diverse artistic heritage of the African continent.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	HU & G	Prerequisite(s): AFR 200 (or AFS 200) or ASB 102 or minimum 45 hours; Credit is allowed for only AFR 336 (or AFH 336) or ASB 336
ASB	337	Pyramids and Hieroglyphs: Life in Ancient Mesoamerica	Preconquest cultures and civilizations of Mexico. The Aztecs, Mayas, and their predecessors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & G & H	Prerequisite(s): minimum 45 hours
ASB	338	Archaeology of North America	In-depth study of the origin, spread, and development of the prehistoric Indians of North America up to historic tribes. Does not include the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Pre-requisites: ASB 102 or ASB 222 or ASB 223
ASB	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
ASB	340	Migration and Culture	Examines migration and culture embedded in a transnational field of social, economic and political processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours. Credit is allowed for only ASB 340 or SOC 328
ASB	342	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB, SBS or SOC 342
ASB	344	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	Pre-requisite: Minimum 45 hours; Credit is allowed for only ASB 344 or SOC 334
ASB	346	Marriage and Family Diversity	Social, economic, and cultural factors that shape family diversity in relation to generational and gender dynamics within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	
ASB	350	Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	HU	
ASB	350	Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU	
ASB	353	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the perspective of anthropology and allied disciplines. Uses a global, comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3-4	(HU or SB) & G	Pre-requisite: Minimum 45 hours; Credit is allowed for only SOC 353 or ASB 353
ASB	353	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the perspective of anthropology and allied disciplines. Uses a global, comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4	(HU or SB) & G	Pre-requisite: Minimum 45 hours; Credit is allowed for only SOC 353 or ASB 353
ASB	353	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the perspective of anthropology and allied disciplines. Uses a global, comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3-4	(HU or SB) & G	Pre-requisite: Minimum 45 hours; Credit is allowed for only SOC 353 or ASB 353
ASB	355	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	HU or SB	Pre-requisites: ASB 102, ASB 222, ASB 223 or ASM 104 or SSH 100 or ASB 100 with C or better. Credit is allowed for only SSH 355 or ASB 355
ASB	356	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356
ASB	361	Pleistocene Archaeology	Biosocial evolution in the Pleistocene, emphasizing technological achievements and the relationship between technology and environment in western Europe, sub-Saharan Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	H	
ASB	362	People and Plants	Offers a global survey of ethnobotany, the study of the uses of plants by people. Integrating botany, anthropology and archaeology, students learn about the roles plants have played as foods, tools, medicines and foci of religious devotion and ritual experience across human history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ASB	366	African Archaeology: Precolonial Urban Culture	In-depth analysis of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data. Special study will be placed on the evidence relating to dynamics of civilizations in ancient Africa, their foundation, growth, and failure, which spans a period of two million years	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 366 (or AFS 366) or ASB 366
ASB	368	Hunter-Gatherers	Studies of known hunting and gathering societies with the goal of developing approaches to understanding past and/or present hunting and gathering societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): minimum 45 hours
ASB	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with C or better; ASB 100 (or 102), SOC 101, SOS 110, or SSH 100 with C or better. Credit is allowed for only ASB 370, SOC 370, SOS 370, or SSH 370
ASB	371	Inequality and Sustainability	Efforts to shift societies onto a sustainable trajectory are facing profound challenges from the degree and dynamics of global inequalities of income, wealth, and life chances. Data and ideas from a spectrum of disciplines are employed to examine, analyze, and criticize the prospects for redressing global inequalities in a sustainable manner.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	Pre-requisites: ENG 101, 105 or 107 with C or better; Minimum of 45 hours completed; Credit is allowed for ASB 371, ASB 394 (Inequality and Sustainability), SOS 371 or SOS 394 (Inequality and Sustainability)
ASB	374	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit for only ASB 374, POS 374, SBS 374 or SOC 374
ASB	375	Humans and the Environment: What's the Connection?	How do diverse human groups across global ecosystems (desert, tropics, arctic, alpine, urban) interact with and adapt to their environments and how are these relationships changing in response to globalization, climate change and other social, historical and political-economic drivers? Cultures situated in landscapes are the basis for an incredible global diversity of worldviews and behaviors that in turn affect how humans experience and "use" their environments. This course will provide an introduction to current and benchmark literature and methods in environmental and ecological anthropology that address people-environment interactions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 375 or SOS 375 or ASB 394 (People: Environment Connections in Anthropology) or ASB 494 (Ecological and Environmental Anthropology)
ASB	378	McGlobalization: Migration, Mass Media and McDonald's	Explores the impact of globalization on local societies and cultures by focusing on the international migration of peoples, the global expansion of capitalism and global mass media and popular culture. Examines both the socioeconomic causes and consequences of globalization, as well as how local peoples around the world have been affected by, participated in and resisted the forces of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 378 or TCL 378
ASB	380	Language, Culture and Gender	Focuses on how language, thought and culture are intertwined in everyday practice. Students learn the central role of language in shaping and reflecting social norms and social actions cross-culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): minimum 42 hours
ASB	389	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 389 or SBS 389 or SOC 389
ASB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
ASB	395	Topics in Comparative Culture	In-depth study of specific topic(s) cross-culturally. Students engage with the subject matter through critical evaluation of literature, hands-on analysis and interpretation of data, and scientific writing.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Prerequisite(s): minimum 42 hours
ASB	402	Visual Anthropology	Explores visual anthropology as a method for social documentation, and as a way to interpret cultural ways of seeing. Brings together anthropology, fine art, and art history students to exchange ideas about how we create, interpret, and communicate visual meanings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASB	412	History of Anthropology	Historical treatment of the development of the culture concept and its expression in the chief theoretical trends in anthropology between 1860 and 1950.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	
ASB	417	Political Anthropology	Comparative examination of the forms and processes of political organization and activity in primitive, peasant, and complex societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	
ASB	421	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ASB	430	Social Simulation	Students will apply computer simulation and agent-based modeling techniques to study social systems relating to concrete research questions.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4	CS	Prerequisite(s): AML 100 or MAT 142, 170, 210, 265, or 270 with C or better OR Mathematics Placement Test score of 50% or higher; minimum 56 hours; Credit is allowed for only ASB 430 or CPI 430 or AML 330
ASB	442	Urban Studies	Studies local and global urban issues such as social geography, political economy, culture and social space, urban social diversity.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours. Credit is allowed for only ASB 442 or SBS 460
ASB	443	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	(L or SB) & G	Pre-requisite: SSH 100 or ASB 100. Credit is allowed for only ASB 443 or SSH 403
ASB	447	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB 447, POS 447, or SBS 447
ASB	452	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites: Minimum 45 credit hours; SSH 100 or ASB 100; Credit is allowed for only SSH 402 or ASB 452
ASB	455	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Global Health major; Minimum 87 hours; SSH 100 or ASB 100 and SSH 403 or ASB 443 with C or better; Credit is allowed for only ASB 455 or SSH 405
ASB	462	Medical Anthropology: Culture and Health	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & C	Credit is allowed for only ASB 462 or SSH 404
ASB	463	Political Ecology of the Border	Examines the political ecology of the human-environment relationship in Mexico and on the U.S.-Mexican border. Through case studies, students learn about the most pressing environmental issues facing human populations and their communities on both sides of the U.S.-Mexican border and the various ways in which these issues are dealt with.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 463 or SOS 463 or TCL 443
ASB	464	The Ethnography of Mexico and the Borderlands	Students learn basic principles of ethnographic research and obtain a better understanding of the social, ecological, cultural, political and economic processes affecting people in Mexico and in the U.S.-Mexico borderlands. Through case studies, students become aware of the variety of issues shaping the lives of those living in these regions. Focuses on contemporary issues such as migration, economy, gender, labor, health and the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 464 or TCL 444 or TCL 598 (The Ethnography of Mexico and the Borderlands)
ASB	466	Peoples and Cultures of Africa	Surveys African peoples and their cultures, external contact, and changes. Meets non-Western requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 466 (or AFS 466) or ASB 466
ASB	471	Introduction to Museums	History, philosophy, and current status of museums. Explores collecting, preservation, exhibition, education, and research activities in different types of museums.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	
ASB	480	Principles of Linguistics	Descriptive and historical linguistics. Surveys theories of human language, emphasizing synchronic linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASB	483	Sociolinguistics and the Ethnography of Communication	Relationships between linguistic and social categories; functional analysis of language use, maintenance, and diversity; interaction between verbal and nonverbal communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	
ASB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
ASB	485	U.S.-Mexico Border in Comparative Perspective	Explores the multicultural and social dimensions of communities along the U.S.-Mexico border, emphasizing social organization, migration, culture, and frontier ideology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		

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ASB	490	Earliest Cities	Archaeological research on the origins and development of the earliest urban centers around the world. Applies urban theory and comparative analysis. Compares ancient and modern cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & H	Pre-requisites: ASB 222 or ASB 223 with C or better; Minimum 45 hours; Credit is allowed for only ASB 490 or PUP 490
ASB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Prerequisite(s): Barrett Honors student
ASB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
ASB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
ASB	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASB	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
ASB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
ASB	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	503	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories. ASB 503/SSH 503.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	510	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields. Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	511	Ethics in Health Social Science Research	Ethics and social justice issues in community-based health research relevant to health social science, including informed consent, community involvement, control, advocacy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	512	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	513	Research Design and Proposal Writing in Health Social Science	Research design, piloting, and proposal writing for social scientists conducting health research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	517	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
ASB	525	Introduction to Material Culture	Considers how objects embody social relationships and therefore cultural meanings. Seminar explores theories that give insight into social processes such as exchange, consumption, and identity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	529	Culture and Political Economy	Origin and spread of Western capitalism and its impact on non-Western societies. Utilizes ethnographic and historical case studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ASB	530	Ecological Anthropology	Focuses on the theories and methods that environmental anthropology (EA) can bring to bear on human-environmental questions across a variety of social-ecological systems. Explores how environmental anthropologists approach these complex challenges, and considers the role of EA within larger interdisciplinary approaches for understanding development, adaptation, vulnerability, and change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only ASB 530 or SOS 553
ASB	532	Graduate Field Anthropology	Independent research on a specific anthropological problem to be selected by the student in consultation with the staff. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	2-8		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	537	Topics in Mesoamerican Archaeology	Explores changing organization of pre-Columbian civilizations in Mesoamerica through interpretive issues, such as regional analysis, chiefdoms, urbanism, and exchange.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	540	Scholarly Inquiry in Anthropology	Basic issues and concepts in anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Graduate student within one of the following programs in the School of Human Evolution and Social Change: Anthropology, Museum Anthropology, Social Science and Health, and Environmental Social Sciences
ASB	541	Theory in Sociocultural Anthropology	Basic issues and concepts in sociocultural anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	542	Archaeology of Small-Scale Societies	Approaches to small-scale (i.e., hunter-gatherer and tribal) societies, archaeological method and theory, ethnography, models of human and cultural evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	544	Settlement Patterns	Spatial arrangement of residences, activity sites, and communities over landscape. Emphasizes natural and cultural factors influencing settlement patterns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	547	Origins of Agriculture	Archaeological evidence for transitions in Old World subsistence economies from hunting and gathering to dependence on domesticated plants and animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	549	Chiefdoms	Examines archaeological evidence of chiefdoms, distinguished by hereditary leadership and non- bureaucratized decision-making elite, to illustrate emergence of social complexity, inequality.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	558	Mortuary Practices and Cultural Analysis	Critical overview of theory and methods of reconstructing lifeways of past peoples with ethnographic/archaeological data and a bioarchaeological perspective.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	560	Theory and Archaeology	Applies social theory to archaeological study of societies of the past. Includes practice theory, hierarchy, space and place, material culture.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	563	Hunter-Gatherer Adaptations	Evolution of prehistoric hunter-gatherer societies in the Old and New Worlds from the most ancient times through protohistoric chiefdoms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	567	Southwestern Archaeology	Broad coverage of Southwestern cultural developments focusing on current debates and rigorous use of archaeological data in making cultural inferences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	568	Intrasite Research Strategies	Research issues within a single site context. Topics include quantitative spatial analysis, site definition, sampling, distributional analysis, and substantive interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	572	Museum Collection Management	Principles and practices of acquisition, documentation, care, and use of museum collections; registration, cataloging, and preservation methods; legal and ethical issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	573	Museum Administration	Formal organization and management of museums, governance, personnel matters, fund raising and grantsmanship, legal and ethical issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only ASB 573 or HST 573
ASB	574	Exhibit Design and Development	Exhibition philosophies and development; processes of planning, designing, staging, installing, evaluating, and disassembling temporary and long-term exhibits.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	579	Critical Issues in Museum Studies	Current debates of museum practice from an anthropological perspective. Addresses issues of collection, presentation, authenticity, and authority.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ASB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ASB	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ASC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
ASC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ASC	315	Numeracy in Technology	Contextual uses of mathematics in applied sciences. Emphasizes using mathematical methodologies to solve technology-related problems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): BAS major
ASC	325	Physical Sciences in Technology	Physical systems and their interrelationships on technology systems. Real-world applications of physical systems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	Pre-requisites: BAS major
ASC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Pre-requisites: Polytechnic BAS student
ASC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ASC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7		
ASC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		Pre-requisites: Polytechnic BAS student

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ASC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisites: Polytechnic BAS student
ASE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		Pre-requisites: Must be a non degree undergraduate student with less than or equal to 25 total earned hours
ASE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
ASE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		Prerequisite(s): Barrett Honors student
ASE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Prerequisite(s): Barrett Honors student
ASE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
ASE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
ASE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	104	Bones, Stones, and Human Evolution	Physical anthropology and archaeology. Evidence and processes of human evolution and of culture change. Primates. Fossil hominids and their tools. Race, variation, and heredity. Environment and human biology. Prehistoric culture and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		SB or SG
ASM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ASM	201	Epidemics and Outbreaks	Covers epidemiologic methods for the control of conditions such as infectious and chronic diseases, mental disorders, community and environmental health hazards, and unintentional injuries. Other topics include quantitative aspects of epidemiology, including data sources, measures of morbidity and mortality, evaluation of association and causality, and study design. A background in basic biology and a basic understanding of the principles of human diseases helpful in succeeding in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Credit is allowed for only ASM 201 or SSH 201
ASM	246	Human Origins	History of discoveries and changing interpretations of human evolution. Earliest ancestors to emergence of modern humans. Humanity's place in nature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		SB
ASM	275	Forensic Anthropology	Discusses the role of the forensic anthropologist in medico-legal investigations involving skeletonized human remains. Includes forensic recovery techniques, identification of decedents through skeletal and dental analysis, and reconstructing the crime scene through analysis of trauma patterns. Covers the legal aspects of forensic practice and considers historical case studies and the contributions forensic anthropologists make to mass disaster investigations and human rights abuses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		SB or SG
ASM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ASM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASM	300	Anthropological Sciences Seminar	Focuses on the ways in which research findings are produced by diverse theories and methods in the anthropological sciences, usually in combination with other life and physical sciences, with a strong focus on combination anthropological conceptual frameworks with quantitative methodologies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: BS in Anthropology major; Two of the following: ASB 102, 222 (or 223), AML 100, ASM 104 with a C or better
ASM	301	Peopling of the World	Reviews all evidence for human dispersal during the last 100,000 years, origins of language, cultures, races, and beginnings of modern humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Pre-requisite: ASM 104
ASM	332	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only AFR 332 (or AFS 332) or ASM 332
ASM	338	Anthropological Field Session	Anthropological field techniques, analysis of data, and preparation of field reports.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	341	Human Osteology	Osteology, human paleontology, and osteometry. Description and analysis of archaeological and contemporary human populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: ASM 104 with C or better; 25 minimum hours
ASM	342	Evolution of Human Behavior	Examines how evolutionary theory informs our understanding of human behavior, psychology and culture. Explores evolutionary explanations of human behavioral variation and cultural diversity and the influence of natural selection on shaping human cognition. Topics include nepotism, economic decisions, behavioral strategies throughout the life course, mate choice and sexual behavior, perception and judgment, motivation and emotions, social learning and culture, cooperation and prosociality, interpersonal violence and warfare, and norms and moral sentiments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s) with C or better: ASM 104 (or BIO 181 or 282). Credit is allowed for only ASM 342 or BIO 327
ASM	344	Fossil Hominids	The fossil evidence for human evolution, emphasizing the concepts and methods for reconstructing the past.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisite: ASM 104
ASM	345	Disease and Human Evolution	Interaction of people and pathogens from prehistoric times to the present, with emphasis on disease as an agent of genetic selection.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): ASM 104 or BIO 100 or BIO 181 (or BIO 188) or BIO 182 (or BIO 187) or BIO 281 or BIO 282
ASM	348	Social Issues in Human Genetics	Moral and social implications of developments in genetic science, particularly as they affect reproduction, medicine, and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	
ASM	350	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASB 222 (or 223), or GLG 101 (or 103), or GPH 111, with C or better
ASM	365	Doing Archaeology	Using hands-on analysis of artifacts and a mock site, this advanced introduction to archaeology acquaints the student with the field and laboratory methods applied by archaeologists, the information archaeologists use, and how they construct knowledge of the past.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4		Prerequisite(s): ASB 222 (or ASB 223 or 335 or 337)
ASM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	401	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4		Pre-requisites: ASB 100 (or ASM 104); SSH 100; Credit is allowed for only ASM or SSH 401
ASM	414	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): ASB 100, 102, 222, 223, AML 100, ASM 104 or SSH 100 with C or better; minimum 45 hours; Credit is allowed for only ASM 414 or SOS 414 or SSH 414
ASM	424	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only SOS 424, BIO 424, or ASM 424
ASM	435	Archaeological Pollen Analysis	Theory, methodology, and practice of pollen analytic techniques. Compares uses in botany, geology, and archaeology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		

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ASM	443	Primatology	Evolution and adaptations of nonhuman primates, emphasizing social behavior. Includes material from fossil evidence and field and lab studies in behavior and biology which must be critically integrated with relevant competing theories concerning the evolution of primate behavior and biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASM 104 with C or better; Minimum 56 hours. Credit is allowed for only ASM 443 or 543
ASM	446	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	Prerequisite(s): ASM 301 or BIO 340 or LSC 347 or MBB 347 with C or better; Credit is allowed for only ASM 446 or ASM 546 or BIO 446 or BIO 546
ASM	450	Bioarchaeology	Surveys archaeological and physical anthropological methods and theories for evaluating skeletal and burial remains to reconstruct biocultural adaptation and lifeways.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: ASM 104
ASM	452	Dental Anthropology	Human and primate dental morphology, growth, evolution, and genetics. Within- and between-group variation. Dental pathology and behavioral-cultural-dietary factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4	SG	Pre-requisites: ASM 104. Credit is allowed for only ASM 552 or ASM 452
ASM	453	Human Behavior through Bone Chemistry	Focuses on the many ways that biogeochemical analyses of archaeological bone and teeth can inform our understanding of past human behavior. Topics include migration and residential mobility, paleodiet, post-depositional contamination and dating methods. Students will learn through lectures, discussions, student presentations, and hands-on laboratory projects.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASB 222 or 223 with C or better; ASM 104 with C or better; Minimum 56 hours; Credit is allowed for only ASM 453 or 553
ASM	454	Comparative Primate Anatomy	Functional anatomy of the cranial, dental, and locomotor apparatus of primates, including humans, emphasizing the relation of morphology to behavior and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		
ASM	455	Primate Behavior Laboratory	Instruction and practice in methods of observation and analysis of primate behavior. Discusses the relationship between class work on captive animals and field techniques for studying free-ranging groups.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	Pre-requisite: ASM 343
ASM	456	Infectious Disease and Human Evolution	Study of infectious disease and humanity, using evidence from anthropology, history, medicine, and ancient skeletons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: ASM 345
ASM	459	Forensic Anthropology	Applies anthropology, primarily human osteology, to legal questions, including individual identification, crime scenes, forensic reports, police work, and court testimony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: ASM 341; ASM 275; Credit is allowed for only ASM 459 or 559
ASM	460	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASM 104 with C or better; ASM 341, ASM 342, ASM 344, ASM 345 or ASM 348
ASM	465	Quantification and Analysis for Anthropologists	Statistical and quantitative strategies for envisioning and exploring archaeological, physical anthropological, bioarchaeological, and socialcultural data. Univariate and bivariate methods. A basic understanding of algebra is necessary to be successful in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	CS	
ASM	472	Archaeological Ceramics	Analysis and identification of pottery wares, types, and varieties. Systems for ceramic classification and cultural interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Prerequisite(s): Barrett Honors student
ASM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
ASM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASM	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASM	506	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	6		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 506, ASM 506 or MCB 506
ASM	520	Agent-Based Modeling	Introduces agent-based modeling to simulate social and social-ecological systems. Topics include design, analysis, and empirical grounding of agent-based models to a variety of application domains including collective action, diffusion processes, resource use, health, and complex societies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	525	Primate Paleobiology	Seminar-based survey of primate evolution, focusing on comparative biology of the extant primates and the fossil record through the Miocene.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	530	Paleoanthropology	Seminar-based in-depth study of the fossil record of human evolution and its geological, environmental, and phylogenetic contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	543	Primateology	Advanced study of nonhuman primate behavioral adaptations, emphasizing comparative sociality, incorporating data on behavior and biology from field and captivity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit allowed for ASM 443 or 543
ASM	546	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); credit is allowed for only BIO 446, ASM 446, BIO 546 or ASM 546
ASM	548	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	552	Dental Anthropology	Evolutionary anthropology of non-human primate and human dentition and research from extant and extinct species of non-human primates and hominins.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 452 or ASM 552
ASM	553	Human Behavior through Bone Chemistry	Focuses on the many ways that biogeochemical analyses of archaeological bone and teeth can inform our understanding of past human behavior. Topics include migration and residential mobility, paleodiet, post-depositional contamination and dating methods. Students will learn through lectures, discussions, student presentations, and hands-on laboratory projects.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 453 or 553
ASM	555	Advanced Human Osteology	Intensive lab course covers identification of human skeletal remains and bone fragments from archaeological contexts. Emphasizes skeletal biology, variation, anatomical landmarks, determinants of age, sex, and stature.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisite: ASM 341 or Anthropology graduate student
ASM	560	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	565	Quantitative Archaeology	Formal methods of structuring, codifying, and analyzing data for archaeological problems. Designing research to yield data amenable to productive analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	568	GIS and Spatial Technologies in Anthropological Research	In-depth survey of spatial technologies in anthropological research, including GIS, spatial modeling, remote sensing, and image analysis and classification.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	570	Fundamentals of CAS Science	Many phenomena of critical relevance to human society are dynamic systems that change over individual and evolutionary time scales, and are highly interactive, both within and between systems. That is, they are complex adaptive systems (CAS), and thus share isomorphic properties like near-decomposability, hierarchical organization, scale-free networks, self-organized criticality, and emergence. Fundamentals of CAS science explores the diverse, interdisciplinary applications of a complex adaptive systems across the social, behavioral, and life sciences.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Graduate student (degree or non-degree); Credit is allowed for only ASM, BIO, or SOS 570
ASM	573	Lithic Analysis	Analysis and interpretation of chipped stone artifacts. Focus on both techniques and underlying concepts and their application to real collections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	579	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ASM	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	611	Paleopathology	Explores patterns of disease manifested in the human skeleton and differential diagnosis of infectious, metabolic, neoplastic, congenital, and other conditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); ASM 555
ASM	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ASM	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	111	Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	
AST	111	Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	
AST	112	Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	
AST	112	Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	
AST	113	Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SQ	Pre/Co-requisite: AST 111 or AST 321
AST	113	Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre/Co-requisite: AST 111 or AST 321
AST	114	Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SQ	Pre/Co-requisite: AST 111, 112, 321 or 322
AST	114	Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre/Co-requisite: AST 111, 112, 321 or 322
AST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisite: Maximum 25 hours
AST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		

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AST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
AST	321	Introduction to Planetary and Stellar Astrophysics	Physical laws; celestial mechanics; properties of planets, the sun, and other stars; formation and evolution of stars and planetary systems. Both AST 113 and 321 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	Pre-requisites: MAT 266 or 271 with C or better; PHY 121 and 122 (or PHY 150) with C or better
AST	322	Introduction to Galactic and Extragalactic Astrophysics	Evolved stars, introduction to relativity, galaxies and interstellar matter, structure and dynamics of galaxies, cosmology. Both AST 114 and 322 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	Pre-requisites: MAT 266 (or MAT 271), PHY 150 (or PHY 121/122) with C or better
AST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
AST	421	Astrophysics I	Selected astrophysical topics, including stellar evolution, star formation, interstellar medium, galactic structure, extragalactic astronomy, high-energy astrophysics, and cosmology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: AST 321 or AST 322 with C or better; PHY 252 with C or better
AST	422	Astrophysics II	Same range of astrophysical topics as for AST 421 but emphasizes different specific topics in a given year.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: AST 321 or AST 322 with C or better; PHY 252 with C or better
AST	460	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite with C or better: AST 112 (or BIO 182 or BIO 282 or GLG 102 or SES 122), one 300-level course in AST or BIO or CHM or GLG or MIC or PHY or SES. Credit is allowed for only AST 460 or GLG 460 or MIC 475
AST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
AST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Prerequisite(s): Barrett Honors student
AST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
AST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
AST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		
AST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
AST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
AST	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	521	Stars and Interstellar Medium I	Radiative transfer, atomic and molecular properties, stellar atmospheres, line profiles, nonlocal thermodynamic equilibrium, interstellar gas and dust, star formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	522	Stars and Interstellar Medium II	Stellar structure, radiative transport, boundary conditions, equations of state, nuclear reactions, opacity, nucleosynthesis, chemical evolution of the galaxy, stellar evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	523	Stars and Interstellar Medium III	Structure of the interstellar medium, gaseous nebulae, recombination theory, ionization fronts and shock waves, galactic magnetic fields, magnetohydrodynamics, molecular clouds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AST	531	Galaxies and Cosmology I	Structure and evolution of the Milky Way, stellar properties, populations and associations/clusters, interstellar medium, dark matter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	532	Galaxies and Cosmology II	Structure of galaxies and the nearby universe, Hubble sequence, kappa-space, stellar populations, active galaxies, galaxy environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	533	Galaxies and Cosmology III	Issues in modern cosmology, the distance scale, cosmological parameters, cosmological tests, cosmic background radiation, early universe, galaxy formation and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AST	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ASU	10	Connect: ASU Orientation	Students enrolled in the Starbucks College Achievement Plan will learn about ASU's mission as the New American University, discover the value of a university degree from a research institution, discuss academic integrity, explore the tools used in online courses, and identify key components of a work/life/school balance plan.	N	LEC	N	NOG	Office of the Provost	Online & Extended Campus	0		
ASU	101-AEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Aerospace Engineering undergraduate student
ASU	101-BME	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering student
ASU	101-CEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1		Prerequisite(s): Fulton Schools of Engineering student
ASU	101-CHE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1		Prerequisite(s): Chemical Engineering major
ASU	101-CHS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	1		Prerequisite(s): College of Health Solutions major
ASU	101-CLS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Prerequisite(s): College of Integrative Sciences and Arts undergraduate student

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ASU	101-CNE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1		
ASU	101-CON	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1		Prerequisite(s): Fulton Schools of Engineering student
ASU	101-CPP	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1		Prerequisite(s): College of Public Service and Community Solutions
ASU	101-CS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Prerequisite(s): Cronkite School of Journalism and Mass Communication student
ASU	101-CSE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): School of Computing, Informatics, and Decision Systems Engineering major
ASU	101-EEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1		Prerequisite(s): undergraduate Electrical Engineering student
ASU	101-FSE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): Fulton Schools of Engineering student
ASU	101-HDA	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Prerequisite(s): Herberger Institute of Design and the Arts student
ASU	101-HNR	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	1		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ASU	101-IEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1		Prerequisite(s): School of Computing, Informatics, and Decision Systems Engineering major
ASU	101-LA	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1		Prerequisite(s): College of Liberal Arts & Sciences student
ASU	101-MAE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Mechanical Engineering students or Aerospace Engineering undergraduate student
ASU	101-MEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Mechanical Engineering undergraduate student
ASU	101-MSE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Prerequisite(s): Fulton Schools of Engineering student
ASU	101-NCIAS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Prerequisite(s): New College of Interdisciplinary Arts and Sciences undergraduate student
ASU	101-NH	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		
ASU	101-NU	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): Nursing and Healthcare Innovation or Nutrition student
ASU	101-SOS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	1		Prerequisite(s): School of Sustainability student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ASU	101-TE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): Teacher Education and Leadership student
ASU	101-TPS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Polytechnic School	1		Prerequisite(s): Ira A. Fulton Schools of Engineering - The Polytechnic School student
ASU	101-UC	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	University College	Dean, University College	1		Prerequisite(s): ASU Online students
ASU	101-UC	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	University College	Dean, University College	1		Prerequisite(s): College of Integrative Sciences and Arts OR University College student
ASU	101-WPC	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1		Prerequisite(s): W.P. Carey student
ASU	11	ASU Online Orientation	Students enrolled in ASU Online Orientation will learn about ASU and its mission as the New American University, discover the value of a university degree from a research institution, discuss academic integrity, explore the tools used in online courses, and identify key components of a work/life/school balance plan.	N	LEC	N	NOG	Office of the Provost	Online & Extended Campus	0		
ASU	140-CHS	ProMod	Project-based learning.	Y	PRO	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	0-18		
ASU	140-CLS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0-18		
ASU	140-CPSCS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	0-18		
ASU	140-CS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	0-18		
ASU	140-FSE	ProMod	Project-based learning.	Y	PRO	Y	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	0-18		
ASU	140-HDA	ProMod	Project-based learning.	Y	PRO	Y	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	0-18		
ASU	140-HNR	ProMod	Project-based learning.	Y	PRO	Y	GNA	Barrett, The Honors College	Barrett, The Honors College	0-18		Prerequisite(s): Barrett Honors student
ASU	140-LA	ProMod	Project-based learning.	Y	PRO	Y	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	0-18		
ASU	140-NCIAS	ProMod	Project-based learning.	Y	PRO	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	0-18		
ASU	140-NU	ProMod	Project-based learning.	Y	PRO	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	0-18		
ASU	140-SOS	ProMod	Project-based learning.	Y	PRO	Y	GNA	School of Sustainability	School of Sustainability	0-18		
ASU	140-TB	ProMod	Project-based learning.	Y	PRO	Y	GNA	Thunderbird Sch of Global Mgmt	Dean, Thunderbird School of Global Management	0-18		
ASU	140-TE	ProMod	Project-based learning.	Y	PRO	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-18		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ASU	140-WPC	ProMod	Project-based learning.	Y	PRO	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	0-18		
ASU	150	The LEAD Project I	Students develop in academic areas while also gaining essential career skills in creativity, problem solving, and teamwork. Students learn how to think critically and manage a project from inception to completion. Through course discussions and assignments, students examine connections between their work in other courses and ASU 150. This is the first part of a two-part curriculum which continues into the spring semester. Separate grades will be issued for each semester.	N	LEC	N	GNA	University College	University Academic Success Programs	1		Credit is allowed for only ASU 150 or ASU 194 (The LEAD Project I) or UNI 120
ASU	151	The LEAD Project II	Students continue to develop in academic areas while gaining essential career skills in creativity, problem solving and teamwork. Students learn how to think critically and manage a project from inception to completion. Through course discussions and assignments, students examine connections between their work in other courses and this course. Second part of a two-part curriculum, which continues from the fall semester. Separate grades are issued for each semester.	N	LEC	N	GNA	University College	University Academic Success Programs	1		Credit is allowed for only ASU 151 or ASU 194 (The LEAD Project II)
ASU	19	Jump Start	One-week program for incoming first-year students to ASU and is designed to set them up for academic success. Introduces the tools and processes that support their journey. Students learn how to connect with other students via collaborative environments.	N	LEC	N	YGB	University College	University Academic Success Programs	0		Prerequisite(s): Jump Start or SPIRIT student
ASU	194-CLS	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ASU	194-LA	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	1-4		
ASU	194-NCIAS	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ASU	194-UC	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	University College	Dean, University College	1-4		
ASU	240-CHS	ProMod	Project-based learning.	Y	LEC	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	0-18		
ASU	240-CLS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0-18		
ASU	240-CPSCS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	0-18		
ASU	240-CS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	0-18		
ASU	240-FSE	ProMod	Project-based learning.	Y	LEC	Y	GNA	Ira A. Fulton Engineering	Ira A. Fulton Schools of Engineering	0-18		
ASU	240-HDA	ProMod	Project-based learning.	Y	LEC	Y	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	0-18		
ASU	240-HNR	ProMod	Project-based learning.	Y	LEC	Y	GNA	Barrett, The Honors College	Barrett, The Honors College	0-18		Prerequisite(s): Barrett Honors student
ASU	240-LA	ProMod	Project-based learning.	Y	LEC	Y	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	0-18		
ASU	240-NCIAS	ProMod	Project-based learning.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	0-18		
ASU	240-NU	ProMod	Project-based learning.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	0-18		
ASU	240-SOS	ProMod	Project-based learning.	Y	LEC	Y	GNA	School of Sustainability	School of Sustainability	0-18		
ASU	240-TB	ProMod	Project-based learning.	Y	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	Dean, Thunderbird School of Global Management	0-18		
ASU	240-TE	ProMod	Project-based learning.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-18		
ASU	240-WPC	ProMod	Project-based learning.	Y	LEC	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	0-18		
ASU	340-CHS	ProMod	Project-based learning.	Y	PRO	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	0-18		
ASU	340-CLS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0-18		
ASU	340-CPSCS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	0-18		
ASU	340-CS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	0-18		
ASU	340-FSE	ProMod	Project-based learning.	Y	PRO	Y	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	0-18		
ASU	340-HDA	ProMod	Project-based learning.	Y	PRO	Y	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	0-18		

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ASU	340-HNR	ProMod	Project-based learning.	Y	PRO	Y	GNA	Barrett, The Honors College	Barrett, The Honors College	0-18		Prerequisite(s): Barrett Honors student
ASU	340-LA	ProMod	Project-based learning.	Y	PRO	Y	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	0-18		
ASU	340-NCIAS	ProMod	Project-based learning.	Y	PRO	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	0-18		
ASU	340-NU	ProMod	Project-based learning.	Y	PRO	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	0-18		
ASU	340-SOS	ProMod	Project-based learning.	Y	PRO	Y	GNA	School of Sustainability	School of Sustainability	0-18		
ASU	340-TB	ProMod	Project-based learning.	Y	PRO	Y	GNA	Thunderbird Sch of Global Mgmt	Dean, Thunderbird School of Global Management	0-18		
ASU	340-TE	ProMod	Project-based learning.	Y	PRO	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-18		
ASU	340-WPC	ProMod	Project-based learning.	Y	PRO	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	0-18		
ASU	394-CLS	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ASU	42	Online Military Orientation	Active duty and veteran students enrolled in ASU 42 will explore ASU academic, veteran, and career resources, discover the value of a university degree from a research institution, discuss academic integrity, explore the tools used in online courses, and craft a plan balancing work, school, and life.	N	LEC	N	NOG	Office of the Provost	Online & Extended Campus	0		
ASU	440-CHS	ProMod	Project-based learning.	Y	LEC	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	0-18		
ASU	440-CLS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0-18		
ASU	440-CPSCS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	0-18		
ASU	440-CS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	0-18		
ASU	440-FSE	ProMod	Project-based learning.	Y	LEC	Y	GNA	Ira A. Fulton Engineering	Ira A. Fulton Schools of Engineering	0-18		
ASU	440-HDA	ProMod	Project-based learning.	Y	LEC	Y	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	0-18		
ASU	440-HNR	ProMod	Project-based learning.	Y	LEC	Y	GNA	Barrett, The Honors College	Barrett, The Honors College	0-18		Prerequisite(s): Barrett Honors student
ASU	440-LA	ProMod	Project-based learning.	Y	LEC	Y	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	0-18		
ASU	440-NCIAS	ProMod	Project-based learning.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	0-18		
ASU	440-NU	ProMod	Project-based learning.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	0-18		
ASU	440-SOS	ProMod	Project-based learning.	Y	LEC	Y	GNA	School of Sustainability	School of Sustainability	0-18		
ASU	440-TB	ProMod	Project-based learning.	Y	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	Dean, Thunderbird School of Global Management	0-18		
ASU	440-TE	ProMod	Project-based learning.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-18		
ASU	440-WPC	ProMod	Project-based learning.	Y	LEC	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	0-18		
ATC	230	Fundamentals of Air Traffic Management	Introduces the manuals, procedures, maps, charts, and regulations used by air traffic controllers in the National Airspace System (NAS).	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 201 with C or better
ATC	331	Tower Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in ATC towers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 201 and ATC 230 with C or better
ATC	332	TRACON Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA TRACONS.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 201 and ATC 230 with C or better
ATC	333	En Route Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA ATC En Route Centers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 201 and ATC 230 with C or better
ATC	431	Tower Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: ATC 331 with C or better
ATC	432	TRACON Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: ATC 332 with C or better
ATC	433	En Route Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: ATC 333 with C or better
ATC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): minimum junior standing

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ATC	491	Air Traffic Management Capstone	Overview of problem solution tools, quality metrics, and current technology initiatives related to air traffic management and related industry problems in a project environment. Student projects focus on airport and airspace requirements. Student teams work with partners from industry, government, and academia to define project objectives and work toward a formal recommendation to help solve the specified problem. Class discussions focus on project management, organizational structures, strategic initiatives, strategy implementation and execution. Uses review and analysis of current industry problems and resolutions to provide examples of practical solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: ATC 331, 332 and 333 with C or better; Pre/Co-requisite: ATC 431, 432, 433 with C or better if completed
ATC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Ira A. Fulton Engineering	Aviation Programs	1-4		
ATE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
ATE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ATE	361	Architectural Technology I	Introduces load distribution on structures. Static analysis of determinant beams, trusses, arches, and rigid frames. Computer applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Corequisite(s): ADE 321
ATE	362	Building Structures II	Strength of materials. Stresses in beams and columns. Thermal effects on structures. Analysis, design, and detailing of wood structural systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: ATE 361 with C or better
ATE	451	Building Systems I	Principles of solar radiation, heat and moisture transfer, and environmental control systems as form influences. Energy-conscious design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Co-requisites: ADE 421
ATE	452	Building Systems II	Architectural design implications of heating, ventilation, and air conditioning systems. Principles of lighting, daylighting, and acoustics, and their applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: ATE 451 with C or better; Co-requisite: ADE 422
ATE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
ATE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ATE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
ATE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
ATE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ATE	521	Building Environmental Science	Scientific principles relating to comfort and environmental control. Heat and moisture transfer. Solar/natural energies for heating, cooling, and lighting.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	550	Passive Heating and Cooling	Theory, analysis, and application of passive and low-energy systems in order to maximize comfort and minimize energy consumption in buildings.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	553	Architectural Technology IV	Design and integration of building systems, including mechanical, electrical, plumbing, security, communications, fire protection, and transportation.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Master of Architecture student; Corequisite(s): ADE 521; ATE 563
ATE	556	Building Development	Comprehensive design development through the understanding and integration of building materials and systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Co-requisites: ADE 522 and APH 505
ATE	560	Building Energy Analysis	Computer simulation of building thermal behavior. Software review. Detailed study of selected simulation models using case study projects.	N	LAB	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student

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ATE	562	Experimental Evaluation	Instrumentation, measurement and computational techniques for analysis of building components, and assessment of thermal and luminous performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	563	Architectural Technology VI	Analysis, design, and detailing of steel buildings and frames. Lateral analysis of small rigid and braced frame systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Master of Architecture student
ATE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	582	Environmental Control Systems	Heating, ventilation, and air-conditioning systems. Loads, psychrometrics, refrigeration cycle, air/water distribution, controls, energy performance standards, and utility rates.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ATE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ATE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ATE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
AVC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AVC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AVC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AVC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
AVC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AVC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
AVC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
AVC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
BCH	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
BCH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
BCH	341	Physical Chemistry with a Biological Focus	Thermodynamics, equilibrium, states of matter, solutions and chemical kinetics with a focus on biological systems. For students in biochemical, premedical, biomedical and educational curricula.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 114 or 116 or 118 with C or better; CHM 231 or 233 or 333 with C or better; MAT 251 or 265 or 270 with C or better; PHY 101 or 112 or 131 with C or better; Credit is allowed for only BCH 341 or CHM 341
BCH	361	Advanced Principles of Biochemistry	Advanced consideration of the structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; principles and theory of the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. The course is recommended for pre-health students. No credit for Biochemistry majors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): CHM 231 with C or better OR Pre- or corequisite(s): CHM 234 or CHM 334 with C or better if completed

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BCH	361	Advanced Principles of Biochemistry	Advanced consideration of the structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; principles and theory of the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. The course is recommended for pre-health students. No credit for Biochemistry majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 231 with C or better OR Pre- or corequisite(s): CHM 234 or CHM 334 with C or better if completed
BCH	367	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	367	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	367	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisites: BIO 354 (or LSC 355); Pre- or Co-requisites: BCH 361 or LSC 366 (with C or better if completed)
BCH	371	Modern Concepts in Biochemistry	Detailed examination of the chemical structure, conformation, and function of proteins, carbohydrates, lipids, and nucleotides; analysis of the energetics, enzymes, and control of the metabolic pathways by which these molecules are degraded or synthesized.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: BIO 353; CHM 234; Credit is allowed for only BCH 371 or LSC 394 (Modern Concepts in Biochemistry)
BCH	372	Modern Concepts in Biochemistry Laboratory	Analyzes protein structure, purification, and function using spectroscopic, chromatographic, and electrophoretic methods.	N	LAB	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisite: BIO 354; Pre/Co-requisite: BCH 371; Credit is allowed for only BCH 372 or LSC 394 (Modern Concepts in Biochemistry Laboratory)
BCH	392	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects. May be repeated for total of 6 semester hours.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
BCH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
BCH	461	General Biochemistry	Structure, chemistry, and metabolism of biomolecules and their role in the biochemical processes of living organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 234 or CHM 334 with C or better; Corequisite(s): BCH 341 or CHM 341 or CHM 346 with C or better if completed
BCH	462	General Biochemistry	Continuation of BCH 461.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: BCH 461 with C or better
BCH	463	Biophysical Chemistry	Principles of physical chemistry as applied to biological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): BCH 341 or CHM 341 or CHM 346 with C or better
BCH	464	Biophysical Chemistry Laboratory	Introduces physical methods in modern biochemistry.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: BCH 467 with C or better; Pre/Co-requisite: BCH 463 with C or better if completed
BCH	465	Protein and Nucleic Acid Biochemistry	Structure and function of proteins and nucleic acids, including protein folding, enzymology, proteomics, DNA/RNA structure, replication, transcription, and genomics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: BCH 461 with C or better; Co-requisite: BCH 462
BCH	467	Analytical Biochemistry Laboratory	Quantitative analysis, separation and purification of biological molecules. Applies chemical and physical methods to the characterization of biological macromolecules.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	L	Pre/Co-requisite: BCH 462 with C or better if completed
BCH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		
BCH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-6		Prerequisite(s): Barrett Honors student
BCH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-6	L	Prerequisite(s): Barrett Honors student
BCH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
BCH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-7		
BCH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
BCH	501	Current Topics in Biochemistry		Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	520	Chemical Biology	Chemical biology, broadly defined, is the application of chemical tools toward the study biological problems. The purpose of this class is to provide the foundation for translational research involving cross-disciplinary approaches to tackling significant problems in the biosciences. This one-semester class will cover topics ranging from traditional molecular biology and biochemistry to state-of-the-art techniques in genomics and proteomics. Particular emphasis will be placed on modern concepts in enzymology. The class will be taught using a combination of current literature and text-based materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: Graduate students (degree and nondegree); Credit is allowed for only BCH or CHM 520
BCH	561	Advanced Topics in Biochemistry	Topics selected from emerging areas of biochemistry based primarily on current literature.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	564	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	568	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCS	101	Elementary Serbo-Croatian	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
BCS	102	Elementary Serbo-Croatian	See BCS 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
BCS	201	Intermediate Serbo-Croatian	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
BCS	202	Intermediate Serbo-Croatian	See BCS 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
BCS	311	Bosnian/Croatian/Serbian Composition and Conversation I	Develops writing ability and oral expression.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: BCS 202 with C or better; Credit is allowed for only BCS 311, 394 (Serbo-Croatian Conv & Comp I) or SLC 394 (Serbo-Croatian Comp/Conv)
BCS	312	Bosnian/Croatian/Serbian Composition and Conversation II	Develops writing ability and oral expression.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: BCS 311 with C or better; Credit is allowed for only BCS 312 or 394 (Bosnian/Croatian/Serbian Composition and Conversation II)
BCS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
BCS	495	Serbo-Croatian for Heritage Speakers	Generates professional proficiency by developing communicative and written competency in standard literary Serbo-Croatian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		

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BDE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, report, or publication. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	692	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BDE	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	701	Fundamentals of Biological Design I	Training in the essentials of fields underlying interdisciplinary research in the biosciences and in the integration of multiple disciplines in use-inspired research. Modules concentrate on key concepts and current questions in the biological sciences, physical sciences, and engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	9		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	702	Fundamentals of Biological Design II	Emphasizes the integrative areas of computational bioinformatics, systems biology, and synthetic biology, and their application in biomedical research.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	721	Integrative Research	Develops comprehensive solutions to societal problems by small interdisciplinary teams of students, including a proposal for research in an integrated science area. Covers issues of intellectual property, commercialization, societal impact and value, project management, product design, and historical examples of disruptive technological innovations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	722	Research Design	Writing and presentation of a research proposal in the form of a grant application, peer review sessions to provide feedback, examination of the grant review and funding process.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	751	Teaching in Science	Guidance in teaching and exposition through assisting a faculty teaching mentor in the Biological Design core course and training in oral presentation skills, including instruction in how to effectively present posters and seminars and participation in outreach experiences in the community.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	100	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	
BIO	100	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SQ	
BIO	100	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	
BIO	100M	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	0.25-4	SQ	

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BIO	112	Discovery: Why Sex?	"Why?" is a question that animates the youngest of children to the most seasoned of scientists. The acts of asking and answering "Why?" highlight the integrated nature of scientific knowledge and discovery. Demonstrates scientific disciplines are not walled cities in which knowledge is neatly segregated from lines of inquiry and knowledge in other disciplines. Instead, scientific concepts weave throughout and between disciplines and scientists increasingly rely on colleagues from different scientific fields to find answers to scientific questions. So our journey to find responses to the question "Why Sex?" takes us not just to biology, but also to earth science and to physics. Along the way, scientists are linked together not only through concepts that crosscut the disciplines, but also in their reliance upon key scientific skills such as the ability to observe, think critically, measure, gather data and communicate their findings.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Life Sciences	4	SG	Credit is allowed for only BIO 112 or BIO 194 (Discovery: Why Sex?)
BIO	113	Dinosaurs	Principles of evolution, ecology, behavior, anatomy and physiology using dinosaurs and other extinct life as case studies. Geological processes and the fossil record. Cannot be used for major credit in the biological sciences.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Credit is allowed for only BIO 113 or LSC 294 t 2 (Dinosaurs)
BIO	130	Introduction to Environmental Science	Introduces the interconnected nature of Earth's hydrosphere, lithosphere (soils and rocks), atmosphere, and biosphere.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	Credit is allowed for only BIO 130 or ABS 130
BIO	130M	Introduction to Environmental Science	Introduces the interconnected nature of Earth's hydrosphere, lithosphere (soils and rocks), atmosphere, and biosphere.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	0.25-4	SQ	
BIO	140	Greek and Latin Roots in Bioscientific Terminology	Introduces students to the ancient Greek and Latin root words most commonly used in biological, medical, and other scientific terminology, and gives practice identifying them in context. The knowledge of these root words enables students to memorize with greater ease and increased retention the bioscientific terminology they encounter in other coursework as well as in their medical or scientific profession.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
BIO	151	Biological Thinking	The science behind the science of life. Masters the core concepts of modern biology, understands the scientific discoveries that lie behind those concepts, and develops scientific reasoning skills so that students can contribute discoveries of their own.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SQ	Pre-requisite: Life Sciences student with a math placement score below 50; Credit is allowed for only BIO 100 or BIO 151
BIO	181	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	Credit is allowed for only BIO 181 or BIO 281 or BIO 282
BIO	181	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SQ	Credit is allowed for only BIO 181 or BIO 281 or BIO 282
BIO	181	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	Credit is allowed for only BIO 181 or BIO 281 or BIO 282
BIO	182	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SG	Credit is allowed for only BIO 182, 281, or 282
BIO	182	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SG	Credit is allowed for only BIO 182, 281, or 282
BIO	182	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Credit is allowed for only BIO 182, 281, or 282
BIO	189	Life Sciences Career Paths	Overview of modern life sciences, including research trends, extracurricular opportunities, degree programs, and potential careers.	N	REC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): Freshmen School of Life Sciences majors
BIO	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
BIO	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	201	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SG	
BIO	201	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SG	

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BIO	201	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	
BIO	201M	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	0.25-4	SG	
BIO	202	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SG	Pre-requisites: BIO 201 with C or better
BIO	202	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SG	Pre-requisites: BIO 201 with C or better
BIO	202	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Pre-requisites: BIO 201 with C or better
BIO	281	Conceptual Approaches to Biology for Majors I	Covers the themes and concepts that underlie the molecular biology of cells and multicellular organisms as well as the biological processes that shape the diversity of organisms on our planet.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SQ	Prerequisite(s): School of Life Sciences student; Pre- or corequisite(s): STP 226 (or 231) with C or better if completed. Credit is allowed for only BIO 181, 182 or 281
BIO	282	Conceptual Approaches to Biology for Majors II	Builds upon established conceptual foundations, covers the themes and concepts underlying organismal biology, with an emphasis on physiology and ecology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): School of Life Sciences student; BIO 281 with C or better; Credit is allowed for only BIO 181 or BIO 182 or BIO 282
BIO	289	School of Life Sciences Undergraduate Research Apprentice	Students gain exposure to contemporary issues in research excellence, mentoring skills, and professional development in this seminar. Enriches individual lab research experiences students by bringing them together in a peer-community environment. Introduces students to the resources they have at their disposal (e.g. on campus, online) to facilitate research productivity and career planning. Rigorously evaluates their research processes and products, in light of their eventual professional plans.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1		Co-requisite: BIO 310, or BIO 494 (Advanced Study Practicum), or BIO/HPS/MBB/MIC/PLB 484/492/493/495/496/499, or MIC 401
BIO	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	300	Natural History of Arizona	Plant and animal communities of Arizona. Cannot be used for major credit in the biological sciences. Both BIO 300 and BIO 301 must be taken to secure SG General Studies credit	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SG	
BIO	301	Field Natural History	Organisms and their natural environment. Cannot be used for major credit in the biological sciences. Both BIO 300 and BIO 301 must be taken to secure SQ General Studies credit	N	PRA	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SG	Pre/Co-requisites: BIO 300 or LSC 310 with C or better if completed
BIO	302	Cancer--Mother of All Diseases	History of cancer; disease statistics; pathogenesis; diagnosis, treatment and prevention; case studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Prerequisite(s): BIO 181 and 182 (or BIO 282) with C or better
BIO	305	Biology Behind the Crime Scene	Explores biological technology behind forensic techniques like fingerprinting, Polymerase Chain Reaction (PCR), and paternity testing.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Pre-requisites: Minimum Sophomore standing
BIO	306	Modes of Biological Thought	Involves students in the process of biological discovery to examine how we identify truth in biological science.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Pre-requisites: ENG101 or ENG 105 with C or better; BIO181 (or BIO188) and BIO182 (or BIO187) with C or better
BIO	307	Dinosaurs	Principles of evolution, ecology, behavior, anatomy, and physiology using dinosaurs and other extinct life as case studies. Geological processes and the fossil record. Weekend field trip required. Cannot be used for major credit in the biological sciences.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisite: Minimum sophomore standing; Credit is allowed for only BIO 307 or LSC 294 (Dinosaurs)
BIO	310	Special Problems and Techniques	Qualified undergraduates may investigate a specific biological problem under the direction of a faculty member.	N	IND	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO	311	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 188 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 311 or HPS 340

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BIO	312	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only BIO 312, IAS 340, or PHI 320
BIO	314	Research Colloquium in Biology and Society I	Develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2	L	Pre-requisites: BS Biology and Society Concentration majors; BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	315	Science, Values, and the Public	Examines science, communication, and a range of public opinion to understand science as a discourse of profound social power.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite: ENG 102, 105, or 108 with C or better. Minimum 35 hours. Credit is allowed for only ENG 370 or BIO 315
BIO	316	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	H	Credit is allowed for only BIO 316 or HPS 330
BIO	318	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H	Credit is allowed for only BIO 318 or HPS 331
BIO	319	Environmental Science (Nonmajor)	Environmental and biological concepts applied to ecological systems with specific focus on analysis of problems caused by humans. Cannot be used for major credit in the Biological Sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	G	Pre-requisite: Junior class standing; Credit is allowed for only BIO 319 or PLB 320
BIO	320	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 or 118 with C or better
BIO	320	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 or 118 with C or better
BIO	320	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 or 118 with C or better
BIO	321	Introductory Ecology Laboratory	Lab and field observations and experiments to test current concepts and theories in ecology.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 320 with C or better if completed
BIO	322	Conservation of Biodiversity	Species-level approaches to the protection, management, and restoration of biological resources from scientific and policy perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	323	Ecosystem Restoration and Management	Ecosystem-level approaches to the protection, management, and restoration of biota and ecosystem processes from local to global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	324	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU	Credit is allowed for only BIO 324 or PHI 310
BIO	325	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s) with C or better: BIO 100 (or BIO 182 or 282 or GLG 101 or SES 121); CHM 101 (or CHM 113 or 114). Credit is allowed for only BIO 325 or CHM 385 or GLG 325

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BIO	327	Evolution of Human Behavior	Examines how evolutionary theory informs our understanding of human behavior, psychology and culture. Explores evolutionary explanations of human behavioral variation and cultural diversity and the influence of natural selection on shaping human cognition. Topics include nepotism, economic decisions, behavioral strategies throughout the life course, mate choice and sexual behavior, perception and judgment, motivation and emotions, social learning and culture, cooperation and prosociality, interpersonal violence and warfare, and norms and moral sentiments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s) with C or better: ASM 104 (or BIO 181 or 282). Credit is allowed for only ASM 342 or BIO 327
BIO	331	Animal Behavior	Theories of evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO or LSC 331
BIO	331	Animal Behavior	Theories of evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO or LSC 331
BIO	340	General Genetics	Science of heredity and variation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisites with C or better: BIO 181 and 182 (or both PLB 200 and 201) OR BIO 181 (or BIO 281 or MBB 245) and MBB 247 OR BIO 281 and 282; non-Molecular Biosciences and Biotechnology majors only. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
BIO	340	General Genetics	Science of heredity and variation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisites with C or better: BIO 181 and 182 (or both PLB 200 and 201) OR BIO 181 (or BIO 281 or MBB 245) and MBB 247 OR BIO 281 and 282; non-Molecular Biosciences and Biotechnology majors only. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
BIO	340	General Genetics	Science of heredity and variation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisites with C or better: BIO 181 and 182 (or both PLB 200 and 201) OR BIO 181 (or BIO 281 or MBB 245) and MBB 247 OR BIO 281 and 282; non-Molecular Biosciences and Biotechnology majors only. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
BIO	342	General Genetics Laboratory	Explores general principles of inheritance with special reference to Mendelian, molecular, and computational genetics via lab experiments.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 340 (with C or better if completed)
BIO	343	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	L	Pre-requisite: MBB 347 or BIO 340 with C or better; Credit is allowed for only BIO or MBB 343
BIO	344	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
BIO	345	Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better; CHM 113 or 114 with C or better
BIO	345	Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better; CHM 113 or 114 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
BIO	345	Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better; CHM 113 or 114 with C or better
BIO	346	The Darwinian Revolution	Intellectual and cultural history of Darwinism and modern evolutionary theory and their impact on 19th- and 20th-century thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
BIO	347	Science and Social Change	Modern science and technology are rapidly and radically transforming our society in innumerable ways, from how we process food to altering the very core of what it means to be human. Explores historical, philosophical, sociological, ethical, economic and political topics and consequences of modern science in society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Credit is allowed for only BIO 347, BIO 394 (Science and Society) or HPS 347
BIO	349	MolecularGenetics:GenesProtein	Emphasizes molecular and cell biology and gene technology, both at the basic and applied research levels, in the growing areas of biotechnology and the molecular biosciences; focuses on molecular processes that allow genetic information to be expressed and regulated and by introducing applications to real-world situations.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 282 (or BIO 181 and 182); CHM 116. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
BIO	351	Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better
BIO	351	Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better
BIO	352	Laboratory in Vertebrate Developmental Anatomy	Morphology of representative embryonic and adult vertebrates.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; Pre/Co-requisite: BIO 351 with C or better
BIO	353	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 181 and 182 (or PLB 200) with C or better OR BIO 281 and 282 with C or better OR MBB 245 and 247 with C or better; CHM 116 or 118 with C or better
BIO	353	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 and 182 (or PLB 200) with C or better OR BIO 281 and 282 with C or better OR MBB 245 and 247 with C or better; CHM 116 or 118 with C or better
BIO	353	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181 and 182 (or PLB 200) with C or better OR BIO 281 and 282 with C or better OR MBB 245 and 247 with C or better; CHM 116 or 118 with C or better
BIO	354	Cell Biology Laboratory	Investigational lab using modern molecular and cellular techniques to analyze molecular, biochemical, and anatomical traits of cells.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre/Co-requisite: LSC 353 or BIO 353 (with C or better if completed)
BIO	355	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 or STP 231, or STP 226 with C or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
BIO	360	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; CHM 116 or CHM 118 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
BIO	360	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; CHM 116 or CHM 118 with C or better
BIO	360	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; CHM 116 or CHM 118 with C or better
BIO	361	Animal Physiology Laboratory	Experimental lab studies of physiological mechanisms in animals and model systems.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 360 (with C or better if completed)
BIO	370	Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s) with C or better: BIO 181 and 182 OR BIO 281 and 282
BIO	370	Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisite(s) with C or better: BIO 181 and 182 OR BIO 281 and 282
BIO	385	Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	385	Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	386	General Entomology	Specialized focus on form, activities, and classification of insects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	389	School of Life Sciences Undergraduate Researcher	While performing undergraduate research at ASU, students gain exposure to contemporary issues in research excellence, mentoring skills, and professional development. Goals include: enriching individual lab research experiences of each student by bringing them together in a peer-community environment; introducing students to the resources they have at their disposal (e.g., on campus, online) to facilitate research productivity and career planning; rigorously evaluating their research processes and products, in light of their eventual professional plans.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): School of Life Sciences majors; 3.00 GPA
BIO	390	Medical/Dental Field Placement	Field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
BIO	393	Careers in Natural and Health Sciences	This seminar course is designed to provide students with proficiency in analyzing career options and to help students explore the full range of careers that are open to those who major at the undergraduate level in the natural sciences. The course will include short presentations by professionals in a variety of fields, including environmental biology, biotechnology, business, education, and various health sciences. There will be ample opportunities for questions and personal interactions.	N	LEC	N	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisites: BIO 188 or BIO 182; Minimum 45 hours
BIO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	406	Computer Applications in Biology	Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 406 or PLB 432
BIO	410	Techniques in Conservation Biology and Ecology	Lecture, field, and laboratory experience in techniques used in conservation biology and ecology. Course is modular, with each module instructed by a discipline-specific expert (e.g., plant ecologist, mammal conservationist, soil ecologist).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisites: ENG 101 (or 105 or 107); BIO 320; BIO 322 or BIO 323 with C or better
BIO	410	Techniques in Conservation Biology and Ecology	Lecture, field, and laboratory experience in techniques used in conservation biology and ecology. Course is modular, with each module instructed by a discipline-specific expert (e.g., plant ecologist, mammal conservationist, soil ecologist).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Pre-requisites: ENG 101 (or 105 or 107); BIO 320; BIO 322 or BIO 323 with C or better

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BIO	411	Quantitative Methods in Conservation and Ecology	Quantitative methods in conservation ecology; develop mathematical models of ecological and natural resource systems and use the models to better understand and inform management of ecosystems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 320 or 322 with C or better; BIO 415 or STP 226 or STP 231 with C or better; MAT 210, 251, 265, or 270 with C or better
BIO	412	Conservation in Practice	Global biodiversity patterns, processes, and conservation; global environmental change; sustainable use of natural resources; emphasizing international approaches to conservation biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 322 and BIO 323 with C or better
BIO	412	Conservation in Practice	Global biodiversity patterns, processes, and conservation; global environmental change; sustainable use of natural resources; emphasizing international approaches to conservation biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 322 and BIO 323 with C or better
BIO	414	Research Colloquium in Biology and Society II	Further develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1	L	Pre-requisites: BIO 314 with C or better
BIO	415	Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better, or a 200 level statistics course (STP 226, or 231) with C or better
BIO	415	Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better, or a 200 level statistics course (STP 226, or 231) with C or better
BIO	416	Biomedical Research Ethics	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only for BIO 416 or HPS 410
BIO	417	Experimental Design	Fixed, random, mixed models; crossed and nested factorial designs; balanced and unbalanced data; completely randomized, blocked, repeated measure designs; ANCOVA.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 415 with C or better
BIO	418	Soil Ecology	Soils viewed in an ecosystem context, soil-plant relationships, nutrient budgets, and abiotic factors that influence soil processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: ABS 370 or BIO 320. Credit is allowed for only ABS 434 or BIO 418
BIO	419	Physiological Plant Ecology	Physiological and morphological responses and adaptations of plants to their environment, emphasizing mechanisms that influence carbon and water balance, growth, and population distributions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 320 or PLB 308 with C or better; Credit is allowed for only PLB 419, 519, BIO 419 or 519
BIO	420	Immunology: Molecular and Cellular Foundations	Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 353, BIO 360 or MIC 220 with C or better
BIO	421	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 320 with C or better. Credit is allowed for only BIO 421 or BIO 521 or SOS 421 or SOS 521
BIO	422	Ecosystem Ecology	Explores the structure, development and dynamics of ecosystems, with a focus on the exchange of energy and materials between the atmosphere, soils, water, biosphere, and anthro-sphere.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 320 with C or better. Credit is allowed for only BIO 422 or BIO 494 (Ecosystem Ecology)
BIO	422	Ecosystem Ecology	Explores the structure, development and dynamics of ecosystems, with a focus on the exchange of energy and materials between the atmosphere, soils, water, biosphere, and anthro-sphere.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 320 with C or better. Credit is allowed for only BIO 422 or BIO 494 (Ecosystem Ecology)
BIO	423	Population and Community Ecology	Organization and dynamics of population and communities. Theoretical and empirical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO	423	Population and Community Ecology	Organization and dynamics of population and communities. Theoretical and empirical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO	424	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only ASM, BIO or SOS 424

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BIO	425	Marine Conservation Ecology	Marine conservation biology is increasingly important for society, as evidenced by frequent media coverage and the recent report by the U.S. Commission on Ocean Policy. Expect exposure to multiple perspectives on important conservation issues in the marine environment and gain valuable experience in critical thinking, communication skills, and the use of science in effective debate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181,182 with C or better OR BIO 281, 282 with C or better. Credit is allowed for only BIO 425 or BIO 494 (Marine Ecology and Conservation)
BIO	426	Limnology	Structure and function of aquatic ecosystems, with emphasis on freshwater lakes and streams.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3-4	L	Pre-requisites: BIO 320 with C or better
BIO	426	Limnology	Structure and function of aquatic ecosystems, with emphasis on freshwater lakes and streams.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3-4	L	Pre-requisites: BIO 320 with C or better
BIO	427	Fire	A survey of fire on Earth--history, ecology, behavior, and management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	H	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	428	Biogeography	Environmental and historical processes determining distributional patterns of animals and plants, emphasizing terrestrial life.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisites: BIO 320 with C or better
BIO	429	Human Impacts on Ecosystem Functioning	Explores our current understanding of how humans are impacting the functioning of ecosystems and how changes in ecosystems would affect provisioning of ecosystem services and ultimately human well-being. The two primary drivers of ecosystem change are growth of the human population and increased consumption per capita. These drivers affect the Earth's cycles of carbon, nitrogen and water, as well as regional and global-scale changes in biodiversity and climate. Includes an in-depth discussion of scenarios for the next 50 and 100 years, which articulate costs and benefits of alternative development pathways in terms of climate change, food production, clean water and biodiversity. Scenarios of change in biodiversity lead to the topic of the consequences of biodiversity change for the functioning of ecosystems from the point of view of their productivity and stability. Human activities have disrupted several biogeochemical cycles including nitrogen and carbon cycles.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 320 (or SOS 326); Credit is allowed for only BIO 429, BIO 528, SOS 429, SOS 528, or SOS 494/598 (Human Impacts on Ecosystem Functioning), or BIO 494/598 (Human Impacts on Ecosystem Functioning)
BIO	431	Genes, Development, and Evolution	Contribution of genes, developmental processes, and evolution to pattern of phenotypic variation, including disease.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisites: BIO 181 (or BIO 188); BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	431	Genes, Development, and Evolution	Contribution of genes, developmental processes, and evolution to pattern of phenotypic variation, including disease.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Pre-requisites: BIO 181 (or BIO 188); BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	434	People and Nature: Ecosystem Services	Explores the drivers of biodiversity change and the consequences they have for human wellbeing, taking both an ecological and an economic perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: MAT 117 or higher or SOS 101; junior standing. Credit is allowed for only BIO 434, SOS 434, or BIO 494 (Ecosys Servcs:People&Nature)
BIO	435	Research Techniques in Animal Behavior	Experimental and field studies of animal behavior; description and quantification of animal behavior and interpretation of behavior within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 331 with C or better
BIO	436	Sociobiology and Behavioral Ecology	Surveys animal and human social behavior examined from ecological and evolutionary perspectives using theoretical and empirical constructs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 331 with C or better
BIO	437	Comparative Biomechanics and Motor Control	Guides students to critically evaluate how the physical and mechanical properties of organisms and their environment affect biological tissues, structures, and motor control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 with C or better; MAT 170 and PHY 111 with C or better; Credit is allowed for only BIO 437, 537, KIN 437, 537, KIN 494 (Comparative Biomechanics and Motor Control) or 598 (Comparative Biomechanics and Motor Control)
BIO	440	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better; Credit is allowed for only BIO 440 or CBS 540 or MBB 440 or MCB 540

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BIO	443	Applied Molecular Genetics and Genomics	Nature and function of the gene; emphasizes the molecular genetic disease states; molecular biology; regulation of gene expression; genomics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: LSC 347 with C or better; CHM 233 or 331 with C or better; CHM 237 or 335 with C or better
BIO	446	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Prerequisite(s): ASM 301 or BIO 340 or LSC 347 or MBB 347 with C or better; Credit is allowed for only ASM 446 or ASM 546 or BIO 446 or BIO 546
BIO	450	Advanced Developmental Biology	Current concepts and experimental methods involving differentiation and biosynthetic activities of cells and organisms, with examples from microorganisms, plants, and animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 351 with C or better
BIO	451	Cell Biotechnology Laboratory	Mammalian cell culture techniques, including mouse embryonic stem cells, the use of bioreactors, cell fractionation, and digital video imaging.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 353 (or MBB 245) with C or better
BIO	453	Animal Histology	Microscopic study of animal tissues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 201 or MIC 220 or BIO 353 or BIO 360 with C or better
BIO	453	Animal Histology	Microscopic study of animal tissues.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 201 or MIC 220 or BIO 353 or BIO 360 with C or better
BIO	455	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Credit is allowed for only BMI 465 or BIO 455
BIO	456	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better; Credit is allowed for only BMI 466 or BIO 456
BIO	461	Comparative Animal Physiology	A comparative approach to understanding the function of animal physiological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 360 with C or better
BIO	462	Endocrine Physiology	Mechanisms of action of hormones; endocrine control of homeostasis, growth, stress responses, and reproduction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 360 with C or better
BIO	464	Photobiology	Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 464 or PLB 440
BIO	465	Neurophysiology	Detailed treatment of cellular and organismal neurophysiology and nervous system function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 360 with C or better
BIO	467	Neurobiology	Introduces major areas of neurobiology, from fundamental cellular and molecular processes through systems neuroscience and neural bases of behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 360 with C or better
BIO	469	Computational Neuroscience: Case Studies in Neuroethology	Introduces the use of computational methods for understanding neural function at the cellular, circuit, and systems levels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 360 with C or better
BIO	471	Ornithology	Biology of birds.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 181 (or BIO 188) and 182 (or BIO 187) OR BIO 281 and 282 with C or better
BIO	471	Ornithology	Biology of birds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and 182 (or BIO 187) OR BIO 281 and 282 with C or better
BIO	471	Ornithology	Biology of birds.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and 182 (or BIO 187) OR BIO 281 and 282 with C or better
BIO	472	Mammalogy	Classification, structure, habits, ecology, and distribution of mammals, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	473	Ichthyology	Systematics and biology of recent and extinct fishes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better

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BIO	474	Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	474	Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	480	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	480	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	480	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	482	Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: BIO 480 with C or better
BIO	482	Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 480 with C or better
BIO	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	489	School of Life Sciences Undergraduate Research Fellow	While performing undergraduate research at ASU, students gain exposure to contemporary issues in research excellence, mentoring skills, and professional development. Goals include: enriching individual lab research experiences of each student by bringing them together in a peer-community environment; introducing students to the resources they have at their disposal (e.g., on campus, online) to facilitate research productivity and career planning; rigorously evaluating their research processes and products, in light of their eventual professional plans.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): School of Life Sciences majors; 3.50 GPA
BIO	490	Surgical Field Placement	Advanced field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 390 with C or better
BIO	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
BIO	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
BIO	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
BIO	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
BIO	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
BIO	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		Pre-requisite: Junior or senior standing
BIO	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Junior or Senior standing; Credit is allowed for only BIO, MIC, MBB, HPS or PLB 496
BIO	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
BIO	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		

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BIO	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
BIO	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	502	Transmission Electron Microscopy	Theory, use, and methods of preparing biological materials for transmission electron microscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Pre/Co-requisites: BIO 504
BIO	503	Bioimaging Lab	Provides a fundamental understanding of light-based microscopy through the training and use of instruments contained within the SOLS Keck Bioimaging laboratory. Examines the use of bright field, contrast, epi-fluorescent, total internal reflective fluorescence (TIRF), confocal, multiphoton and atomic force microscopy and how they are applied to various research applications. Additional focus given toward image ethics, analysis, and presentation using programs such as Adobe Photoshop and ImageJ. During the second half of the semester, students propose and develop an experimental project, based on their graduate research, in which they collect data, do analysis, and prepare results for a final project presentation.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 504, MCB 504, or BIO 598 Special Topic: Bioimaging Current Techniques; Credit is allowed for only BIO or MCB 503
BIO	504	Bioimaging	Lecture survey of modern techniques for imaging tissues, cells, and macromolecules, including light microscopy (e.g. video, fluorescence, confocal, multiphoton, single molecule), electron microscopy (e.g. transmission, scanning, cryogenic, tomographic) and ancillary techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO or MCB 504
BIO	506	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6		Pre-requisites: Graduate student; Credit is allowed for only ASM, BIO or MCB 506
BIO	515	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 515 or GLG 547 or HSD 515 or PAF 547 or SOS 516
BIO	516	Foundations of Bioethics	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	517	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
BIO	518	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 518 or HPS or HST 516
BIO	519	Physiological Plant Ecology	Physiological and morphological responses and adaptations of plants to their environment, emphasizing mechanisms that influence carbon and water balance, growth, and population distributions	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 519, PLB 419 or PLB 519

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BIO	521	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 421 or BIO 521 or SOS 421 or SOS 521
BIO	522	Populations: Evolutionary Ecology	Principles of population biology and community ecology within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	527	Environmental Ethics and Policy Goals	Advanced seminar in applied environmental ethics, focusing on the most influential and policy-relevant approaches in the field of environmental ethics. Core topics include the historical and philosophical foundations of alternative understandings of environmental responsibility; the debate over utility and preservation in environmental policy argument; and the interplay of ethical principles, scientific knowledge and societal priorities in environmental decision making. Consideration of the ethical and value dimensions of biodiversity conservation, wilderness protection, environmental valuation, environmental activism, climate change and sustainability, among other challenges.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BIO 527 or SOS 527 or BIO 591 (Environ Ethics & Policy Goals)
BIO	528	Human Impacts on Ecosystem Functioning	Explores our current understanding of how humans are impacting the functioning of ecosystems and how changes in ecosystems would affect provisioning of ecosystem services and ultimately human well-being. The two primary drivers of ecosystem change are growth of the human population and increased consumption per capita. These drivers affect the Earth's cycles of carbon, nitrogen and water, as well as regional and global-scale changes in biodiversity and climate. Includes an in-depth discussion of scenarios for the next 50 and 100 years, which articulate costs and benefits of alternative development pathways in terms of climate change, food production, clean water and biodiversity. Scenarios of change in biodiversity lead to the topic of the consequences of biodiversity change for the functioning of ecosystems from the point of view of their productivity and stability. Human activities have disrupted several biogeochemical cycles including nitrogen and carbon cycles.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only BIO 429, BIO 528, SOS 429, SOS 528, or SOS 494/598 (Human Impacts on Ecosystem Functioning), or BIO 494/598 (Human Impacts on Ecosystem Functioning)
BIO	530	Scientific Teaching	Guides graduate students to better understand issues related to undergraduate learning in science courses, and prepares students to become more effective teachers. Topics focus on emerging research that supports active and student-centered learning activities as well as methods that include the 5Es, concept-mapping, and "backward" design. Students reflect on their own teaching philosophy, and begin building an ePortfolio documenting and validating their ability to teach effectively.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 530 or 591 (Scientific Teaching)
BIO	531	Advanced Scientific Teaching	Further develops the teaching abilities of graduate students by applying knowledge into the more advanced teaching activities including large class sizes, diverse student populations, online delivery, and technology-integrated teaching. Students have more in-depth practice fully developing lesson plans, assessments and other teaching activities based on the concepts of evidence-based teaching.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 531 or BIO 594 (Advanced Scientific Teaching)
BIO	532	Recent Papers in Discipline-Based Education Research	Discipline-based education research is a newly emerging scholarly field that combines the knowledge of teaching and learning with the deep knowledge of discipline-specific science content. Currently, discipline-based education research is being used to transform the way we teach undergraduate science courses. Readings in recent papers in the field of discipline-based education research, spanning the disciplines of physics, chemistry, geosciences and biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	537	Comparative Biomechanics and Motor Control	Guides students to critically evaluate how the physical and mechanical properties of organisms and their environment affect biological tissues, structures, and motor control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Credit is allowed for only BIO 437, 537, KIN 437, 537, KIN 494 (Comparative Biomechanics and Motor Control) or 598 (Comparative Biomechanics and Motor Control)
BIO	543	Molecular Genetics	Nature and function of the gene; emphasizes the molecular basis of inheritance and gene expression in prokaryotes and eucaryotes. Knowledge of general genetics recommended before registering for this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	545	Populations: Evolutionary Genetics	Mathematical models in the description and analysis of the genetics of populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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BIO	546	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 446, 546, BIO 446 or 546
BIO	549	Phylogenetic Biology and Analysis	Basic theory and general concepts of phylogenetic inference as well as practical, hands-on experience with many of the commonly used methods for inferring and interpreting phylogenetic trees.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	552	Developmental Genetics	Genetic approaches to the analysis of development during the life cycle of eukaryotic organisms, and the role of genes in the unfolding of the differentiated phenotype.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	560	Ecological Modeling	Mathematical modeling of animal populations, food-web structural and ecological processes in space and time. May use modeling tools on computer clusters.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ABS, BIO 560 or MAT 561
BIO	564	Cellular Physiology and Signaling	Emphasizes the molecular basis for cell structure, function and intercellular signaling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	568	Stress and the Brain	Covers the fundamentals of stress and brain interactions. Presents a foundation from a historical perspective, then the basics of an organism's stress response, including the activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis. The stress response is highly conserved and allows organisms to respond and adapt to their environment. A highly effective and robust stress response facilitates adaptation and behavioral flexibility. However, a maladaptive stress response can produce detrimental outcomes. The ultimate goal is to understand the dynamic and reciprocal processes by which the stress response and brain interact to produce behavioral flexibility and resilience or detrimental outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	570	Fundamentals of CAS Science	Many phenomena of critical relevance to human society are dynamic systems that change over individual and evolutionary time scales, and are highly interactive, both within and between systems. That is, they are complex adaptive systems (CAS), and thus share isomorphic properties like near-decomposability, hierarchical organization, scale-free networks, self-organized criticality, and emergence. Fundamentals of CAS science explores the diverse, interdisciplinary applications of a complex adaptive systems across the social, behavioral, and life sciences.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM, BIO, or SOS 570
BIO	578	Environmental Leadership and Communication	America remains inactive about the ramifications of critical societal challenges such as climate change, environmental hazards and living sustainably, and less than 2% of Congress has any professional background in science. Environmental issues are no longer local and solutions cannot remain provincial. Scientists must become envoys of knowledge that is global; science is now part of an unavoidable and contentious public discussion on these issues, and we need it to catalyze solutions. Increasingly, scientists who are communicators are moving into positions of leadership, engaging with society and changing their academic institutions from within. This seminar provides leadership training and important skills for early career scientists to communicate science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student, Credit is allowed for only BIO 578 or BIO 591 (Environmental Leadership and Communication)
BIO	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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BIO	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	600	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	610	Introduction to Responsible Conduct of Research (RCR) in Life Sciences	Introduces ethical and regulatory issues in the nine core areas of responsible conduct of research. Discusses real and hypothetical cases that tie broad ethical considerations to current concern of scientists.	N	REC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	611	Current Topics in Responsible Conduct of Research (RCR) in Life Sciences	Explores a single topic in the responsible conduct of research in depth. Topic changes depending on current issues in responsible conduct of research as well as the interests of the instructor and students. Possible topics include: responsible authorship; conflicts of interest; human subjects research; and misconduct, data management, and academic integrity.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	614	Biometry	Fundamental concepts of statistics and how to apply a range of standard statistical tools to the analysis of biological data. Uses the software applications SPSS and R to carry out these tests, and how to identify the particular situations in which each test is appropriate. Topics include: basic probability, descriptive statistics, estimation, hypothesis testing, t-tests, analysis of variance, regression, correlation, chi-square analysis, randomization tests, and nonparametric statistics	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	615	Biology and Society Lab	This course brings together graduate students, postdocs, and faculty members in biology and society. Sessions include panel discussions of biology and society topics from multiple perspectives, student-led discussions of important literature, practice presentations of papers for national meetings, discussion of dissertation and thesis ideas, and other activities that help to forge an active intellectual lab group.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	620	Research Prospectus Writing	Workshop-style course where students develop and peer review graduate-level project prospectuses, such as those for NSF grant proposals, journal articles, theses, and dissertations. Appropriate for graduate students in Biology and Society, History and Philosophy of Science, the life sciences, and related programs.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO or HPS 620
BIO	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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BIO	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
BIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
BIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
BIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
BIS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
BIS	300	Theories and Applications of Organizational Studies	Critical analysis and application of organizational theory and conceptual perspectives to identify and solve problems, emphasizing personal and organizational application.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or SB	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum sophomore standing
BIS	301	Foundations of Interdisciplinary Studies	Introduces concepts and methods of interdisciplinary study by critically examining anticipated 21st-century workplace and civic trends.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): Interdisciplinary Studies major; minimum 2.00 GPA; ENG 102 or 105 or 108 with C or better; activation of BIS eligibility student group by a BIS advisor; one course meeting General Studies MA requirement
BIS	302	Interdisciplinary Inquiry	Explores interdisciplinarity and integration as applied to various approaches of human inquiry.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): Interdisciplinary Studies major; minimum 2.00 GPA; BIS 301 with C or better; ENG 102 or 105 or 108 with C or better; one course meeting General Studies MA requirement
BIS	340	Organizational Skills	Develops and enhances skills needed in effective organizations such as communication and the use of technology.	Y	LEC	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum junior standing or minimum 56 hours
BIS	343	Social Processes in Organizations	Examines the interdisciplinary nature of social processes and human interactions across a number of different organizational contexts.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or SB	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum junior standing or minimum 56 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BIS	345	Organizational Ethics	Explores and considers normative and applied ethics within a variety of organizations.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum junior standing or minimum 56 hours
BIS	350	Diversity and Organizations	Critical interdisciplinary analysis of individual, cultural, and organizational diversity.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L & C	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 56 hours. Credit is allowed for only BIS 350 or OGL 350
BIS	353	Interdisciplinary Leadership	Offers interdisciplinary perspectives on the theory and practice of leadership in a range of organizational environments	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum junior standing
BIS	355	Peace Corps Seminar	The Peace Corps: its mission, history, concerns and application process.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 45 hours
BIS	357	Assessment in Organizations	Considers the role and function of assessment in effective organizations. Provides the knowledge and tools required to identify, collect and analyze information to assess organizations.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): MAT 117 (or any course with General Studies MA designation); minimum junior standing or minimum 56 hours
BIS	360	Organizational Contexts	Explores how organizations function by analyzing in depth a specific organizational context like health care, family, education, government, community, religion or the economy.	Y	LEC	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum junior standing or minimum 56 hours
BIS	370	Dimensions of Liberal Studies	Critical analysis and application of concepts of liberal studies and its modes of inquiry. Prerequisite: BLS student; sophomore status; completion of first-year composition.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Pre-requisites: BLS student; Sophomore status; ENG 102, 105 or 108 with C or better
BIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
BIS	401	Applied Interdisciplinary Studies	Applies interdisciplinary problem-solving skills in internships, service-learning, or research; may involve individual or group projects combining both concentrations.	N	RSC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	402	Senior Seminar	Capstone course helps integrate classroom and experiential learning. Students choose among course topics that address their interests.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): Interdisciplinary Studies major; minimum 2.0 GPA; BIS 302 with C or better
BIS	470	Liberal Studies Seminar	Advanced analysis and application of theories and methods of human and social inquiry.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Pre-requisites: BLS student; BIS 370 with C or better; Senior status; ENG 102, 105 or 108 with C or better
BIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
BIS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	OP4	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
BIS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
BIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
BIS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
BIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7		
BIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
BLE	220	Foundations of Structured English Immersion	Examines current educational practices and historical legal issues. Prepares teacher candidates with a provisional Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): non-Educational Studies BAE major

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BLE	221	Theories for Acquiring and Learning Languages	Languages are tools people use and learn to use for a variety of purposes. While nearly all people naturally acquire at least one language in their lifetime, the construct of bilingualism or multilingualism can occur as either an elective or a forced process. The context or the decision that leads to second or multiple language learning can have profound effects on the way and the extent to which those languages are learned. Examines the variables affecting both language acquisition and language learning as well as some methods to better facilitate these processes.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): non-Teacher Preparation student
BLE	322	Reading Methods in BLE/ESL Settings	Instructional/assessment strategies, including systematic, research-based phonics, vocabulary, comprehension, spelling, writing, phonemic writing in Spanish/English.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	324	Social Studies for Diverse Language Classrooms	Social studies education standards, curriculum, and instructional strategies for English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	335	Language Diversity in Classrooms	Issues in sociolinguistics and language variation in schools with a focus on classroom interaction, instruction, curriculum, assessment, and language policy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	Prerequisite(s): admission to the Professional Program
BLE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
BLE	396	Clinical Experience I	Applies course content in BLE/ESL elementary education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Prerequisite(s): admission to the Professional Program
BLE	397	Clinical Experience II	Applies course content in BLE/ESL elementary education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Prerequisite(s): admission to the Professional Program
BLE	400	Principles of Language Minority Education	Overview of philosophical and theoretical foundations of bilingual education and ESL models of instruction. Other topics include significant legislative and judicial measures.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	404	Instructional Design for Culturally and Linguistically Diverse Students	Provides a foundation in instructional design to meet the academic and linguistic needs of culturally and linguistically diverse students, with a focus on English language learners.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only BLE 404 or ELL 504 or SPE 404
BLE	407	SEI for Secondary Students	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the 7-12 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	408	SEI for Linguistically Diverse Learners	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the K-8 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	411	Science Curriculum, Instruction and Assessment in BLE/ESL Settings	Methods, management strategies, and assessment procedures for teaching science to BLE/ESL students in elementary schools.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	411	Science Curriculum, Instruction and Assessment in BLE/ESL Settings	Methods, management strategies, and assessment procedures for teaching science to BLE/ESL students in elementary schools.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	411	Science Curriculum, Instruction and Assessment in BLE/ESL Settings	Methods, management strategies, and assessment procedures for teaching science to BLE/ESL students in elementary schools.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	411	Science Curriculum, Instruction and Assessment in BLE/ESL Settings	Methods, management strategies, and assessment procedures for teaching science to BLE/ESL students in elementary schools.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	412	Mathematics Curriculum, Instruction and Assessment in BLE/ESL Settings	Teaching, management, and assessment of mathematics in K-8 BLE/ESL settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	413	Language Arts in BLE/ESL Settings	Literacy and language arts instruction; assessment of reading and writing; transition literacy skills, particularly critical reading of content.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	478	Student Teaching: BLE/ESL Elementary Schools 1-8	Student teaching in BLE/ESL elementary education classrooms grades 1-8: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-15		Prerequisite(s): admission to the Professional Program
BLE	481	Reading Practicum	Applies concepts from BLE 414. Supervised school-based experiences in teaching reading to BLE/ESL students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): admission to the Professional Program
BLE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
BLE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BLE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
BLE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
BLE	511	Introduction to Language Minority Education	Historical, philosophical, theoretical, and pedagogical foundations of language minority education in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	515	Instructional Methods for Bilingual Students	Introduces general dual language teaching approaches. Focuses on the effective teaching of limited English proficient populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	520	ESL for Children	Examines approaches to second-language development for children congruent with recent research in second-language acquisition in children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	522	Literacy/Bi-literacy Development	Acquaints teachers with first- and second-language literacy research, practice, and assessment in elementary school settings (Spanish-English emphasis)	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	527	SEI for Middle and Secondary Schools	Prepares middle and secondary teachers and administrators in the areas required for Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BLE	529	Language Assessment and Evaluation of ESL/BLE Students	Assessment and evaluation of linguistic minorities; test theory, score interpretation; culturally responsive assessment; assessment of language and school achievement.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BLE	533	Literacy in Secondary BLE/ESL Settings	Examines first- and second-language literacy research, practice, and assessment across content areas in secondary school settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	535	Sociolinguistic Issues in Bilingual Education	Surveys major theoretical issues (e.g., language situations, communicative competence, language attitudes) interrelating language, social processes, and bilingual education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	537	Language Structure Acquisition	Introduces linguistics and language acquisition. Grammatical theory; language use in educational contexts; first, second, and simultaneous language acquisition.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Credit is allowed for only BLE 537 or LIN 510
BLE	541	Nature of Bilingualism/Second-Language Acquisition	Bilingual and second-language acquisition, with emphasis on children and adolescents. Stresses cognitive, social, and cultural aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	561	Parent Involvement in Language Minority Education Programs	Examines issues, approaches, and strategies for improving parental and community involvement in the schooling of language minority children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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BLE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	597	Capstone	Reflective, experience-based integration of theory and practice; professional development for individuals working with English language learners.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): MA English as a Second Language major
BLE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
BLE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BMD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	501	Introduction to Biomedical Informatics	Overview of the field of biomedical informatics for use of computers and information in healthcare and the biomedical sciences.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate. Credit is allowed for only BMD 501 or BMI 501
BMD	502	Foundations of Biomedical Informatics Methods I	First semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate. Credit is allowed for only BMD 502 or BMI 502
BMD	507	Introduction to Digital Image Processing and Analysis	Core course with four sections for students seeking to concentrate in biomedical imaging informatics. The first section analyzes the concepts and terms of image processing and analysis. The second section evaluates key algorithms in image processing (e.g., image filtering, Fourier transform, image restoration). The third section examines advanced image analysis methods (e.g., image segmentation, mathematical morphology, image topology, shapes and boundaries, color processing, image coding and compression, wavelet, and special effects). The fourth section develops the practical applications of image processing and analysis in medicine and biology.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BMD 507 or BMI 507
BMD	510	Current Perspectives in Biomedical Diagnostics	Seminar course using external speakers who review the current state of the biomedical diagnostics industry in terms of technology, regulation or legal issues.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	511	Health Economics, Policy, and Payment Models	Economics provides a framework to understand and predict human decision making under scarcity, uncertainty and imperfect information. Examines concepts central to health care economics and their application to important decisions made by patients, families, practitioners, administrators and policy makers. Uses an individual family's scenario through a progressive case study to evaluate how incentives and information affect the health and health care of each family member. Each meeting integrates basic economic principles, existing facts and knowledge from economic research, and individual perspectives and experience regarding how these concepts apply to health care policy.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only BMD 511 or HCD 511
BMD	550	Translational Bioinformatics	Provides an introduction to bioinformatics methods and applications used in the field of translational medical research. Topics include bioinformatics data acquisition and management, analysis methodologies, and applications.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BMD 550 or BMI 550
BMD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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BMD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Diagnostics MS student
BMD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Diagnostics MS student
BMD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	Biomedical Informatics Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	617	Genetics and the Law	Provides background on genetics and recent genetic advances; addresses the legal consequences and issues associated with such advances.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	2-3		Prerequisite(s): College of Law major or MS in Biomedical Diagnostics major. Credit is allowed for only BMD 617 or LAW 617
BMD	667	Regulation of Medical Diagnostics	Examines the regulation of drugs, medical devices, and biologics (e.g. vaccines) by the Food and Drug Administration.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate
BMD	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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BMD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	100	Introduction to Biomedical Engineering	Introduces engineering design methods, experimental practices, data gathering, presentation and statistical analysis. Lecture/labs focus on device design and application, including hands-on experience.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Pre-requisite: Biomedical Engineering major
BME	101	Introduction to Biomedical Engineering I: Belief Systems in Engineering	Biomedical engineering is a highly interdisciplinary field with a mixture of basic science, design, and application. Reviews the process of building a knowledge base, including how we form belief systems (both founded and unfounded). Understands how the scientific process works to generate "true" knowledge of the world and the dangers of denying fact. Teaches how BME uses science as a belief system to generate innovations that improve our quality of life.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student
BME	102	Introduction to Biomedical Engineering II	Guides the student through the transition from how knowledge is generated by the scientific process/method to how the bioengineer uses the engineering method, design tools, and interdisciplinary skill sets to translate relevant scientific and related knowledge to create new healthcare technological solutions, i.e., medical device solutions, to address unmet biomedical and health care needs for individuals, as well as for society as a whole.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Corequisite: BME 101
BME	103	Introduction to Biomedical Engineering III: Product Design & Development	Hands-on training in and implementation of selected product design skills necessary to successfully conduct engineering medical device product design using best industry practices. Runs concurrently with BME 101 and BME 102, which introduce the underlying theory that connects the principles of the scientific method with engineering design method in the practice of biomedical product research and development (R&D). Provides the beginning biomedical engineer with a hands-on design experience that connects product design theory with product development best practices via student exposure to the core elements of the engineering design process--specifically prototype conceptualization and realization.	N	LAB	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering major; Pre/Co-requisite: BME 101; Credit is allowed for only BME 103 or 194 (Introduction to BME III)
BME	111	Engineering Perspectives on Biological Systems	Biological concepts for the emerging engineer. Introduces biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Pre-requisite: Engineering student
BME	112	Engineering Perspectives on Biological Systems Laboratory	Introduces biological concepts for the emerging engineer in a lab setting: biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Engineering student
BME	121	Programming in Biomedical Engineering	Introduces computer programming in the context of scientific and engineering problem solving. Topics include loops, functions, pointers, data structures, and algorithms in the context of a biomedical problem. Culminates in an introduction to object-oriented programming, with a look at modern wireless (iPad and iPhone) devices for biomedical applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite: Biomedical Engineering student; Pre/Co-requisite: MAT 265 or MAT 270
BME	182	Biomedical Engineering Product Design and Development I	Continuation of hands-on training and implementation of medical device product design and development skills; FDA-regulated U.S. and global medical device healthcare markets and opportunities, business development in regulated environments, medical product and project management planning, exempt and Class I medical devices, medical product component and device levels, identification and selection of customer needs, translation of customer needs, product specification development, virtual and physical prototypes, prototype product specification verification, product design and development process documentation, FDA regulatory best-industry practices.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering BSE major; Pre- or corequisite(s): ENG 101, 105, or 107 with C or better if completed
BME	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	200	Conservation Principles in Biomedical Engineering	Applies bioengineering analysis and problem solving of mass, energy, and charge balances to medical and biological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): BIO 181, BIO 188 or BME 111 with C or better; CHM 114 (or CHM 116) with C or better; PHY 121 with C or better; Pre/Co-requisite: MAT 275

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BME	201	Anatomy & Physiology: Cell & Tissue Physiology	Introduces the major structural and functional characteristics of individual cells and tissues in the mammalian body. Physiological principles in the context of biomedical problem solving. Describes the functions of basic cell and tissue systems in the body, describes how they interact in healthy and diseased tissues, and identifies how simple biomedical devices interface with these systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical engineering student; Pre/Co-requisites: BIO 181 with C or better if completed; CHM 114, 116 or 118 with C or better if completed
BME	202	Anatomy & Physiology: Organs & Systems	Introduces the fundamental structural and functional characteristics of the major organs and systems in the mammalian body. Physiological principles in the context of biomedical problem solving. Describes the functions of fundamental physiology of organs comprised of the five tissue types of the body, describes how they interact in healthy and diseased tissues, and identifies how simple biomedical devices interface with these systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisites: BME 201 with C or better if completed; Credit is allowed for only BME 202 or 294 (A&P: Tissues)
BME	203	Anatomy & Physiology: Lab	Laboratory introduction to the fundamental structural and functional characteristics of the major physiological systems in the mammalian body. Physiological principles in the context of biomedical problem solving in a lab. Describes how these systems interact in healthy and diseased biological states, and identifies how simple biomedical devices interface with these systems.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisites: BME 201; BME 202; CHM 114, 116 or 118 with C or better if completed; Credit is allowed for only BME 203 or 294 (A&P: Systems)
BME	211	MATLAB & Mathcad in Biomedical Engineering	Introduces the basics of MATLAB and Mathcad programming in the context of biomedical engineering conservation of mass problem solving.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; CHM 114, 116 or 118 with C or better; BIO 181 with C or better; Pre/Co-requisites: PHY 131 or 151 with C or better if completed; MAT 274 or 275 with C or better if completed
BME	212	Conservation Principles	Basics of conservation principles in complex biological applications. Subsystem approaches to render a simplified approach to solving complex system problems with known and unknown variables. Application of MATLAB and Mathcad for solving conservation problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 211 (with C or better if completed)
BME	213	Biomedical and Bioengineering Ethics	Explores ethical issues in biomedical and medical sciences and engineering practices and includes professional ethics, medical ethics, engineering ethics and the Biomedical Engineering Society (BMES) Code of Ethics, the ethics of human and animal tissue and subjects use in biomedical science and engineering research, responsible conduct for research, ethical issues in the design and manufacture of medical devices for developing and developed countries, and the impact of biomedical engineering solutions on society and the environment.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student
BME	214	FDA Regulatory Processes and Technical Communications	Develops writing skills to factually and effectively communicate all facets of biomedical product design and development activities that are required to successfully conceive, develop, and launch a medical device into the market place using the FDA quality systems best practices that are utilized by the health care technology industry.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering major; Pre- or corequisite(s): ENG 102, 105, or 108 with C or better if completed
BME	235	Physiology for Engineers	Physiology of the nervous, muscular, cardiovascular, endocrine, renal, and respiratory systems. Emphasizes use of quantitative methods in understanding physiological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4		Prerequisite(s): Biomedical Engineering major; BIO 181, BIO 188, or BME 111 with C or better; CHM 114 or 116 with C or better; Pre- or corequisite(s): PHY 131; PHY 132
BME	282	Biomedical Engineering Product Design and Development II	Hands-on training and implementation of product design skills that combine virtual analytical model prototype development with component and sub-assembly integration to develop both virtual and physical prototypes of a medical device product at the product architecture level and verify selected product architecture specifications from design input and earlier design process verification steps.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering major; BME 182 with C or better
BME	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		Prerequisite(s): Barrett Honors student

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BME	300	Bioengineering Product Design	The fundamentals of financial and organizational structure of business and how it influences bioengineering analysis, design, and decision making; biomedical ethics and device and drug regulation; and fundamentals of business and technical management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Biomedical Engineering junior, senior, or postbac; BME 100 with C or better; BME 213 with C or better; BME 214 with C or better; ENG 102, 105, or 108 with C or better
BME	301	Numerical Methods in Biomedical Engineering	Applications of numerical methods to biomedical engineering problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	2		Pre-requisites: Biomedical Engineering student; MAT 274 (or MAT 275) with C or better
BME	302	Biomaterials/Physicochemical Properties	Introduces the science and engineering of biomaterials; addresses material properties of natural and artificial biomaterials.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; PHY 121 (or PHY 150) with C or better; Pre/Co-requisite: BME 203 (with C or better if completed)
BME	303	Biological Response to Implanted Biomaterials	How biomaterials interact with surrounding tissue; biocompatibility. Also discusses specific clinical problems that are treated using implants.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 302 (with C or better if completed)
BME	311	Basic Concepts of Signals and Systems in Biomedical Engineering	Applies principles of calculus and ordinary differential equations to analysis and computer processing of biosignals and linear modeling of biosystems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; EEE 202 with C or better; Pre/Co-requisite: MAT 342 or MAT 343 (with C or better if completed)
BME	312	Transforms for Biomedical Engineering Applications	Introduces properties of discrete and continuous transforms for the purpose of analyzing signals and applying the transforms to solve biomedical engineering problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student. Pre/Co-requisite: BME 311 (with C or better if completed)
BME	313	Preclinical and Clinical Trials in Biomedical Engineering	Explores the rationale and the tools required to evaluate the safety and efficacy of medical devices designed and developed using best industry practices for human consumption. Introduces the design and conduct of pre-clinical trials (in vitro, ex vivo or in vivo systems other than humans), as well as clinical trials that are required for FDA approval to market medical devices in the U.S. Covers the following topics: an overview of medical device development; FDA regulatory affairs and practices; ethics concerns in animal and human trials; experimental design and biostatistics for medical device preclinical and clinical studies; preclinical (IACUC) and clinical trial (IRB) approval; informed consent best practices; medical device preclinical and clinical trial management; recruitment of clinical study participants and populations; ethics of preclinical and clinical trials; and alternatives to animal and human trials.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 213 or BME 294 (Biomedical and Bioengineering Ethics) with a C or better
BME	318	Biomaterials	Material properties of natural and artificial biomaterials. Tissue and blood biocompatibility. Uses of materials to replace body parts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4		Pre-requisites: Biomedical Engineering BSE student; CHM 114, 116, or BIO 181 (or BME 111 or BIO 188) with C or better; MAT 274 (or 275) with C or better
BME	321	Probability for Biomedical Engineering	Introduces probability distributions in the context of basic biological phenomena and biomedical engineering.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: MAT 342 or MAT 343 (with C or better if completed)
BME	322	Statistics for Biomedical Engineering	Introduces parametric and nonparametric statistics tests in the context of common biomedical experiments.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering major; MAT 274 (or 275) with C or better
BME	331	Transport Phenomena for Biomedical Engineering	Transport phenomena with emphasis on momentum, energy, and mass transport in living systems, medical devices, and other therapeutic/diagnostic applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Pre-requisites: Biomedical Engineering student; BME 200, 212 or 294 (Conservation Principles) with C or better; MAT 274 (or 275) with C or better; PHY 121 with C or better

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BME	340	Thermodynamics for Biomedical Engineers	Thermodynamics is a branch of science dealing with processes (chemical or mechanical) and the subsequent energy and mass transfers. Studies whether a process is favorable (possible) or unfavorable (impossible) while assessing energy and mass transfer within each specific stage of the process. The operation of living systems is heavily based on the use of chemical reactions and or mechanical processes such as beating of the heart, biochemical reactions of a drug in liver, phase equilibria. Covers the fundamental principles and laws of thermodynamics. Helps students think thoroughly about the applications of thermodynamics in biological sciences and bioengineering with the main emphasis on basic concepts and problem-solving skills.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Biomedical Engineering BSE major; BME 200 with C or better; Pre- or corequisite(s): MAT 267 or 272 with C or better if completed
BME	341	Engineering Design Method	Covers the engineering design method, a collection of valuable design tools, and the application of the method and tools to address current problems in the field of biomedical engineering.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 100, 101, 103 or BME 194 (Introduction to Biomedical Engineering) with C or better; ENG 102, 105 or 108 with C or better
BME	342	3D Spatial Modeling	3D spatial modeling tools applied in the context of biomedical engineering to create computational models of idealized and anatomical biological structures (e.g., blood vessels).	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 100, 101, 103 or BME 194 (Introduction to Biomedical Engineering) with C or better; BME 203 or 294 (Cell Tissue Physiology) or 294 (A&P: Tissues) or 294 (A&P: Systems) with C or better
BME	350	Signals and Systems for Bioengineers	Applies principles of calculus and ordinary differential equations to analysis and computer processing of biosignals and linear modeling of biosystems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Biomedical Engineering major; MAT 275 with C or better
BME	351	Circuits for Biomedical Engineering Instrumentation	Circuits is a specialized skill that is developed for students interested in building devices which serve as electrical interfaces to the body. These are interfaces which have very specialized requirements. Students who have been familiarized with the basics of electrical circuit design as well as physiology learn some of the issues that arise and solutions that have been generated to provide for these interfaces.	N	LEL	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 312 or BME 394 (Transforms For BME Apps) with C or better
BME	352	Filtering of Deterministic and Stochastic Signals	Introduces properties of deterministic and stochastic signals and their use in biomedical signal processing.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 312 or BME 394 (Transforms For BME Apps) with C or better if completed
BME	353	Microcomputing & Embedded Systems for Biomedical Engineering	Introduces the use of microcontrollers to analyze biological signals.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 352 (with C or better if completed)
BME	361	Design of Experiments and Clinical Trials	Explores advanced techniques in trial and experimental design in biomedical engineering, including testing new products or drugs, or even generation of new methods and treatments, designed to provide statistical confirmation at the end of trials. Design of trials, experiments, and measures, so that efficacy can be properly evaluated using statistical tests. Although this course makes reference to regulatory procedures, emphasizes the proper application of statistical techniques in the design of experiments.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; BME 322 or BME 394 (Statistics For BME) with C or better
BME	370	Microcomputer Applications in Biomedical Engineering	Uses microcomputers for real-time data collection, analysis, and control of experiments involving actual and simulated physiological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Biomedical Engineering major; EEE 202 with C or better; BME 350 with C or better
BME	382	Biomedical Engineering Product Design and Development III	Continuation of hands-on training and implementation of medical device product design and development skills; experimental practices, data gathering, presentation, and statistical analysis in regards to demonstration of validation and verification tools and testing, identification and selection of customer needs, translation of customer needs, product specification development, virtual and physical prototypes, prototype product specification verification, product design and development process documentation, FDA regulatory best industry practices.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering major; BME 282 with C or better; Credit is allowed for only BME 382 or BME 494 (Prototyping from Design to Marketing) or BME 598 (Prototyping from Design to Marketing)
BME	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
BME	401	Biomedical Engineering Product Design & Development: Capstone	Introduces global biomedical engineering design factors that affect the selection and implementation of medical device product innovation, design, and development using best industry practices. These include technical, regulatory, economic, legal, business, entrepreneurial, social, and ethical aspects of medical device systems engineering design.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 313, BME 331, BME 341, BME 342, BME 353 and BME 361 with C or better
BME	402	Biomedical Engineering Product Design & Development: Capstone II	Introduces project management and product innovation, design and development processes and their best practices.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 401 (with C or better if completed)
BME	403	Biomedical Engineering Product Design & Development: Capstone III	Introduces conceptual product design and development best practices using three-dimensional modeling and other design tools for the determination of product specifications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	2		Pre-requisite: Biomedical Engineering student; Pre/Co-requisites: BME 401 and 402 (with C or better if completed)
BME	404	Biomedical Engineering Product Design & Development: Capstone IV	Introduces entrepreneurial biomedical product development business practices for successful quality systems premarket submission of a verified detailed medical device design of a capstone project.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 403 or BME 494 (Capstone III) with C or better
BME	405	Biomedical Engineering Product Design & Development: Capstone V	Introduces prototyping of the capstone device and begins experiments of the device prototype.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 404 (with C or better if completed)
BME	406	Biomedical Engineering Product Design & Development: Capstone VI	Addresses prototype device verification and validation methods to achieve a robust design; the conclusion of the capstone project.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	2		Pre-requisite: Biomedical Engineering student; Pre/Co-requisites: BME 404 and 405 (with C or better if completed)
BME	413	Biomedical Instrumentation	Principles of medical instrumentation. Studies of medical diagnostic instruments and techniques for the measurement of physiologic variables in living systems. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3	L	Pre-requisites: Biomedical Engineering major; BIO 201 and 202 (OR BME 210 and 202 and 203 or BME 235) with C or better; BME 350 with C or better
BME	416	Biomechanics	Mechanical properties of bone, muscle, and soft tissue. Static and dynamic analysis of human movement tasks such as locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Pre-requisites: Bioengineering or Pre-Med Engineering BSE student; BME 318 and MAE 212 with C or better
BME	417	Biomedical Engineering Capstone Design I	Technical, regulatory, economic, legal, social, and ethical aspects of medical device systems engineering design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4	L	Prerequisite(s) with C or better: BME 300; BME 318; BME 322; BME 331; BME 370; BME 382; Biomedical Engineering major
BME	419	Biocontrol Systems	Applies linear and nonlinear control systems techniques to analysis of neuromusculoskeletal, cardiovascular, thermal, and mass transfer systems of the body.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; BME 350 and BME 370 with C or better
BME	421	Biomedical Instrumentation I	Introduces principles of biomedical instrumentation and techniques of physiologic measurement as used in medicine and biology.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 341 and 353 with C or better
BME	422	Biomedical Instrumentation II	Principles of biomedical instrumentation and techniques as used in medicine and biology with an emphasis on medical diagnostic imaging.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering major; Pre- or corequisite(s): BME 421 with C or better if completed
BME	423	Biomedical Instrumentation Laboratory	Lab experience with problems, concepts, and techniques of biomedical instrumentation in static and dynamic environments. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit.	N	LAB	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1	L	Pre-requisite: Biomedical Engineering student; Co-requisite: BME 413
BME	434	Applications of Bioengineering Transport Phenomena	Develops mathematical models of transport phenomena in physiological systems, medical devices, and pharmacokinetic analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; BME 331 with C or better
BME	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		

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BME	490	Biomedical Engineering Capstone Design II	Individual projects in medical systems or medical device design and development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4		Prerequisite(s): Fulton Engineering undergraduate student; BME 417 with C or better
BME	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		Prerequisite(s): Barrett Honors student
BME	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6	L	Prerequisite(s): Barrett Honors student
BME	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-7	L	Prerequisite(s): Bioengineering or Pre-Med Engineering BS or BSE student
BME	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	520	Bioelectric Phenomena	Study of the origin, propagation, and interactions of bioelectricity in living things; volume conductor problem, mathematical analysis of bioelectric interactions, and uses in medical diagnostics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	521	Neuromuscular Control Systems	Overview of sensorimotor brain structures. Application of nonlinear, adaptive, optimal, and supervisory control theory to eye-head-hand coordination and locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	522	Biosensor Design and Application	Theory and principles of biosensor design and application in medicine and biology. Principles of measurements with biosensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	524	Fundamentals of Applied Neural Control	Fundamental concepts of electrical stimulation and recording in the nervous system with the goal of functional control restoration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	525	Surgical Techniques	Principles of surgical techniques, standard operative procedures, federal regulations, guidelines, and state-of-the-art methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	2		Pre-requisites: Graduate Engineering students only
BME	526	Introduction to Neural Engineering	Introduces the field of neural engineering. Neural engineering, as with all engineering fields, can be thought of as applied scientific understanding, in this case, applied neuroscience. Covers aspects of neurophysiology, neuroanatomy, neurosurgery, biophysics, electronics and signal processing; integrates these knowledge areas into neural engineering applications. Covers an entire process for conducting research in neural engineering: surgical implantation of electrodes, data acquisition, processing neural signals, decoding neural data, and controlling prosthetic devices. Provides foundation for working with neural engineering applications and conducting research in neural engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BME 526 or BME 598 (Intro to Neural Engineering)
BME	533	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only BME 533 or CHE 533 or MAE 533
BME	544	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	556	Human Systems Neuroscience	Systems-level neuroscience course focusing on human diseases. Classes involve lectures and/or other activities such as observations of clinical procedures and tours of clinical facilities (e.g., the neurosurgical suite, imaging facilities).	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4		Pre-requisite: Neuroscience PhD major. Credit is allowed for only BIO 598 (Human Sys Neuroscience), BME 556 or NEU 556
BME	561	Clinical Neuroscience	Fundamental mechanisms that underlie diseases and disorders of the central and peripheral nervous systems. Introduces assessment and pharmacological, surgical and rehabilitative management of nervous systems disorders. Prior knowledge of neural systems is helpful. Identifies the mechanisms by which key disease and trauma states impact neural systems and how clinicians identify the locus and type of damage based on clinical and imaging criteria.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	566	Medical Imaging Instrumentation	Design and analysis of imaging systems and nuclear devices for medical diagnosis, therapy and research.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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BME	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		Pre-requisites: Graduate Bioengineering students only
BME	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	101	Introduction to Bioinformatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Introduces topics in translational bioinformatics, such as sequence alignment, the Human Genome Project, gene expression analysis, genome-wide association studies, next-generation sequencing.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	102	Introduction to Public Health/Imaging Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Second course in a three-semester series focusing on biomedical informatics applications in public health, including population studies and outbreak detection, and medical imaging, including telemedicine.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Pre-requisite: BMI 101 with B or better
BMI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		

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BMI	201	Introduction to Clinical Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Provides an introduction to biomedical informatics techniques and applications used in clinical environments. Includes searching and organizing free text information, decision analysis techniques and clinical decision support systems, and clinical applications including physician order entry used in electronic medical records. Also covers challenges in clinical informatics, including sociotechnical and cognitive issues in implementation and use.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		
BMI	211	Modeling Biomedical Decisions	First semester of a three-semester course sequence surveying the methods and theories underlying the field of biomedical informatics. Explores models of medical decision making, including classical decision theory, Bayesian, and cognitive models. Also includes a component discussing evaluation methods in biomedical informatics.	N	PRA	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	221	Knowledge Representation for Biomedical Informatics	Introduces topics in knowledge representation and modeling, including frame-based systems, logic-based systems, rule-based systems, inference, and reasoning. Overview of history and present state of the field.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
BMI	311	Modeling Biomedical Knowledge	Introduces concepts of artificial intelligence and knowledge modeling using medical informatics examples. Historical foundations and motivations of AI in medical applications; problem solving, reasoning, knowledge management, and planning as applied to medical informatics problems.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	312	Modeling Biomedical Data	Third semester of a three-semester course surveying the methods and theories underlying the field of biomedical informatics. Explores methods of use in the design and maintenance of biomedical databases, machine learning techniques, information retrieval in biomedicine and other methods specific to bioinformatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	330	Topics in Translational Bioinformatics	Provides an introduction to bioinformatics methods and applications used in the field of translational medicine research. Topics include bioinformatics data acquisition and management, including microarrays, database modeling and integration; analysis methodologies, including statistics and data mining; and applications.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	332	Team Dynamics for Healthcare IT Projects	Teaches the fundamentals of leadership, management, and team dynamics in a project-focused software engineering environment, and with a focus on informatics and healthcare applications. Teaches students about team and group dynamics, recognizing dysfunctional teams, and helping to foster productive group and leadership skills.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
BMI	404	Clinical Environments	Designed for medical informatics students who have no significant clinical experience in the U.S. Introduces medical terminology and exposes students to the clinical environments in which health care providers create, manage, and use clinical information. Students attend lectures and spend a significant portion of time examining and reporting on different clinical settings throughout the semester.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): minimum 45 hours
BMI	461	Advanced Topics in Biomedical Informatics I	Covers current trends and cutting-edge research areas of clinical, public health, and consumer health informatics. Particular emphasis on research that is of relevance to patients, and the healthy public, covering such topics as outbreak detection and the personal health record. Also covers research on the use of technology in medical education, and the ways in which clinical decision support systems are applied in contemporary medical practice.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	462	Advanced Topics In Biomedical Informatics II	Covers current trends and cutting-edge research areas of bioinformatics, imaging informatics, and translational science. Emphasizes informatics approaches to the novel data sources that are supplied by the next generation of methods for affordable gene sequencing, and initiatives underway to accelerate the integration of novel research findings into everyday clinical practice. Includes a series on modeling and simulation, current approaches to computer-aided diagnosis of medical images, ways in which technology can support the discovery of new knowledge, and the application of telemedicine to remotely facilitate clinical care.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	465	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Credit is allowed for only BMI 465 or BIO 455
BMI	466	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better; Credit is allowed for only BMI 466 or BIO 456

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BMI	482	Capstone I	First course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of a research project in biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3	L	
BMI	483	Capstone II	Second course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of an applied project in biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3	L	Pre-requisite: BMI 482 with C or better
BMI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		
BMI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-6		
BMI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-6	L	
BMI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
BMI	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-7	L	
BMI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-3		
BMI	501	Introduction to Biomedical Informatics	Overview of the field of biomedical informatics for use of computers and information in healthcare and the biomedical sciences.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate. Credit is allowed for only BMD 501 or BMI 501
BMI	502	Foundations of Biomedical Informatics Methods I	First semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate. Credit is allowed for only BMD 502 or BMI 502
BMI	504	Introduction to Clinical Environments	Course is divided into three sections. The first section covers medical and health care concepts and terms, and discuss observational techniques. In the second portion, students investigate a variety of different clinical environments and report back to the class on their findings. The final portion summarizes the key points of information technology in these clinical environments.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): graduate BME or BMI major
BMI	505	Foundations of Biomedical Informatics Methods II	Second semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 502 with C or better
BMI	506	Clinical Decision Support	The course will provide an in-depth analysis of computer-based approaches to supporting clinical decision making for providers and patients (as well as healthy individuals, for disease prevention/health maintenance). The history of the field of clinical decision support (CDS) and the spectrum of methodologies will be reviewed. Practical issues involved in successful implementations of CDS will be discussed. The roles of standards and infrastructure will be examined. Current research topics and foci will be explored.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	507	Introduction to Digital Image Processing and Analysis	Core course with four sections for students seeking to concentrate in biomedical imaging informatics. The first section analyzes the concepts and terms of image processing and analysis. The second section evaluates key algorithms in image processing (e.g., image filtering, Fourier transform, image restoration). The third section examines advanced image analysis methods (e.g., image segmentation, mathematical morphology, image topology, shapes and boundaries, color processing, image coding and compression, wavelet, and special effects). The fourth section develops the practical applications of image processing and analysis in medicine and biology.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BMD 507 or BMI 507
BMI	515	Applied Biostatistics in Medicine and Informatics	Comprehensive treatment of the statistical methods used most often to analyze quantitative data collected in medical and biomedical informatics studies, including clinical trials, epidemiologic studies, studies of the accuracy and performance of screening and diagnostic tests, and studies to develop predictive models. Students learn to use SAS statistical software to analyze biomedical data.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BMI	516	Advanced Biomedical Data Analysis	Acquisition, conversion and organization of biological data into relevant diagnostic, therapeutic, and research information using information extraction and data mining.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 501 with C or better
BMI	520	Modeling Gene Regulatory Networks	Computational and mathematical modeling used to approximate gene regulatory networks as well as signaling pathways and inference of model parameters.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 505 with C or better; BMI 516 with C or better
BMI	540	Problem Solving in Biomedical Informatics	Theory and practice of software engineering principles as they apply to large- and medium-scale clinical systems from bench to bedside.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 501 with C or better
BMI	550	Translational Bioinformatics	Provides an introduction to bioinformatics methods and applications used in the field of translational medical research. Topics include bioinformatics data acquisition and management, analysis methodologies, and applications.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BMD 550 or BMI 550
BMI	555	Statistical Learning for Data Mining	Surveys data analysis methods for massive data sets and provides experience in analysis with computer software.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 515 or IEE 572 or IEE 578; Credit is allowed for only BMI 555 or IEE 520
BMI	560	Teaching in Biomedical Informatics	Student serves as a teaching assistant with a faculty member who is teaching either a required or elective course in the Biomedical Informatics curriculum. Such courses will generally be BMI courses but with the approval of the student's faculty program advisor may include a course that is an approved elective in the BMI program but is offered in another department within the university. The experience provides a significant teaching role, either lecturing or moderating small group sessions or laboratories. Grading class homework assignments and designing/grading examinations will also typically be part of the experience. Assisting other students outside of class and being available during office hours will also generally be part of the student teacher's role. A student may also receive 1 hour of credit for participating substantively in the design of a new course, working closely with a faculty member. Generally in such circumstances the student should then serve as course teaching assistant when it is offered for the first time (separate enrollment in this course).	N	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1		Pre-requisite: Biomedical Informatics PhD student
BMI	570	BMI Symposium	Students attend the BMI Symposium Speaker Series twice a month and the student journal club discussion on alternate weeks. During the journal club weeks, each student leads a discussion on a current topic pertinent to the field of biomedical informatics.	N	SEM	Y	YGB	College of Health Solutions	Biomedical Informatics Program	1		Pre-requisite: BMI Graduate student
BMI	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Pre-requisite: BMI Graduate student
BMI	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Pre-requisite: Biomedical Informatics Masters student
BMI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Informatics MS student
BMI	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Informatics MS student
BMI	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	Biomedical Informatics Program	1		Prerequisite(s): graduate Biomedical Informatics student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
BMI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	Biomedical Informatics Program	1-12		Pre-requisite: Biomedical Informatics Masters student
BMI	601	Fundamentals of Health Informatics	Offers an overview of the field of health informatics. Combines perspectives from medicine and computer science for use of computers and information in health care and the health sciences. Includes an overview of health information literacy and data standards. Covers specific applications and general methodology in health informatics using current topics in the field. Discusses evaluations of health systems.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	602	Programming in a Health Care Domain	Intensive introduction to object-oriented programming concepts focused on the unique challenges such as those related to data volume, complexity, and uncertainty inherent to applications in a health care domain. Also covers the fundamentals of algorithm analysis and data structure design. Stresses a software engineering approach to abstraction for problem decomposition and solution formulation, with object-oriented and reusability concepts introduced early. Emphasizes the use of generic data structures and abstractions from template libraries for reusability, as well as modular design. In addition, also covers basic concepts of algorithms and data structures.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	603	Health Informatics Database Modeling and Applications	Thorough coverage of the foundations of database systems and their specific use and modeling in healthcare and biomedical environments. Students learn through hands-on experience with the modeling and implementation of health-related databases using the relational approach. Topics include an overview of database models and architecture, database design, SQL, XML, and data warehousing as they are applied in clinical domains. Students are encouraged to explore database-related topics of their own, choosing ones that are relevant to a bioinformatics or clinical domain.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	604	Health Information Literacy	Students learn to locate, retrieve, and store information with an emphasis on electronic search, retrieval, and storage. They also learn to assess the validity and quality of information, improve the quality of information, and how to improve the quality of, protect, and effectively communicate health information.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	2		Pre-requisite: Health Informatics MAS student
BMI	605	Health Information Systems and Applications	Explores the use of information systems in different health care settings, analyzing operational and strategic objectives for their deployment. Emphasizes the analysis of the different factors that influence decision making during the process of design and deployment of systems, including human factors, hardware, software, policy, communications, and the successful management of such systems. Also covers guidelines for the design and successful deployment of systems to meet those objectives and includes discussion of architectures, components, and models. Analyzes specific case studies of successfully and unsuccessfully deployed systems.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	606	Health Data Standards	The cost-effective delivery of high quality, safe healthcare requires access to multiple data sources and systems and applications responsible for data acquisition and management, the ability to aggregate, integrate, and analyze data from multiple sources, and the ability to communicate the results of such analyses or the knowledge resulting from those analyses to users in a timely fashion at points where they are needed. A variety of standards are required, at the data and communication level. Reviews the state of these standards, and the multiple entities that have a stake in them, and enables the student to navigate this complex process in selecting, implementing, or extending health systems in a variety of settings.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	1		Pre-requisite: Health Informatics MAS student
BMI	607	Effective Professional Communications	To be able to work in the field of biomedical informatics or health information technology requires an understanding of not only science and technology but also biomedicine and healthcare. This requires both familiarity with the basic concepts of these fields, as covered in other courses, as well as the ability to present ideas clearly in both written and oral communication. Also requires the ability to work effectively in groups, with shared understanding of group and individual roles, assignments, and responsibilities. Provides experience with oral, written, and group communication tasks, and uses critique and feedback as a method for highlighting issues and areas for improvement.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	2		Pre-requisite: Health Informatics MAS student

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BMI	608	Project Management for Interdisciplinary Teams	Introduces students to the health care team and explores tools and techniques for establishing effective interdisciplinary teams in a health care setting, emphasizing collaborative clinical decision-making and patient management. By working in small teams, the course puts into practice these techniques, allowing students to collaborate with other health professionals to solve specific problems, provide services, or develop new understandings. Also covers the concepts, skills, tools, and techniques involved in the management of information system projects, providing an introduction to the established discipline of project management, with a specific focus on how they apply to managing information systems for a biomedical setting.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	609	Capstone	This course assists students in preparing their capstone project, which represents the culmination of their study for the MAS in Health Informatics focusing on development process, technical skills, and communication.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Pre-requisite: Health Informatics MAS student
BMI	610	Clinical Culture and the Health Care Environment	Designed for medical informatics students who have no significant clinical experience in the U.S. Introduces medical terminology and reviews clinical environments in which health care providers create, manage and use clinical information. Students perform observations in a variety of clinical environments.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Health Informatics MAS student
BMI	611	Applied Data Analysis	Students learn what statistical methods are used most widely in the analysis of data from studies of disease risk factors, health interventions, and health care improvements, and what statistical methods should be used to analyze data from various types of studies. They learn how to estimate the number of subjects needed for studies of various designs. They learn to conduct and interpret multiple linear, multiple logistic, and multivariate lifetable analysis. Hands-on experience in the use of statistical software to conduct analysis of health data.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	612	Applied Data Mining	Comprehensive introduction to data mining methods and algorithms used most often to analyze data collected in biomedical informatics studies, including genomics and proteomic disease association studies, clinical trials, clinical image analysis and studies of the accuracy and performance of screening and diagnostic tests. Emphasizes assessing data quality, understanding how to select an overall approach to analysis, and presenting and interpreting the results of data mining analysis. Students learn to use Excel to effectively display data collected in biomedical research studies and Weka software to analyze data using approaches that are used commonly in biomedical studies.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	613	Workflow Analysis and Redesign in Health Systems Engineering	Provides an overview of workflow analysis and process redesign and their use in quality improvement activities, including specification. Uses case examples to highlight key concepts and measurement concepts and covers techniques. Includes the links of systems engineering to fundamentals of decision theory, statistics and optimization. Includes discussion of current successful techniques for systems engineering. System engineering seeks to enable the successful design, implementation, deployment and maintenance of successful systems. Emphasizes gathering and analysis of customer needs for the specification and documentation of required functionality early in the system's lifecycle.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	614	Current Perspectives in Health Informatics	Seminar course using external speakers to discuss and review the current state of the health informatics field.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	615	Human Factors Engineering for Biomedical Applications	Fundamental principles of human-computer interaction and human factors and how to apply them to real-world problems through class projects, homework, and real-world design. Focuses on learning why user-friendly interfaces can greatly improve work productivity and enhance the quality of healthcare without radically changing the underlying technology.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	616	Clinical Decision Support and Evidence-Based Medicine	Focuses on the major problems of human decision making in health care including causes of errors, decreased quality and increased costs. Explores the role of information technology, primarily through computer-based clinical decision support (CDS), to address these problems. Explores key methods used to provide CDS, the capabilities and limitations of current approaches, and the challenges for managing and updating the knowledge needed to deliver CDS in an enterprise setting. Origins of evidence-based decision making and policy formulation; how to use the tools and approaches that have been developed to support evidence-based decision making and policy formulation; and the history and evolution of systematic review and meta-analysis as a tool to inform decisions and policies based on evidence. Students gain hands-on experience by conducting a systematic review and a meta-analysis and using the results to draw conclusions and formulate health policy.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
BMI	617	Principles of Evidence-based Medicine	The origins of evidence-based decision making and policy formulation; how to use the tools and approaches that have been developed to support evidence-based decision making and policy formulation. The history and evolution of systematic review and meta-analysis as a tool to inform decisions and policies based on evidence. Hands-on experience by conducting a systematic review and a meta-analysis and using the results to draw conclusions and formulate policy.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	2		Prerequisite(s): Health Informatics MAS student
BMI	618	Leadership and Change in Clinical Environments	Covers core concepts related to leadership and specific methodologies used by effective leaders, including running meetings, negotiation, and conflict management. Also reviews change management as a structured approach to transitioning individuals, teams, and organizations from a current state to a desired future state. Provides exposure to various models and processes related to change management and the tradeoffs between these different approaches. Includes case examples related to health information.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Informatics PhD student
BMI	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-15		Prerequisite(s): Biomedical Informatics PhD student
BMI	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	Biomedical Informatics Program	1-15		Prerequisite(s): Biomedical Informatics PhD student
BMY	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BMY	501	Essentials of Biomimicry	Offered as a sampler of the various topics (discipline, emulate, ethos, (re)connect and iSites, human-nature connection, biomimicry thinking, and life's principles) within the discipline of biomimicry. Each week is devoted to a specific topic and is led by a different instructor. Provided a basic overview of each aspect of the discipline with ample opportunity for conversation and dialogue around the specific components, with an understanding that greater depth into each topic can be learned by taking the advanced BMY courses.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	502	Life's Principles	Life's principles are nature's universal design guidelines based on 3.8 billion years of successful strategies across all life. With instruction by Dr. Dayna Baumeister, this 16-week online course takes participants on a deep dive of life's principles, including the review and study of life's operating conditions, the six primary principles and their related sub-principles. Gives participants the experience necessary to bring these design guidelines into practice.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	4		Pre- or corequisite(s): Biomimicry MS or Biomimicry certificate student; BMY 501
BMY	503	Biology Taught Functionally	Biomimicry teaches biology through the lens of function, thereby providing a core understanding in biology for all students, no matter their background. Explores how biologists gather and research information and how that knowledge can inform other disciplines. Also introduces the art of translating biological concepts into strategies for application, which is then carried throughout all the courses. Students learn how to work with biologists on a biomimicry team and how to weave biology and biomimicry together. The biologists in the cohort not only learn to look at nature through the function lens, but also act as subject matter experts for their interdisciplinary teams and teaching assistants.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	504	Biomimicry Thinking	Biomimicry thinking is the practice of biomimicry from a methodology-based approach. 16-week intensive in the methodology of biomimicry reviews how biology and biomimicry can be incorporated into the four major phases of any design process: scoping, discovering, creating and evaluating. Covers the art of translating biological concepts into strategies for application and building a taxonomy of design principles.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	511	Biomimicry and Design	Biomimicry is innovation inspired by nature, or the conscious emulation of nature's genius. Prepares participants to design sustainable innovations using the biomimicry philosophy and methodology. Participants complete a 16-week series of lectures and assignments to demystify the design thinking process, understand how to harness the potential of approaching challenges with a design mind, distill a design challenge, understand user needs, build a bridge between biology and design, use a methodology for discovering models from nature, abstract design principles from bio-inspired strategies, and translate those principles into sustainable innovations. Participants both with a design background and without equally experience a deep immersion into the world of biomimetic design.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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BMY	512	Biomimicry and Engineering	Prepares participants to understand the field of engineering; identify the types of engineers and what each one does; what constrains engineers' work under, materials selected by engineers, how to present biological ideas to engineers and how to integrate ideas from their discipline into sustainable engineering designs using biomimicry principles. Most examples used are of large engineered structures. These structures play critical functions in human systems, have a significant impact on the environment and last for over a 100 years, so it is important to imbue as much sustainability into their design as possible. Requires a final team project designed to put these ideas into practice.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	516	Biomimicry and Business	Addresses business topics from the biomimicry point of view; explains mechanisms and tools for comparing and contrasting business and nature. Challenges participants to question conventional ways of conducting business and come up with new approaches based on a different point of view.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	517	Human-Nature Connection	Grounds the emerging discipline of biomimicry as a continuation of our ancestral connection with nature. Human-Nature Connection (HNC) engages participants in an exploration of the meaning and value of connecting with nature. Topics include defining humans, nature, and our connection with nature; establishing the evolutionary, personal, and socio-cultural influences on the different expressions of this connection; and illustrating the relevance of biomimicry to the human-nature connection.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	2		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	530	Virtual Design Lab Practicum	Practicum designed to allow participants to dive deep into the biomimicry tools and resources presented during the program and to apply them selectively to a specific and unique opportunity of the student's choosing. Projects should have a meaningful outcome achievable within the semester, and should engage the scoping, discovering, creating and evaluating phases of biomimicry thinking. Deliverables are milestone based, and the final deliverable should have application in a real-world setting.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	2		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BMY	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BMY	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BUA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
BUA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		

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BUA	330	Organizational Leadership	Strategies, skills, and techniques that promote successful leadership within organizations. Practice leadership skills and self-discovery in preparation for leadership positions.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
BUA	380	Small Business Leadership	Develops leadership skills needed to form, lead, and operate a small business. Emphasizes creating a vision, research, and problem solving.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	381	Small Business Accounting and Finance	Accounting and finance skills needed by small business owners to acquire, allocate, and track monetary resources and evaluate performance.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student. Must not have earned credit in ACC 382.
BUA	383	Small Business Working Relationships	Addresses communication and the people in a business--clients, employees, suppliers, competitors, governments, family, and self development.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
BUA	440	Strategic Management	Strategic formulation and administration of the total organization, including integrative analysis and strategic plan; interrelationship of business functional areas.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Agribusiness senior; FIN 300 with C or better; MGT 300 with C or better; MKT 300 with C or better; SCM 300 with C or better; Credit is allowed for only AGB 414, BUA 440 or 441
BUA	441	Entrepreneurship and Feasibility	Assessment of the opportunities, risks, and challenges associated with business start-up and continued operation.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Agribusiness senior; FIN 300 with C or better; MGT 300 with C or better; MKT 300 with C or better; SCM 300 with C or better; Credit is allowed for only AGB 414, BUA 440 or 441
BUA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-6	L	Prerequisite(s): Barrett Honors student
BUA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
BUA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-7		
BUA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
BUE	480	Teaching Business Subjects	Organization and presentation of appropriate content for business subjects in the secondary school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BUE	481	Technology in Business and Vocational Education	Emerging curricula and instructional technology in business and vocational education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BUE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): admission to the Professional Program
BUE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-3		
BUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
BUS	384	Business Operations and Planning	Planning and executing plans--the what, when, where, how, and who from product/service/project idea to pay back or completion.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	3		Prerequisite(s): SCM 300 or 303
BUS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Prerequisite(s): minimum 45 hours
BUS	424	Sales and Negotiations	Principles and techniques of selling, merchandising and negotiations applicable for all businesses and organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	3		Prerequisite(s): MKT 300
BUS	434	Risk Management and Insurance	Strategies to manage business risk: derivatives, insurance, self-insurance and public policy.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	3		Prerequisite(s): FIN 300 or 303
BUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		
BUS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-6		Prerequisite(s): Barrett Honors student
BUS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-6		Prerequisite(s): Barrett Honors student
BUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-7		
BUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-3		
BUS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BUS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	0.5-12		Prerequisite(s): W.P. Carey degree-seeking graduate student
BUS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	0.5-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Prebusiness Office	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Prebusiness Office	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Prebusiness Office	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Prebusiness Office	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CBS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
CBS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
CDE	232	Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
CDE	232	Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
CDE	244	Children Facing Health Care Challenges	Provides a comprehensive introduction to family-centered care, psychosocial assessment of the hospitalized and chronically ill child, and techniques to support their coping. Utilizes the principles/theories of child development, and introduces the role of a child-life specialist in the promotion of effective coping through play, preparation and education among children, youth and families facing challenges related to health care and hospitalization.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Credit is allowed for only CDE 244 or CDE 294 (Children Facing Health Care Challenges)
CDE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
CDE	312	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: Minimum 24 hours; SOC 101, PSY 101(PGS 101), FAS 101 or FAS 330 with C or better; Credit is allowed for only CDE 312 or SOC 312
CDE	337	Early Childhood Intervention	Explores how child development theory affects practice with children and families, emphasizing development of young children and early intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
CDE	338	Child Development Practicum	Supervised practicum in the Child Development Lab preparing students for work in child care centers and agencies serving young children and families. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	2-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CDE	350	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
CDE	356	Race and Child Development	Reviews the current research and literature about the particular role of race in child development. Even though race is not a valid biological construct, it has significant social implications as it shapes how children interact and are treated by others. Through primarily class discussions/activities, presentations and papers, addresses: (1) What are the research and theoretical issues in studying race? (2) What does race and racism mean? (3) How does race influence developmental processes?	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): APA 200 or APA 210 or 30 hours. Credit is allowed for only APA 356 or CDE 356 or APA 394 (Race and Child Development)
CDE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
CDE	418	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & H	Pre-requisites: FAS 101 or FAS 330 or PGS 101 or SOC 101 with C or better; Minimum 30 hours. Credit is allowed for only CDE 418 or SOC 418
CDE	418	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & H	Pre-requisites: FAS 101 or FAS 330 or PGS 101 or SOC 101 with C or better; Minimum 30 hours. Credit is allowed for only CDE 418 or SOC 418
CDE	430	Infant/Toddler Development in the Family	Examines the development of infants/toddlers, the socialization processes of families, and the interactions of these processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
CDE	450	Child Dysfunction in the Family	This course will provide a focused study of the development of dysfunction within the family context. Other contextual influences will also be considered.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: CDE 232, PGS 101, or SOC 101 with C or better; Minimum Junior standing
CDE	450	Child Dysfunction in the Family	This course will provide a focused study of the development of dysfunction within the family context. Other contextual influences will also be considered.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: CDE 232, PGS 101, or SOC 101 with C or better; Minimum Junior standing
CDE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
CDE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6	L	Prerequisite(s): Barrett Honors student
CDE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
CDE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
CDE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-7		
CDE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		
CDE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	501	Social Statistics	Understands and uses statistics for applications in the social sciences.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only CDE 501, SOC 501 or SOC 598 (Statistics for Social Sciences)
CDE	531	Theoretical Issues in Child Development	Major developmental theories, related research, and their application to family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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CDE	533	Research Issues in Child Development	In-depth exploration and critique of research focusing on child development in a family setting.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	534	Risk and Resilience in Children and Adolescents	Integrates child development, family theory, and research to understand risk and resilience in children and adolescents.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: CDE 531; FAS 500
CDE	570	Child Development for Infant Family Practice	Examines development during infancy and early childhood with an emphasis on social and emotional development, mental health, and early parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	571	Infant Mental Health for Infant Family Practice	Surveys the biological and environmental risk factors that jeopardize the mental health of infants and young children; overview of prevention and intervention strategies.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	572	Assessment of Infants, Toddlers, and Families for Infant Family Practice	Developmentally appropriate assessment of mental disorders and developmental disabilities in infants, toddlers, and preschool children and parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	573	Cultural Competence for Infant Family Practice	Examines cultural issues impacting parent-child relationships and child rearing and the effectiveness of infant mental health and early intervention services on families of various ethnic and cultural backgrounds.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	574	Observation and Reflection for Infant-Family Practice	Strategies for observing infant behavior and parent-child relationships and skills for reflective, relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	575	Advanced Observation and Reflection for Infant-Family Practice	Advanced strategies for observing infant behavior and parent-child relationships and skills for reflective relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	576	Applied Research Methods for Infant Family Practice	Survey and critical examination of child development, parent-child relationships, family relationships, and early intervention research and the application to IFP.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	610	Gender Development	Examines current theories and research concerning the various aspects of gender and developmental change.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	612	Children's Peer Relationships	Studies scientific theory, research, and evidence on peer relationships and social competence from early childhood through adolescence.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: CDE 531 with C or better
CDE	634	Prevention and Child Development	Advanced training in research and theory-based approaches to developing and evaluating prevention programs for children at risk.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite: CDE 534
CDE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
CDE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CDH	501	Digital Humanities: Critical Theory and Methods	Digital technologies are now intricately woven into our lives--whether it's in terms of authoring a paper in a text editor, sending texts and emails, or doing data analysis. Popular narratives of the "big" and the "new" celebrate and sometimes bemoan the ways that these tools shape our communication, access to information, habits and even our physical bodies. Focuses on the histories of these technologies, their operations, popular conceptions about such tools, and their affordances and limits for humanities scholarship. Students learn how to leverage digital technologies, but also how to critically read them. Broad ranging; in addition to surveying the "big tent," students are encouraged to utilize their final projects to engage with specific disciplinary digital tools and methods relevant to their scholarly work.	N	LEL	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): enrolled in Digital Humanities certificate program
CDH	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDH	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDH	598	Special Topics	Topical courses not offered in regular course rotation (e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand).	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
CED	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
CED	250	Career Development	Covers models of the individual, the world of work, and decision making with emphasis on individual application.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	
CED	294	Special Topic	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
CED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
CED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
CED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
CED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
CED	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7		

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CED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
CED	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	501	Intro to Research and Evaluation in Counseling	Introduction to the basic models of research and evaluation in the field of counseling.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CED 501 or 591 (Res. & Eval. in Counseling)
CED	502	Counseling Research Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate counseling research problems using statistical software.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CED 502 or CED 591 (Counseling Research Data Analysis)
CED	522	Theories of Counseling and Psychotherapy	Presents major theories of psychological intervention as well as underlying personality theory upon which they are based.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	523	Psychological Tests	Standardized tests in the study of the individual, with emphasis on test score interpretation in counseling.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	525	Educational Evaluation	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: COE 501
CED	527	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	528	School Counseling	Introduces counseling within multicultural settings. Emphasizes counseling, consultation, and coordination skills needed for schools' comprehensive developmental guidance programs.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	529	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	534	Occupations and Careers	The world of work, career development, education, and training for occupational entry and mobility.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	545	Analysis of the Individual	Theory and methods commonly used in studying the individual. Observational methods, diagnostic interviews, structured, and semi-structured methods for assessing personality.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	567	Group Dynamics and Counseling	Group process factors, theory, and diversity issues determining effective interaction in small groups. Emphasis placed on lecturettes, self awareness, and experiential components.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	577	Counseling Prepracticum	Focus on racial, social, and cultural factors in the development of helping relationships through integration of cognitive and affective self-awareness with counseling skills.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling Psychology MC or PhD student
CED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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CED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	672	Marriage and Family Counseling	Introduces marriage and family counseling theories. Emphasizes a systems-communication model utilizing cocounseling.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Counseling Graduate student
CED	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Counseling Graduate student
CED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Counseling Graduate student
CED	685	School Counseling Internship	Structured practical experience in school counseling following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	YGB	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Masters of Counseling major
CED	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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CED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CEE	181	Technological, Social, and Sustainable Systems	Introduces the importance and role of technological, social, and sustainable systems in the modern world. Provides a framework for the theory and practice of sustainable engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3	HU	Credit is allowed for only CEE 181, FSE 181, or SOS 181
CEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		
CEE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	210	Engineering Mechanics I: Statics	Force systems, resultants, equilibrium, distributed forces, area moments, fluid statics, internal forces, friction, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: FSE 100 with C or better; MAT 266 (or MAT 271) with C or better; PHY 121 with C or better; PHY 122 with C or better; Credit is allowed for only CEE or CNE 210
CEE	212	Engineering Mechanics II: Dynamics	Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: CEE 210 (or CNE 210) and MAT 275 (or MAT 274) completed with C or better; Credit is allowed for only CEE or CNE 212

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CEE	213	Introduction to Deformable Solids	Strain-displacement and stress-strain-temperature relations. Stresses and deformations due to axial, shear, torsional and bending moments. Buckling, stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: CEE 210 (or CNE 210) with C or better; MAT 274 (or MAT 275) with C or better; Credit is allowed for only CEE or CNE 213
CEE	281	Surveying	Theory and fieldwork in construction and land surveys.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): MAT 170 or higher with C or better; Credit is allowed for only CEE 281, CNE 241 or CON 241
CEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	300	Engineering Business Practice	Engineering economic principles, cost/benefit analysis, project financing and delivery, management of engineering design, business practices, ethical and professional responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3	L	Pre-requisites: Engineering BSE student; Junior or Senior standing; MAT 267 with C or better
CEE	321	Structural Analysis and Design	Statically determinate and indeterminate structures (trusses, beams, and frames) by classical and matrix methods. Introduces structural design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Prerequisite(s): Civil Engineering BSE or Construction Engineering BSE major; CEE 212 or CNE 212 or MAE 212; CEE 213 or CNE 213 with C or better; Credit is allowed for only CEE 321 or CNE 321
CEE	341	Fluid Mechanics for Civil Engineers	Fundamental principles and methods of fluid mechanics forming the analytical basis for water resources engineering. Conduit and open channel flow.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Pre-requisites: BSE Civil Engineering student; CEE 212 (or CEE 211 or MAE 212) and CEE 213 with C or better; Pre/Co-requisite: CEE 384 or MAE 384 (with C or better if completed)
CEE	351	Geotechnical Engineering	Index properties and engineering characteristics of soils. Compaction, permeability and seepage, compressibility and settlement, and shear strength.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Prerequisite(s): CEE 213 (or CNE 213) with C or better; BSE Civil Engineering or Construction Engineering major; Credit is allowed for only CEE or CNE 351
CEE	353	Civil Engineering Materials	Structure and behavior of civil engineering materials, including steel, aggregate, concrete, masonry, asphalt, wood, composites. Atomic structure and engineering applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): CEE 213 (or CNE 213) with C or better; BSE Civil Engineering or Construction Engineering major; Credit is allowed for only CEE or CNE 353
CEE	361	Introduction to Environmental Engineering	Concepts of air and water pollution; environmental regulation, risk assessment, chemistry, water quality modeling, water and wastewater treatment systems designs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Prerequisite(s): Fulton Engineering undergraduate student; CEE 213 with C or better; CHM 114 or CHM 116; Pre- or corequisite(s): IEE 380
CEE	372	Transportation Engineering	Fundamental background of highway and traffic engineering in the areas of planning, design, and operations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Pre-requisites: Civil Engineering BSE student; CEE 213 with C or better; Pre/Co-requisite: IEE 380
CEE	384	Numerical Methods for Engineers	Numerical methods and computational tools for selected problems in engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3	CS	Prerequisite(s): Fulton Engineering undergrad; MAT 274 or 275 with C or better; MAT 242 or 343 (or 342 for non-MAE student) with C or better; Pre- or corequisite(s): MAT 267 or 272 with C or better if complete; Credit allowed for only MAE 384 or CEE 384
CEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
CEE	400	Earth Systems Engineering and Management	Introduces earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3	(L or HU) & H	Prerequisite(s): Civil Engineering BSE major; CEE 300 with C or better OR non-CEE junior or senior; Credit is allowed for only CEE 400 or CNE 400
CEE	412	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 351 and 353 with C or better; Credit is allowed for only CEE 412 or 511
CEE	420	Steel Structures	Behavior of structural components and systems. Design of steel members and connections. Load and resistance factor design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: BSE Civil Engineering or Construction Engineering major; CEE 321, or CNE 321 with C or better. Credit is allowed for only CEE 420 or CNE 420
CEE	421	Concrete Structures	Behavior of concrete structures and the design of reinforced and prestressed concrete members, including footings. Partial design of concrete building system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: BSE Civil Engineering or Construction Engineering major; CEE 321 or CNE 321 with C or better; Credit is allowed for only CEE or CNE 421
CEE	423	Structural Design	Analysis and design of reinforced concrete steel, masonry, and timber structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 421 with C or better; Pre/Co-requisite: CEE 420 (with C or better if completed)
CEE	432	Developing Software for Engineering Applications	Matrix and computer applications to structural engineering and structural mechanics. Stiffness and flexibility methods, finite elements, and differences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; Credit is allowed for only CEE 432 or 532
CEE	440	Hydrology	Descriptive and quantitative hydrology; hydrologic cycle, models, and systems. Rain-runoff models. Hydrologic design. Concepts, properties, and basic equations of groundwater flow. Emphasizes quantitative methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): CEE 341 or MEE 340 or GLG 362 with C or better; Credit is allowed for only CEE 440 or CEE 545 or CEE 598 (Hydrology) or GLG 471 or GLG 490 (Hydrology)
CEE	441	Water Resources Engineering	Applies the principles of hydraulics and hydrology to the engineering of water resources projects; design and operation of water resources systems; water quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 341 with C or better
CEE	452	Foundations	Applies soil mechanics to foundation and retaining wall systems, including bearing capacity, settlement, and lateral earth pressure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): Civil Engineering BSE or Construction Engineering major; CEE 351 or CNE 351 with C or better; Credit is allowed for only CEE 452 or CNE 452
CEE	462	Unit Operations in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 361 with C or better
CEE	466	Urban Water System Design	Capacity; planning and design of water supply; domestic and storm drainage; and solid waste systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 341 and 361 with C or better
CEE	467	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 361 or MIC 220 with C or better; Credit is allowed for only CEE 467 or 567

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
CEE	470	Sustainable Environmental Biotechnologies	Introduces principles of green chemistry and green engineering and their integration in the design of sustainable bioengineering and biotechnology applications that protect environmental quality and human health.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: CEE 361; Credit is allowed for only CEE 470, 494 (Sustainable Environmental Biotechnologies), 570 or 598 (Sustainable Environmental Biotechnologies)
CEE	474	Transportation Systems Planning	Transportation systems modeling procedures, travel characteristics analysis, traffic predictions, transportation systems management, and transit planning methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 372 and 384 with C or better
CEE	475	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 372 with C or better; Credit is allowed for only CEE 475 or 576
CEE	481	Civil Engineering Project Management	Civil engineering project management and administration, planning and scheduling, cost estimating and bidding strategies, financial management, quality control and safety, and computer applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; CEE 351 with C or better; CEE 372 with C or better. Credit is allowed for only CEE 481 or 585
CEE	483	Highway Materials, Construction, and Quality	Properties of highway materials, including aggregates, asphalt concrete, and portland cement concrete; construction practice; material delivery, placement, and compaction; quality control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 351 and CEE 372 and CEE 353 with C or better. Credit is allowed for only CEE 483 or 583
CEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	485	Sustainable Civil and Environmental Systems Engineering	Provides working knowledge of operations research methodologies, both the traditional and more modern metaheuristic techniques, to evaluate sustainable civil engineering systems and quantitatively evaluate project alternatives involving single or multiple goals.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 300; MAT 242 with C or better
CEE	486	Integrated Civil Engineering Design	Requires completion of a civil engineering design in a simulated practicing engineering environment. Limited to undergraduates in their final semester.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4	L	Pre-requisites: Civil Engineering BSE student; CEE 321; CEE 341; CEE 351; CEE 361; CEE 372 with C or better OR Construction Engineering student: CEE or CNE 321; CEE or CNE 351 with C or better. Credit is allowed for only CEE or CNE 486
CEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6		Prerequisite(s): Barrett Honors student
CEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6	L	Pre-requisite: Barrett Honors Engineering student
CEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-7		
CEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CEE	506	Life Cycle Assessment for Civil Systems	Covers fundamental and advanced concepts of the life cycle assessment framework exploring products, services, activities and infrastructure systems. Examines key concepts for system boundary selection, functional unit selection, inventorying, impact assessment and interpretation stages with a focus on energy and environmental assessment. Advanced concepts include allocation of effects, problem formulation for assessing footprints versus decisions or policies, and assessment of infrastructure interdependencies and supply chains. Exposes tools and data sources and presents approaches for evaluation of sensitivity and uncertainty of results. Encourages students with broad sustainability interests to enroll and explore how life cycle assessment can aid their work by shifting their views from direct to cradle-to-grave effects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CEE 506 or CEE 598 (Lifecycle Assessment) or SOS 546 or SOS 598 (Lifecycle Assessment)
CEE	507	Urban Infrastructure Anatomy and Sustainable Development	Understanding how built environment infrastructure systems interact with ecosystem services is critical for policies and decisions directing urban sustainability. Brings together students from several disciplines to develop a semester-long research project focused on a particular urban sustainability problem in Phoenix. During the semester, students are given background on how infrastructure systems work and are interdependent, and explore tools and methods for urban sustainability assessment with peers from several disciplines. As a class, students evaluate a particular urban sustainability problem for Phoenix, interact with local policy and decision makers in developing solutions, and present their findings at the end of the semester to the ASU community.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): degree-or nondegree-seeking graduate. Credit for only CEE 507 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or PUP53 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or SOS547 or SOS598 (Urban Infrastr Anatomy & Sustain Dev)
CEE	511	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Graduate Civil Engineering student; Credit is allowed for only CEE 412 or 511
CEE	512	Pavement Performance and Management	Pavement management systems, including data collection, evaluation, optimization, economic analysis, and computer applications for highway and airport design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Graduate Civil Engineering student
CEE	513	Pavement Evaluation, Maintenance, and Rehabilitation	Provides the necessary information for pavement engineers to evaluate, identify, and select reliable and cost-effective rehabilitation alternatives for existing Hot Mix Asphalt (HMA) and Portland Cement Concrete (PCC) pavements.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	514	Bituminous Materials and Mixture	Types of bituminous materials used in pavement mixtures. Chemical composition, physical properties, desirable aggregate characteristics, optimum asphalt contents, superpave asphalt binder, mixture design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Graduate Civil Engineering student
CEE	515	Properties of Concrete	Materials science of concrete. Cement chemistry, mechanisms of hydration, interrelationships among micro- and macro-properties of cement-based materials. Mechanical properties, failure theories, fracture mechanics of concrete materials. Cement-based composite materials and the durability aspects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate tudent
CEE	516	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	521	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods; applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	522	Experimental Stress Analysis	Specification and analysis of stress and strain at a point, stress-strain relationships. Mechanical, optical, and electrical strain gages and circuits, digital data acquisition and analysis, closed loop mechanical testing, fracture mechanics, optical methods and photoelasticity, and introduction to nondestructive testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	526	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): graduate Engineering student; APM 505 or MAE 501 with C or better; Credit is allowed for only CEE 526 or MAE 527
CEE	527	Advanced Concrete Structures	Ultimate strength design. Combined shear and torsion. Serviceability. Plastic analysis. Special systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	530	Prestressed Concrete	Materials and methods of prestressing. Analysis and design for flexure, shear, and torsion. Prestress losses due to friction, creep, shrinkage, and anchorage set. Statically indeterminate structures. Design of flat slabs, bridges, and composite beams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	532	Developing Software for Engineering Applications	Fundamentals of engineering software development and object-oriented programming. Programming in C++. Development of matrix toolbox. Introduces finite element method. Computer graphics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 432 or 532
CEE	533	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student

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CEE	536	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Engineering CEE Graduate student; Credit is allowed for only CEE 536, MAE 494 (Structural Dynamics) or 515
CEE	540	Groundwater Hydrology	Physical properties of aquifers, well pumping, subsurface flow modeling, unsaturated flow, numerical methods, land subsidence, and groundwater pollution.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	541	Surface Water Hydrology	Hydrologic cycle and mechanisms, including precipitation, evaporation, and transpiration; hydrograph analysis; flood routing; statistical methods in hydrology and hydrologic design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	543	Water Resources Systems	Theory and application of quantitative planning methodologies for the design and operation of water resources systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	545	Hydrology	Descriptive and quantitative hydrology; hydrologic cycle, models and systems. Rain-runoff models. Hydrologic design. Concepts, properties and basic equations of groundwater flow. Emphasizes quantitative methods.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): Civil, Environmental and Sustainable Engineering MS, MSE or PhD major; Credit is allowed for only CEE 440 or CEE 545 or CEE 598 (Hydrology) or GLG 471 or GLG 490 (Hydrology)
CEE	550	Soil Behavior	Physicochemical aspects of soil behavior, stabilization of soils, and engineering properties of soils.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	551	Advanced Geotechnical Testing	Odometer, triaxial (static and cyclic) back pressure saturated and unsaturated samples, pore pressure measurements, closed-loop computer-controlled testing, in-situ testing, and sampling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	553	Advanced Soil Mechanics	Applies theories of elasticity and plasticity to soils, theories of consolidation, failure theories, and response to static and dynamic loading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	554	Shear Strength and Slope Stability	Shear strength of saturated and unsaturated soils strength-deformation relationships, time-dependent strength parameters, effects of sampling, and advanced slope stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	555	Advanced Foundations	Deep foundations, braced excavations, anchored bulkheads, reinforced earth, and underpinning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	557	Geoenvironmental Engineering	Environmental site assessment, solid waste management, waste containment system design, soil and groundwater remediation, soil erosion control, brownfields development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	558	Unsaturated Soil Mechanics	Advanced unsaturated soil mechanics theory, including introduction of stress-state variables and constitutive relationships for unsaturated flow and stress-strain applications. Knowledge of CEE 351 or equivalent material is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	559	Earthquake Engineering	Characteristics of earthquake motions, selection of design earthquakes, site response analyses, seismic slope stability, and liquefaction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	560	Soil and Groundwater Remediation	Presents techniques for remediation of contaminated soils and groundwaters with basic engineering principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	561	Physical-Chemical Treatment of Water and Waste	Theory and design of physical and chemical processes for the treatment of water and wastewaters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	562	Environmental Biochemistry and Waste Treatment	Theory and design of biological waste treatment systems. Pollution and environmental assimilation of wastes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	563	Environmental Engineering Chemistry	Analyzes water, domestic and industrial wastes, lab procedures for pollution evaluation, and the control of water and waste treatment processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	564	Contaminant Fate and Transport	Fate and transport processes with emphasis on governing equations and parameters relevant to the migration of chemicals in the environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	565	Advanced Environmental Biotechnology	Emerging topics in environmental biotechnology and related problem-solving techniques.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); CEE 562 and 567; Credit is allowed for only CEE 565 or 598 (Advanced Environmental Biotechnology)
CEE	567	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Engineering CEE Graduate student; Credit is allowed for only CEE 467 or 567
CEE	568	Unit Processing in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student

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CEE	569	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): graduate Engineering major; Credit is allowed for only CEE 469 or CEE 569 or CHE 469 or CHE 569
CEE	570	Sustainable Environmental Biotechnologies	Introduces principles of green chemistry and green engineering and their integration in the design of sustainable bioengineering and biotechnology applications that protect environmental quality and human health.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil, Environmental and Sustainable Engineering MS, MSE or PhD student; Credit is allowed for only CEE 470, 494 (Sustainable Environmental Biotechnologies), 570 or 598 (Sustainable Environmental Biotechnologies)
CEE	571	Advanced Environmental Chemistry	Applied water quality and water treatment aquatic chemistry. Knowledge of environmental chemistry topics is necessary to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental and Sustainable Engineering MS, MSE or PhD major
CEE	572	Life Cycle Assessment for Civil Systems	Concepts of the life cycle assessment (LCA) framework exploring products, services, activities and infrastructure systems. Examines key concepts for system boundary selection, functional unit selection, inventorying, impact assessment and interpretation stages with a focus on energy and environmental assessment. Advanced concepts include allocation of effects, problem formulation for assessing footprints versus decisions or policies, and assessment of infrastructure interdependencies and supply chains. Exposure to tools and data sources occur throughout the course; presents approaches for evaluation of sensitivity and uncertainty of results.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): graduate Civil Engineering or Construction Engineering major
CEE	573	Transportation Operations	Driver, vehicle, and roadway characteristics; traffic control devices; traffic engineering studies; and transportation system management measures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	576	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 475 or 576
CEE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student
CEE	581	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student; Credit is allowed for only CEE 581 or SOS 552
CEE	582	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student; Credit is allowed for only CEE 483 or 583
CEE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	585	Civil Engineering Project Management	Civil engineering project management and administration, planning and scheduling, cost estimating and bidding strategies, financial management, quality control and safety, and computer applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): MS, MSE or PhD Civil, Environmental and Sustainable Engineering major. Credit is allowed for only CEE 481 or CEE 585
CEE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CEE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student
CEE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1		Pre-requisite: Civil Engineering MS or MSE student
CEE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		Pre-requisite: Engineering CEE Graduate student
CEE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering PhD student
CEE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Pre-requisite: Civil Engineering PhD student
CEE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	IND	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1		Pre-requisite: Civil Engineering PhD student
CEE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Prerequisite(s): Civil Engineering PhD student
CEN	501	Computer Systems I	Introduces digital CMOS circuit and logic design and signal processing and analysis. Design of digital CMOS logic gates, combinational and sequential logic circuits, arithmetic logic unit; register-transfer-level design; Fourier and z transforms, filters, sampling, random variables, distribution and density functions.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisites: Computer Engineering Graduate student; Credit is allowed for only CEN 501 or 591 (Computer Systems I)
CEN	502	Computer Systems II	Covers fundamentals of computer architecture and focuses on basic principles of systems programming, operating systems, compilers and networking topics that cover the computer science to computer engineering interface.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Engineering Graduate student; Credit is allowed for only CEN 502 or 591 (Computer Systems II)
CEN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CEN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		

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CEN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CEN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CHE	100	Introduction to Chemical Engineering	Introduces design in chemical engineering, teaming, chemical engineering profession, computer models, communication skills, quality and customer satisfaction. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	2		Pre-requisite: Ira A. Fulton School of Engineering and University College student
CHE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	211	Introduction to Chemical Processing	Applies chemical engineering analysis and problem solving to chemical processes material and energy balance methods and skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): CHM 116 with C or better; MAT 266 or 271 with C or better
CHE	231	Introduction to Transport Phenomena I: Fluids	Transport phenomena, with emphasis on fluid systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s) with C or better: CHE 211; MAT 266 or 271; PHY 121; Corequisite(s): MAT 274 or 275; Credit is allowed for only CHE 231 or 501

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CHE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Prerequisite(s): Barrett Honors student
CHE	334	Introduction to Transport Phenomena II: Heat and Mass Transfer	Applies heat and mass transport principles. Design of heat exchangers and continuous contactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Chemical Engineering BSE major; CHE 231 with C or better
CHE	342	Introduction to Applied Chemical Thermodynamics	Applies conservation and accounting principles with nonideal property estimation techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Biomedical Engineering BSE major with BME 200 with C or better OR Chemical Engineering BSE major with CHE 211 with C or better; Pre- or corequisite(s): MAT 267 or 272 with C or better if completed
CHE	352	Chemical Engineering Lab I	Introduces engineering lab equipment, data collection, and analysis; strengthens ability to generate written reports and oral presentations; reinforces teamwork skills; strengthens and extends the understanding of earlier technical contents in the curriculum.	N	LAB	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3	L	Prerequisite(s): Chemical Engineering BSE major; CHE 334 with C or better
CHE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	432	Principles of Chemical Engineering Design	Multicomponent distillation, engineering economics, equipment sizing and costs, plant operation economics, and simulation and optimization techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; CHE 334, 342, 442, and 433 with C or better
CHE	433	Modern Separations	Design of modern separation equipment in chemical engineering other than fractionation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; CHE 334 and CHE 342 with C or better
CHE	442	Introduction to Chemical Reactor Design	Applies kinetics to chemical reactor design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; CHE 334 and CHE 342 with C or better; Credit is allowed for only CHE 442 or CHE 505
CHE	451	Chemical Engineering Laboratory II	Operation, control, and design of experimental and industrial process equipment; independent research projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Chemical Engineering BSE major; CEE 384 or CHE 394 (Numerical Methods for Chemical Engineers) with C or better; CHE 334 with C or better; CHE 342 with C or better; CHE 352 with C or better
CHE	461	Process Dynamic Control	Process dynamics, instrumentation, and feedback applied to automatic process control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3	CS	Prerequisite(s): Chemical Engineering BSE major; CEE 384 or CHE 394 (Numerical Methods for Chemical Engineers) with C or better; CHE 211 with C or better; CHE 433 or 442 with C or better
CHE	462	Process Design	Applies economic principles to optimize equipment selection and design; development and design of process systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3	L	Prerequisite(s): Fulton Engineering undergraduate student; CHE 432, 433, and 442 with C or better
CHE	469	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Chemical Engineering BSE major; CHE 342, or Civil Engineering BSE major; CEE 361, or Materials Science and Engineering BSE major; MSE 330; Credit is allowed for only CEE 469 or CEE 569 or CHE 469 or CHE 569

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CHE	475	Biochemical Engineering	Applies chemical engineering methods, mass transfer, thermodynamics, and transport phenomena to industrial biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Pre-requisite: CHE 334 and 442
CHE	476	Bioreaction Engineering	Principles of analysis and design of reactors for processing with cells and other biologically active materials; applies reaction engineering in biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Pre-requisites: Engineering BS or BSE student OR Graduate Engineering student
CHE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Prerequisite(s): Barrett Honors student
CHE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
CHE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		Prerequisite(s): Fulton Engineering undergraduate student
CHE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-7		Prerequisite(s): Fulton Engineering undergraduate student
CHE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	518	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only MSE 518, EEE 518, MAE 518, MSE 475, or CHE 518
CHE	533	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only BME 533 or CHE 533 or MAE 533
CHE	543	Thermodynamics of Chemical Systems	Classical and statistical thermodynamics of nonideal physicochemical systems and processes; prediction of optimum operating conditions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Pre-requisites: Graduate Engineering student
CHE	544	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
CHE	561	Advanced Process Control	Dynamic process representation, linear optimal control, optimal state reconstruction, and parameter and state estimation techniques for continuous and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
CHE	569	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): graduate Engineering major; Credit is allowed for only CEE 469 or CEE 569 or CHE 469 or CHE 569
CHE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
CHE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
CHE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): graduate Chemical Engineering student
CHE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
CHE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student
CHE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): graduate CHE major

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CHE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
CHE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
CHE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		Pre-requisite: Graduate Engineering student
CHE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student
CHE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
CHE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
CHE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student
CHE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
CHE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student
CHI	101	First-Year Chinese I	Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills. Standard dialect. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Credit is allowed for only CHI 101 or MND 101
CHI	102	First-Year Chinese II	Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills. Standard dialect. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Prerequisite(s): CHI 101; Credit is allowed for only CHI 102 or MND 102
CHI	110	Intensive Chinese I	Adopts different pedagogical approaches to help students acquire basic skills in listening, speaking, reading and writing in Modern Standard Chinese. While linguistic elements are the focus of this course, appropriate cultural information related to language use is also an important component of instruction. Trains students to be able to function successfully in Chinese culture. Students don't simply learn to "speak Chinese" or read and write characters as some form of party trick. Teaches a practical skill set that allows students to communicate and behave appropriately in Chinese culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		Credit is allowed for only CHI 101 or CHI 102 or CHI 110
CHI	120	Introduction to Chinese Culture	Introduces geographical, historical, literary, and intellectual premises of Chinese culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre/Co-requisites: ENG 101, 105, or 107; Credit is allowed for only SLC 120 or CHI 120
CHI	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Maximum 25 hours
CHI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	201	Second-Year Chinese I	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Prerequisite(s): CHI 102; Credit is allowed for only CHI 201 or MND 201
CHI	202	Second-Year Chinese II	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Prerequisite(s): CHI 201; Credit is allowed for only CHI 202 or MND 202
CHI	205	Chinese Calligraphy	Introduces styles and techniques of Chinese writing. Requires no knowledge of Chinese or Japanese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1		

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CHI	210	Intensive Chinese II	Intensive 2nd-year college-level Modern Standard Chinese designed for students who are highly motivated and have successfully completed at least 1st-year college-level Modern Standard Chinese language course or equivalent. Reviews and reinforces 1st-year Chinese grammatical patterns and introduces new ones in order to further develop students' communicative competence in listening, speaking, reading and writing in modern Chinese. Introduces over 500 new characters and presents and expands an equal number of spoken vocabulary items. Students increase their vocabulary, consolidate their grammar, describe objects and express ideas more accurately and fluently.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		Prerequisite(s): CHI 102 or 110 with C or better; Credit is allowed for only CHI 201 or CHI 202 or CHI 210
CHI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	301	Third-Year Chinese I	Expansion of proficiency in listening comprehension, speaking, reading, and writing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: CHI 202 with C or better
CHI	302	Third-Year Chinese II	Continuation of CHI 301.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: CHI 301 with C or better
CHI	307	Introduction to Literary Chinese I	Reading in various genres of pre-20th century literature (wen-yen), with analysis of the structure of the classical writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: CHI 302, JPN 202, or KOR 202 with C or better
CHI	308	Introduction to Literary Chinese II	Continuation of CHI 307.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: CHI 307 with C or better
CHI	321	Chinese Literature	Masterworks of the tradition from the 7th century BCE through the 13th century. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	
CHI	322	Chinese Literature	Masterpieces from the later tradition and its transition to modern times. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	
CHI	333	China	Political, economic, social, and cultural history of the Chinese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 333, HST 383 or SLC 333
CHI	335	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only CHI 335, HPS 325, HST 385 or SLC 335
CHI	336	Interpreting China's Classics	Study of selected Confucian and/or Taoist classics and ways they have been read in both Asian and Western scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 336, HST 386 or SLC 336
CHI	338	The Daoist Bible: The Dao de jing	At 5,000 words, the Dao de Jing (Tao-te ching) is arguably the shortest religious book in the world. It is also the most widely translated, after the Christian Bible. Introduces the wisdom of the Old Boy, Laozi himself, and to some of the startlingly wide variety in which his short, gnomic utterances have been interpreted. No knowledge of Chinese required; all readings and lectures in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101, 105 or 107 with C or better; Credit is allowed for only CHI 338, 394 (Daoist Bible: The Dao De Jing) or REL 338
CHI	343	Daoism	Introduces the history, doctrines, and practices of Taoism from the mid-second century CE up to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G & H	Pre-requisites: ENG 102, 105 or 108 with C or better; 24 or more hours; Credit is allowed for only CHI or REL 343
CHI	345	Chinese Film and Civilization	Screening and discussion of recent films from China, Taiwan, and Hong Kong in the context of modern Chinese civilization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
CHI	348	Pathways into Chinese Culture	Introduces some important aspects of China's cultural history and traditions. Provides an overview of Chinese history and culture and reviews major developments in science and technology. Incorporates current social and cultural topics and reviews through the lens of historical context. Classroom activities enable students to gain a better understanding of traditional Chinese culture with respect to both elite and popular culture. Conducted in Mandarin and is designed for the students who are currently enrolled in CHI 301 and CHI 401 or whose Chinese proficiency level in all four skills (speaking, listening, reading and writing) are at the intermediate mid to intermediate high level according to ACTFL guidelines.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): CHI 202 with C or better. Credit is allowed for only CHI 348 or CHI 394 (Pathways into Chinese Culture)
CHI	380	The Chinese Language	Introduces the Chinese languages from linguistic perspectives. Topics include the linguistic structure and characteristics (phonetics, phonology, morphology and syntax) of the Chinese language; linguistic history and dialects of Chinese; and its relationship with culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
CHI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHI	401	Fourth-Year Chinese I	Focuses on solidifying and improving students' knowledge of modern Mandarin. Emphasizes learning strategies to increase reading and listening comprehension, as well as further strengthening oral fluency and written skills. Surveys a wide variety of original text and media materials, in both full-form and simplified characters. Conducted in Chinese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: CHI 302 with C or better
CHI	402	Fourth-Year Chinese II	Continuation of CHI 401.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: CHI 401 with C or better
CHI	407	Chinese for Academic and Professional Purposes I	Part of the Chinese Flagship program; course has a three-fold objective: (1) to improve language proficiency in all four language skills; (2) to support other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; and (3) to develop the use of explicit language learning strategies that support professional-level literacy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: CHI 402 with C or better
CHI	408	Chinese for Academic and Professional Purposes II	Part of the Chinese Flagship Program. Improves language proficiency in all four language skills; supports other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; develops the use of explicit language learning strategies that supports professional level literacy. All course work in Mandarin Chinese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: CHI 407 with C or better
CHI	430	Readings in Chinese Religions	Readings in Chinese religious texts, including Buddhism, Daoism, local religious cults, and others. May be repeated once for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 308 (CHI 414) with C or better
CHI	450	Classical Prose	Readings in classical prose forms, including guwen, sanwen, pianwen, fu, and incidental writings. Course content varies with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 308 with C or better
CHI	451	Chinese Cultural History I	China's classics in translation studied both for their intrinsic ideas and for the origins of Chinese thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(HU or SB) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 451, HST 451 or SLC 451
CHI	452	Chinese Cultural History II	Evolution of Confucian thought, its synthesis with Taoism and Buddhism, and modern reactions against, and uses of, Confucian traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & G & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 452 or HST 452 or SLC 452
CHI	461	Classical Vernacular Performance Literature	Readings in performance literature in colloquial Chinese. Bianwen, zhugongdiao, baojuan, zaju, chuangqi drama.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 302; CHI 307 with C or better
CHI	462	Readings in Traditional Xiaoshuo	Readings in the shorter and longer fiction of the late imperial period written in classical vernacular language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 302; CHI 308
CHI	470	Modern Chinese Literature and Culture	Readings in modern Chinese literary texts, including prose, fiction, and poetry. Course content changes with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: CHI 302 with C or better
CHI	482	History of the Chinese Language	Introduces the history of the Chinese language. Graduate/advanced undergraduate-level introductory course on the historical changes of the sounds, writing system, grammar, and other aspects of the Chinese language. Topics include the historical phonology of Chinese, development of graphs (Hanzi), some topics of syntactic changes in texts, morphology, lexicography, cultural implication of language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites; CHI 302; CHI 308
CHI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
CHI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
CHI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
CHI	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	509	Methods of Research in Chinese Applied Linguistics	Offers an overview of issues in applied linguistics, specifically related to the teaching and learning of Chinese as a second language. Divided according to broad topics and may vary depending on interests and background of class participants.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student. Credit is allowed only for CHI 509 or 591 (Chinese Applied Linguistics)
CHI	514	Advanced Classical Chinese	Close readings in selected premodern texts, with focus on special grammatical features, and increased vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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CHI	520	Teaching of Chinese as a Second Language	Theory and practice of teaching Chinese, including presentation, interaction, and evaluation, with consideration given to cultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	561	Readings in Traditional Xiaoshuo	Introduces major issues, texts, and resource materials for the study of narrative forms, including short stories and longer works of fiction. Focuses on the period from 1400 to 1900. One year of university-level classical Chinese or equivalent proficiency; three years of university-level modern Chinese recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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CHI	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
CHI	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	101	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	
CHM	101	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4	SQ	
CHM	101	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	
CHM	107	Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This lecture course may be combined with the laboratory CHM 108 for those interested in lab course credit. Cannot be used for major credit in chemical or biochemical sciences. Both CHM 107 and CHM 108 must be taken to secure SQ credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	
CHM	107	Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This lecture course may be combined with the laboratory CHM 108 for those interested in lab course credit. Cannot be used for major credit in chemical or biochemical sciences. Both CHM 107 and CHM 108 must be taken to secure SQ credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	SQ	
CHM	108	Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	
CHM	108	Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	SQ	Pre/Co-requisite: CHM 107

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CHM	111	General Chemistry Laboratory for Majors I	Laboratory course in general chemistry for chemistry and biochemistry majors intended to complement CHM 117 lecture course. Covers a diverse range of laboratory experiments appropriate to chemistry and biochemistry majors designed to reinforce chemical principles and to develop a broad range of chemical synthesis skills. Uses modern analytic and characterization techniques to study the physical and chemical properties of substances. Suitable for students who have completed introductory chemistry at the high school level. Both CHM 117 and CHM 111 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	SQ	Pre- or corequisite(s): CHM 117 with C or better if completed; Biochemistry, Biophysics or Chemistry major
CHM	112	General Chemistry Laboratory for Majors II	Continuation of CHM 111 laboratory course in general chemistry for chemistry and biochemistry majors intended to complement CHM 118 lecture course. Covers a diverse range of laboratory experiments appropriate to chemistry and biochemistry majors designed to reinforce chemical principles and to develop a broad range of chemical synthesis skills. Uses modern analytic and characterization techniques to study the physical and chemical properties of substances. Both CHM 118 and CHM 112 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	SQ	Prerequisite(s): CHM 111 with C or better; Biochemistry, Biophysics or Chemistry major. Pre- or corequisite(s): CHM 118 with C or better if completed
CHM	113	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	Prerequisite(s): CHM 101 with C or better, Mathematics Placement Test score of 50% or higher, or Pre/Corequisite(s): MAT 170, 171, 210, 251, 265 or 270 with C or better if completed
CHM	113	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4	SQ	Prerequisite(s): CHM 101 with C or better, Mathematics Placement Test score of 50% or higher, or Pre/Corequisite(s): MAT 170, 171, 210, 251, 265 or 270 with C or better if completed
CHM	113	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	Prerequisite(s): CHM 101 with C or better, Mathematics Placement Test score of 50% or higher, or Pre/Corequisite(s): MAT 170, 171, 210, 251, 265 or 270 with C or better if completed
CHM	114	General Chemistry for Engineers	Chemical principles with emphasis toward engineering. Students without high school chemistry or are chemical engineering majors must enroll in the CHM 113, 116 sequence instead of CHM 114.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4	SQ	Prerequisite(s): CHM 101 with C or better, or Mathematics Placement Test score of 50% or higher, or Pre- or corequisite(s): MAT 170, 171, 210, 251, 265, or 270 with C or better if completed
CHM	116	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	Prerequisite(s): CHM 113 or 114 or 117 with C or better
CHM	116	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4	SQ	Prerequisite(s): CHM 113 or 114 or 117 with C or better
CHM	116	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	Prerequisite(s): CHM 113 or 114 or 117 with C or better
CHM	117	General Chemistry for Majors I	Lecture course in general chemistry for chemistry and biochemistry majors and is complemented by the CHM 111 laboratory course. Covers electronic structure of atoms and molecules, intermolecular forces, bonding models, molecular geometry, physical states of matter, gas laws, and chemistry of condensed matter and modern materials. Highlights chemical reactivity, periodic trends and descriptive chemistry. Both CHM 111 and CHM 117 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	SQ	Prerequisite(s): Biochemistry, Biophysics, or Chemistry major; CHM 101 with C or better OR Mathematics Placement Test score of 50% or higher OR Pre- or corequisite(s): MAT 170, 171, 210, 251, 265, or 270 with C or better if completed

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CHM	118	General Chemistry for Majors II	Continuation of CHM 117 lecture course in general chemistry for chemistry and biochemistry majors and is complemented by the major's CHM 112 laboratory course. Topics include thermodynamics, properties of solutions, chemical equilibrium, aqueous chemistry, acids and bases, electrochemistry, chemical kinetics, nuclear chemistry, coordination chemistry. Both CHM 118 and CHM 112 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	SQ	Prerequisite(s): Biochemistry, Biophysics, or Chemistry major; CHM 117 with C or better; Pre- or corequisite(s): MAT 266 or 271 with C or better if completed
CHM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-3		Pre-requisites: Biochemistry or Chemistry major; Maximum 45 hours
CHM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
CHM	231	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	Prerequisite(s): CHM 101, 114, 116, or 118 with C or better
CHM	231	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	SQ	Prerequisite(s): CHM 101, 114, 116, or 118 with C or better
CHM	231	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	Prerequisite(s): CHM 101, 114, 116, or 118 with C or better
CHM	233	General Organic Chemistry I	Chemistry of organic compounds.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): CHM 116 or CHM 118 with C or better
CHM	233	General Organic Chemistry I	Chemistry of organic compounds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 116 or CHM 118 with C or better
CHM	233	General Organic Chemistry I	Chemistry of organic compounds.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): CHM 116 or CHM 118 with C or better
CHM	234	General Organic Chemistry II	Continuation of CHM 233.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: CHM 233 or CHM 333 with a C or better; Credit is allowed for only CHM 234 or 334
CHM	234	General Organic Chemistry II	Continuation of CHM 233.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 233 or CHM 333 with a C or better; Credit is allowed for only CHM 234 or 334
CHM	234	General Organic Chemistry II	Continuation of CHM 233.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 233 or CHM 333 with a C or better; Credit is allowed for only CHM 234 or 334
CHM	235	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	Pre- or corequisite(s): CHM 231 with C or better if completed
CHM	235	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	SQ	Pre- or corequisite(s): CHM 231 with C or better if completed
CHM	235	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre- or corequisite(s): CHM 231 with C or better if completed
CHM	237	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre/Co-requisites: CHM 233 with C or better if completed; Credit is allowed for only CHM 237 or 337
CHM	237	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre/Co-requisites: CHM 233 with C or better if completed; Credit is allowed for only CHM 237 or 337
CHM	237	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre/Co-requisites: CHM 233 with C or better if completed; Credit is allowed for only CHM 237 or 337
CHM	238	General Organic Chemistry Laboratory II	Continuation of CHM 237.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Prerequisite(s): CHM 237 or 337 with C or better; Pre- or corequisite(s): CHM 234 with C or better if completed; Credit is allowed for only CHM 238 or 338

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CHM	238	General Organic Chemistry Laboratory II	Continuation of CHM 237.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): CHM 237 or 337 with C or better; Pre- or corequisite(s): CHM 234 with C or better if completed; Credit is allowed for only CHM 238 or 338
CHM	238	General Organic Chemistry Laboratory II	Continuation of CHM 237.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): CHM 237 or 337 with C or better; Pre- or corequisite(s): CHM 234 with C or better if completed; Credit is allowed for only CHM 238 or 338
CHM	240	Mathematical Methods in Chemistry	Introduces mathematical/computational methods in chemical kinetics, thermodynamics, quantum chemistry. Mathematical-based computer lab.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Molecular Sciences	3	CS	Pre-requisite: CHM 116 (or 118) with C or better; Pre/Co-requisites: MAT 272 or MAT 267 with C or better if completed
CHM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
CHM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
CHM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-6		Prerequisite(s): Barrett Honors student
CHM	302	Environmental Chemistry	Explores major environmental issues, problems, and solutions from analytical and chemistry perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 114 or 116 or 118 with C or better; CHM 231 or 233 or 333 with C or better
CHM	302	Environmental Chemistry	Explores major environmental issues, problems, and solutions from analytical and chemistry perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 114 or 116 or 118 with C or better; CHM 231 or 233 or 333 with C or better
CHM	303	Environmental Chemistry Laboratory	Lab in environmental chemistry to complement CHM 302. First-hand experience with sampling methods, analytical techniques, and environmental lab methods. Both CHM 303 and CHM 348 must be taken to secure L General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	2	L	Pre/Co-requisites: CHM 302 with C or better if completed
CHM	325	Analytical Chemistry	Advanced principles and theory of quantitative analysis, including stoichiometry, equilibria, photometric methods, electrochemistry, separation processes, statistical data analysis, and applications to advanced topics in analytical chemistry.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	325	Analytical Chemistry	Advanced principles and theory of quantitative analysis, including stoichiometry, equilibria, photometric methods, electrochemistry, separation processes, statistical data analysis, and applications to advanced topics in analytical chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	325	Analytical Chemistry	Advanced principles and theory of quantitative analysis, including stoichiometry, equilibria, photometric methods, electrochemistry, separation processes, statistical data analysis, and applications to advanced topics in analytical chemistry.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	326	Advanced Analytical Chemistry Laboratory	Practical methods of quantitative analysis for chemistry majors, including titrimetric, gravimetric, and photometric analysis, and analytical separation processes, statistical data analysis, and applications to advanced topics in chemical analysis.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre- or co-requisite(s): CHM 325 with C or better if completed
CHM	326	Advanced Analytical Chemistry Laboratory	Practical methods of quantitative analysis for chemistry majors, including titrimetric, gravimetric, and photometric analysis, and analytical separation processes, statistical data analysis, and applications to advanced topics in chemical analysis.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre- or co-requisite(s): CHM 325 with C or better if completed
CHM	326	Advanced Analytical Chemistry Laboratory	Practical methods of quantitative analysis for chemistry majors, including titrimetric, gravimetric, and photometric analysis, and analytical separation processes, statistical data analysis, and applications to advanced topics in chemical analysis.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre- or co-requisite(s): CHM 325 with C or better if completed
CHM	327	Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 325 and CHM 326 with C or better; Pre/Co-requisite: CHM 346 with C or better if completed
CHM	327	Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 325 and CHM 326 with C or better; Pre/Co-requisite: CHM 346 with C or better if completed
CHM	328	Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	2		Pre/Co-requisite: CHM 327 with C or better if completed

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CHM	328	Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	2		Pre/Co-requisite: CHM 327 with C or better if completed
CHM	333	Organic Chemistry for Majors I	Structures, reaction mechanisms and kinetics, and systematic syntheses of organic compounds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Biochemistry or Chemistry major; CHM 116 or 118 with C or better; Credit is allowed for only CHM 231, 233 or 333
CHM	334	Organic Chemistry for Majors II	Continuation of CHM 333.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Biochemistry or Chemistry major; CHM 333 with C or better; Credit is allowed for only CHM 234 or 334
CHM	337	Organic Chemistry Laboratory for Majors I	Emphasizes mechanisms, kinetics, and products of organic reactions.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre-requisites: Biochemistry or Chemistry major; Pre/Co-requisite: CHM 333 with C or better if completed; Credit is allowed for only CHM 237 or 337
CHM	338	Organic Chemistry Laboratory for Majors II	Continuation of CHM 337.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre-requisites: Biochemistry or Chemistry major; CHM 337 with C or better; Pre/Co-requisites: CHM 334; Credit is allowed for only CHM 238 or 338
CHM	341	Elementary Physical Chemistry	Thermodynamics, equilibrium, states of matter, solutions, and chemical kinetics. For students in premedical, biological, and educational curricula.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 114, 116, or 118 with C or better; CHM 231, 233, or 333 with C or better; MAT 251, 265, or 270 with C or better; PHY 101, 112, or 131 with C or better; Credit is allowed for only BCH 341 or CHM 341
CHM	343	Elementary Physical Chemistry Laboratory	Physical chemistry experiments.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre/Co-requisite: CHM 341 with C or better if completed; Credit is allowed for only CHM 343 or 348 and 349
CHM	345	Physical Chemistry I	Introduces quantum chemistry with application to electronic structure and dynamics of atoms and molecules.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 116 or 118 with C or better; CHM 240 OR PHY 201 OR both MAT 274 (or MAT 275) and MAT 242 (or MAT 342 or 343) with C or better; MAT 267 or 272 with C or better; PHY 131 or 151 with C or better
CHM	346	Physical Chemistry II	Introduces equilibrium and statistical thermodynamics. Laws of thermodynamics, equations of state, multicomponent chemical and phase equilibria, and electrochemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: CHM 345 with C or better
CHM	348	Physical Chemistry Laboratory I	Lab experiments in spectroscopy and computational chemistry. To secure L General Studies credit the following must be taken: CHM 303 & CHM 348 or CHM 348 & CHM 349 & CHM 452.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	L	Pre/Co-requisite: CHM 345 with a C or better if completed
CHM	349	Physical Chemistry Laboratory II	Lab experiments in thermodynamics, electrochemistry, and computational chemistry. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	L	Pre/Co-requisites: CHM 346 with C or better if completed
CHM	385	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s) with C or better: BIO 100 (or BIO 182 or 282 or GLG 101 or SES 121); CHM 101 (or CHM 113 or 114). Credit is allowed for only BIO 325 or CHM 385 or GLG 325
CHM	392	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
CHM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
CHM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		

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CHM	424	Separation Science	Basic theory and practical aspects of gas, liquid, ion-exchange, and gel-permeation chromatographies, and other important industrial and research techniques.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 234, or 334, or 346, with C or better
CHM	433	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 234 or 334 with C or better; CHM 341 or 346 with C or better; Credit is allowed for only CHM 433 or 531
CHM	434	Advanced Organic Chemistry II	Continuation of CHM 433.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: CHM 433 or CHM 531 with C or better
CHM	435	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s) with C or better: BCH 361 or BCH 461 or CHM 460; BIO 353; CHM 234 or CHM 334. Credit is allowed for only CHM 435 or CHM 535
CHM	442	Practical NMR Spectroscopy	Covers the practical operation of NMR spectrometers, common ¹ H/ ¹³ C/X nuclei NMR spectroscopy, safety around NMR spectrometers and basic NMR data processing, handling and analysis.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): CHM 101, 114, 116, or 118 with C or better; Credit is allowed for only CHM 442 or CHM 494 (Practical Nuclear Magnetic Resonance Spectroscopy)
CHM	452	Inorganic Chemistry Laboratory	Preparation and characterization of typical inorganic substances, emphasizing methods and techniques. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	L	Pre/Co-requisite: CHM 453 with C or better if completed
CHM	453	Inorganic Chemistry	Principles and applications of inorganic chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 341 or CHM 346 with C or better
CHM	460	Biological Chemistry	Structure and function of macromolecules and their involvement in the processing of energy and information by living cells.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 234 (or 334) with C or better; CHM 346 with C or better
CHM	471	Solid-State Chemistry	Crystal chemistry, thermodynamics and electrochemistry of solids, nonstoichiometric compounds, diffusion and solid-state reactions, crystal growth, and selected topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre/Co-requisite: CHM 346 with C or better if completed; Credit is allowed for only CHM 471 or 571
CHM	480	Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
CHM	480	Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		
CHM	481	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: CHM 341, CHM 346 or GLG 321 with C or better. Credit is allowed for only CHM or GLG 481
CHM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		
CHM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
CHM	485	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 341, CHM 346, or GLG 321 with C or better; Credit is allowed for only GLG 485 or CHM 485
CHM	489	Field Geochemistry	Explores basic field measurements and sampling techniques for environmental systems, with a focus on carbon cycling in the Colorado River. Surveys a variety of geochemical principles, including: equilibrium aqueous speciation, acid-base chemistry, solution-mineral equilibrium systems, oxidation-reduction reactions, organic and environmental geochemistry and biogeochemical cycles. Applies chemical principles and analytical techniques to answer questions about environmental systems and processes.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Molecular Sciences	3	L	Prerequisite(s): CHM 302 or GLG 321 or GLG 481 with C or better; Credit is allowed for only CHM 489 or GLG 489 or GLG 490 (Field Geochemistry)
CHM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-6		Prerequisite(s): Barrett Honors student
CHM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-6	L	Prerequisite(s): Barrett Honors student
CHM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		

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CHM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
CHM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-6		Prerequisite(s): Barrett Honors student
CHM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-7		
CHM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
CHM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
CHM	501	Current Topics in Chemistry		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	520	Chemical Biology	Chemical biology, broadly defined, is the application of chemical tools toward the study biological problems. The purpose of this class is to provide the foundation for translational research involving cross-disciplinary approaches to tackling significant problems in the biosciences. This one-semester class will cover topics ranging from traditional molecular biology and biochemistry to state-of-the-art techniques in genomics and proteomics. Particular emphasis will be placed on modern concepts in enzymology. The class will be taught using a combination of current literature and text-based materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Graduate students (degree and non-degree); Credit is allowed for only BCH 520 or CHM 520
CHM	523	Advanced Analytical Chemistry	Theoretical principles of analytical instrumentation and measurements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	524	Separation Science	Addresses principles and applications for all areas of chemical separations. Emphasizes separations principles in microfluidics and its interface with nanotechnology and traditional electronic materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	531	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, molecular orbital theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: degree- or nondegree-seeking graduate. Credit is allowed for only CHM 433 or CHM 531
CHM	532	Advanced Organic Chemistry II	Organic mechanisms, thermodynamic and kinetic control, structure/activity relationships, isotope effects, multistep reactions, reactive intermediates, radical reactions, electron transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	535	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Graduate degree or non-degree seeking students; Credit is allowed for only CHM 435 or 535
CHM	540	Integrated Physics and Chemistry	Collaborative inquiry methods for teaching and coordinating physics and chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CHM 540 or PHS 540
CHM	541	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CHM 541 or MSE 524
CHM	542	Practical NMR Spectroscopy	Covers the practical operation of NMR spectrometers, common ¹ H/ ¹³ C/X nuclei NMR spectroscopy, safety around NMR spectrometers and basic NMR data processing, handling and analysis.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CHM 542 or CHM 598 (Practical Nuclear Magnetic Resonance Spectroscopy)

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CHM	543	Computational Chemistry	Provides basic concepts and practical experience in computational chemistry as applied to molecules and solids. Systematically covers theoretical background and applied aspects of electronic structure methods/simulation, and related visualization techniques. Provides weekly laboratory session will provide hands-on experience with state-of-the-art molecular and solid-state simulation/visualization packages, with an emphasis on their reliability, predictive capability and practical limitations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking). Pre/Co-requisite: CHM 545
CHM	544	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CHM 544, NAN 544, PHY 444 or PHY 544
CHM	545	Quantum Chemistry	Wave and matrix formulation of quantum mechanics applied to the vibrational, rotational, and electronic states of polyatomic molecules. Hartree-Fock, electron correlation, and molecular orbital theory. Selection rules and introduction to group theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	546	Molecular Spectroscopy and Group Theory	Applies quantum mechanics to the general problem of the interaction of light with molecular systems. Angular momentum and group theory. Symmetry classifications. Overview of the formalism and experimental techniques in different resonant-based spectroscopies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	549	Advanced Topics in Physical Chemistry	Various advanced and special topics in physical chemistry. Previous topics included: supercooled liquids and the glass transition, vibrational spectroscopy of solids, phase transitions and critical phenomena.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	553	Advanced Inorganic Chemistry	Principles of modern inorganic chemistry applied over the entire periodic system. Bonding theory, chemical reactivity, spectroscopic and magnetic properties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	560	Matter and Light	Interactions of light with matter. Lasers and spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CHM 560 or PHS 560
CHM	571	Structure, Bonding, and Symmetry in Materials	Principles of structural and materials chemistry, emphasizing crystal chemistry. Symmetry of periodic structures (space groups), factors determining bond lengths and coordination geometries, and the role of structure in determining physical properties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CHM 471 or 571
CHM	581	Structure of Matter and its Properties	Models of matter and its properties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CHM 581 or PHS 581
CHM	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Molecular Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CHS	100	Introduction to Health Solutions	Addresses the roles, responsibilities and scope of practice for various health professions. Explores interprofessionalism, ethical care and current issues in health and health care through the use of case studies and activities.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		
CHS	101	The ASU Experience for Health Solutions Students	Required, one-hour course, offered in sections capped at 19 and designed to introduce all new first-time ASU students to the unique elements, culture, challenges and opportunities of their university. Covers several core topics.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	1		
CHS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	College of Health Solutions	College of Health Solutions	1-4		
CHS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		
CHS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-6		
CHS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	College of Health Solutions	1-6		
CHS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
CIS	105	Computer Applications and Information Technology	Introduces business information systems from a business intelligence perspective and the uses of application software with emphasis on database and spreadsheet packages for efficient and effective problem solving.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3	CS	
CIS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-3		
CIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		
CIS	235	Introduction to Information Systems	Survey course introducing the competitive and strategic uses of information systems, how information systems are transforming organizations and their management, and the issues, difficulties, and opportunities facing the technology professional and business manager today.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: CIS 105, 200 or 220 with C or better; MAT 210, 270, 211 or 271 with C or better; Credit allowed for only CIS 235 or CIS 236
CIS	236	Honors Introduction to Information Systems	Introduces strategic leveraging of IS solutions and surveys different facets of IS in order to gain an understanding of how business problems are addressed and opportunities realized.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3	CS	Prerequisite(s): Barrett Honors student

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CIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Accountancy or Computer Information Systems BS or PRE student
CIS	300	Web Design and Development	Focuses on Web site development, including target audience, image presentation, page/content topic organization, site navigational functionality, implementation needs, and future needs. Web site design and development practice using business software products.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: Minimum 2.0 ASU cumulative GPA AND minimum 56 earned hours, OR be post-bacc undergraduate, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
CIS	308	Advanced Excel in Business	Covers advanced Excel skills using an applied focus on different types of decisions one may analyze using spreadsheet capabilities; graphs and charts to communicate complex analytics; pivot tables to slice and dice data for reporting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): CIS 105 or CIS 236 with C or better; minimum 45 hours. credit is allowed for only CIS 308 or CIS 394 (Advanced Excel in Business)
CIS	309	Business Process Management	Flow charting, swimlane diagramming, process simulation using modern tool suites. Teaches the types of process evaluation decision analytics most commonly used and covers applied process analysis in a variety of contexts.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): CIS 105 or CIS 236 with C or better; minimum 45 hours. credit is allowed for only CIS 309 or CIS 394 (Process Management)
CIS	311	Business Project Management	Overview of project management emphasizing the fundamentals and analytics that can support project decision making. Covers project planning, resource and disruption management and problem resolution skills. Leverages widely available project management computer tools.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): CIS 105 or 236 with C or better; minimum 45 hours. Credit is allowed for only CIS 311 or CIS 394 (Project Management - Information Systems)
CIS	315	Introduction to Business Data Analytics	Overview of analytics in the business context; concepts of strategic and operational analytics; overview of concepts like dimensional modeling, the Model Lifecycle, data mining, big data, KPIs and metrics, ERP and analytics, in-database/memory analytics; real-time analytics and data stream analysis.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisites(s) with C or better: CIS 235 (or CIS 236); ECN 221; MAT 211; BS Business Data Analytics major
CIS	340	Business Information System Development I	Systems Development Life Cycle (SDLC) tools, techniques, and methodologies used to plan and analyze the needs of modern business information system development.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey CIS BS student; ACC 241, 242 or 271 with C or better; CIS 235 or 236 with C or better; ECN 221 with C or better; MAT 211 with C or better.
CIS	345	Business Information System Development II	Provides a clear understanding of the Systems Development Life Cycle (SDLC) tools, techniques, and methodologies used to design, implement, and support modern business information systems development.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey Computer Information Systems BS student; CIS 340 with C or better
CIS	355	Business Data Warehouses and Dimensional Modeling	SQL, stored procedures and data warehouse architectures; data warehouse requirements definition, design and analysis; overview of the steps in building information-enabled business models; role of data warehousing in data mining and analytics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisites(s): BS Business Data Analytics major. Corequisite(s): CIS 315
CIS	360	Business Database Concepts	Database theory, design, and application, including the entity-relationship model; the relational, hierarchical, and network database models; and query languages.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey Accountancy BS student and CIS 105 or 236; ACC 231, 232 or 261; ACC 241, 242 or 271 with C or better
CIS	365	Business Database Systems Development	Focuses on business database and data warehousing systems, development and management. Topics include capturing business requirements using data modeling, SQL, data security, operational and analytical data stores and data integrity.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): Computer Information Systems BS major; CIS 235 or 236 with C or better
CIS	375	Business Data Mining	Building predictive analytics (e.g., SEMMA, KDD); exposure to logistic regression, machine learning and decision tree methods; Understanding lift factors, ROC curves; hands-on use of mining software; business case studies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisites(s): CIS 315 with C or better; BS Business Data Analytics major
CIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Minimum 2.0 ASU cum GPA and minimum 56 earned hours, OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student

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CIS	405	Business Intelligence	Business intelligence (BI) is a term describing a broad category of applications, technologies, architectures and processes for gathering, storing, accessing and analyzing data to provide business users with timely information to enable better insights into project and process management and evidence-based decision making. BI is based on techniques for data decision capture, cleansing, validation, warehousing and analytics to help decision makers improve decision outcomes. Provides a capstone understanding of the concepts of managing data resources and the development of business intelligence capabilities using data visualization, data warehousing, data mining, online analytical processing decision support systems and other advanced BI topics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s) CIS 105 or 236 with C or better; minimum 45 hours. Credit is allowed for only CIS 394 (Business Intelligence) or 405
CIS	415	Big Data Analytics and Visualization in Business	Text and stream mining, visualizations for big data, Hadoop, cloud-based solutions, fundamentals of big data programming, social media and big data, NoSQL, software tool support for visualizations; GIS, business case studies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisites(s): CIS 315 with C or better; BS Business Data Analytics major
CIS	425	Electronic Commerce Strategy	Key business strategies and technology elements of contemporary electronic commerce. Covers Web design and interactions between Web pages and databases.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey Accountancy BS or Computer Information Systems BS student; CIS 360 or 365 with C or better
CIS	430	Networks and Distributed Systems	Advanced topics such as communications protocols, distributed systems, network security and client-server systems; applications based on platforms such as .NET and networked UNIX.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey Computer Information Systems student; ACC 330 or 444; CIS 340 or 410 with C or better; Pre/Co-requisite: CIS 360 or 365
CIS	440	Systems Design and Electronic Commerce	Systems design for organizational and electronic commerce systems; use of project management and systems analysis and design tools.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3	L	Pre-requisites: W. P. Carey Computer Information Systems BS student; CIS 360 or 365 with C or better; CIS 430 with C or better
CIS	450	Enterprise Analytics	Model lifecycle analysis, analytics governance, aligning governance, aligning firm and analytics strategy, big data security issues, enterprise search, applied projects.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s) with C or better: CIS 355, 375, 415; BS Business Data Analytics major
CIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey CIS BS student
CIS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-6		Prerequisite(s): Barrett Honors student
CIS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Information Systems	1-6	L	Prerequisite(s): Barrett Honors student
CIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: W. P. Carey ACC BS or CIS BS student
CIS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-6		Prerequisite(s): Barrett Honors student
CIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-7		Prerequisite(s): W.P. Carey CIS BS major
CIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-3		Pre-requisites: W. P. Carey CIS BS student
CIS	502	Information Systems: Digital Innovations and Transformation	Organizational, strategic, and technical issues of the management of information. Evaluation, design, and use information systems as competitive advantage.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Prerequisite(s): W. P. Carey MBA degree program student

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CIS	503	Decision Making with Data Analytics	Presents frameworks and approaches to equip students to recognize patterns in data and models, recommend actions and implement organizational changes. Students learn multiple concepts to improve decision making in organizations including the curation of data repositories for cross-functional analytics, recognition of decision biases, recommendation and communication of business process changes, and the establishment of iterative processes for decision analytics. Readings address decision-making dilemmas and challenges facing managers in analytics-rich business environments. Students get an immersive experience in analyzing the individual biases inherent in decision making, the informational requirements and the data analytics governance requirements to ensure effective deployment and continuous renewal of analytics culture at the enterprise level.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	2.5		Prerequisite(s): W.P. Carey graduate student
CIS	505	Introduction to Enterprise Analytics	Ensuring the foundational understanding of contextualized analytics within the business enterprise continuum by covering how data flows and is managed across the landscape of enterprise business processes.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate student
CIS	506	Information Management	Addresses central issues in managing information to achieve competitive advantage and support innovation. Specific topics covered include data quality, data modeling using both entity relationship models and star schemas, data governance, document management, document search, enterprise performance management and visualization techniques.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Prerequisite(s): graduate W. P. Carey major
CIS	508	Data Mining I	Charting a roadmap for data-driven decision making and getting a practical understanding of how IT tools and techniques can allow managers to extract predictive analytics and patterns from primarily numeric data.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate student
CIS	509	Data Mining II	Uses tools and techniques to analyze unstructured data that are applied to business problems to support informed decision making and the extraction of predictive analytics and patterns from primarily nonnumeric data.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-req for CIS 509
CIS	510	Business Process and Workflow Analysis	Builds foundations for process analysis by focusing on information, documents, people, roles and business rules. Provides an introduction to various techniques and tools of process analysis, including an understanding of organizational issues in rolling out change initiatives.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major. Credit is allowed for only CIS 510 or CIS 591 (Business Process Workflow Analysis)
CIS	512	Business Intelligence	Understanding how organizations make use of Business Intelligence (BI) to gain a sustainable competitive advantage. Builds the foundations for evidence-based managerial decision making. Covers technologies for data warehousing and data mining from a managerial perspective. Covers contemporary topics such as real-time BI, business analytics, and business performance management with the help of case studies, audio-video content, guest speakers, online forums to generate creative thinking and discussion.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Prerequisite(s): W.P. Carey graduate major
CIS	515	Business Analytics Strategy	Evaluating, strategically aligning, planning for and directing investments in and governance of processes for continuous renewal of analytics deployments in business.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisite: W.P. Carey graduate major
CIS	525	Strategic Value of Information Technology	Instills balanced and disciplined view of IT and business with their interplay. Assigns cases and assignments involving the symbiotic relationship of IT and business to provide real-world exposure for critical thinking and engaging discussion.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major; Credit is allowed for only CIS 525 or CIS 591 (Strategic Value of Information Technology)
CIS	540	Enterprise Information Security and Controls	Provides a broad survey of information security and controls, utilizing the COBIT framework to illustrate how information security and controls contribute to effective IT governance. Develops an understanding of the issues associated with information security and effective IT governance, with particular emphasis on how management contributes to the effectiveness of an organization's information security program.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major. Credit is allowed for only CIS 540 or CIS 591 (Information Security & Controls)
CIS	545	Managing Enterprise Systems	Investigates major categories of enterprise systems, factors driving software adoption and keys for successful implementation. Pays special attention to evaluating the potential impact of emerging technologies on business environments.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major; Credit is allowed for only CIS 545 or CIS 591 (Enterprise Systems)
CIS	560	IT Services and Project Management	Provides an overview of the project management process groups and knowledge areas (defined by the PMBOK) and focuses on the application of key concepts, tools and techniques for delivering on-time, on-budget IT project and services that meet end-user needs.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major; Credit is allowed for only CIS 560 or CIS 591 (IT Services and Project Management)

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CIS	575	Emerging Technologies	Explores decision models and frameworks applied to assess, evaluate and implement emerging technologies. Explains the principles of sustaining and disruptive technological innovation on the adoption and diffusion of emerging technologies. Discusses the technical, industrial and legal parameters that enable convergence and commoditization of technologies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major; Credit is allowed for only CIS 575 or CIS 591 (Emerging Technologies in IT)
CIS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: Specific W.P. Carey Graduate student
CIS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: Specific W.P. Carey Graduate student
CIS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey Info Systems PhD student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CIS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CMN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	502	Theory and Practice in Communication and Persuasion	Theoretical exploration of communicative and persuasive practices as applied in various contexts. Surveys classical, modern, and contemporary theories of persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	505	Methods in Applied Communication Research	Examines the intellectual, practical, and ethical dimensions of engaging in applied research. Emphasizes empirical and quantitative methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	506	Humanistic Inquiry and Field Research in Communication	Examines interpretive, critical, and rhetorical approaches to communication and advocacy, including hermeneutics, ethnography, and cultural studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	515	Ethical Issues in Communication Advocacy	Examines the ethical issues or concerns related to communication advocacy. Variable topics; examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	516	Mediation and Dispute Resolution	Examines advocacy's role in fair negotiation and effective and successful dispute resolution. Examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	520	Communication Campaigns	Explores public communication strategies aimed at advocating for general or specific audiences and/or for particular issues and causes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better
CMN	522	Argumentation and Advocacy	Introduces various models of argumentation and their applications to various spheres of advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts students
CMN	531	Communication and Social Change	Examines human communication and technologies of communication as agents of social change within groups, communities, organizations, and/or cultures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	532	Advocacy in Interpersonal Settings	Examines particular relational contexts in which advocacy plays a pronounced role (e.g., personal, family, and service provider relationships).	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	550	Advocacy in Organizational Settings	Examines issues of upward influence, the expression of dissent, and grievance systems within organizational contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	551	Democracy and Power in Organizations	Examines structural, historical, relational, and symbolic dimensions of organizational communication and discourses that foster or impede communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better
CMN	557	Communication and Technology	Assesses technology's role in the social dynamics of human interaction. Emphasizes the impact of technology with regard to communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	565	Globalization and Advocacy	Explores the forces leading to increased intergroup contact and their impact on social, economic, and political dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	570	Communication and Advocacy in Social Context	Variable topics course exploring the intersection of communication and advocacy in specific contexts not addressed in other elective courses.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student

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CMN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
CMN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Pre-requisite: Communication Studies Master of Arts student
CMN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CMN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
CNE	210	Engineering Mechanics I: Statics	Force systems, resultants, equilibrium, distributed forces, area moments, fluid statics, internal forces, friction, and stability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Construction Engineering	3		Pre-requisites: FSE 100 with C or better; MAT 266 (or MAT 271) with C or better; PHY 121 with C or better; PHY 122 with C or better; Credit is allowed for only CEE or CNE 210
CNE	212	Engineering Mechanics II: Dynamics	Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Pre-requisites: CEE 210 (or CNE 210) and MAT 275 (or MAT 274) completed with C or better; Credit is allowed for only CEE or CNE 212
CNE	213	Introduction to Deformable Solids	Strain-displacement and stress-strain-temperature relations. Stresses and deformations due to axial, shear, torsional and bending moments. Buckling, stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Pre-requisites: CEE 210 (or CNE 210) with C or better; MAT 274 (or MAT 275) with C or better; Credit is allowed for only CEE or CNE 213
CNE	241	Surveying	Theory and fieldwork in construction and land surveys.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Prerequisite(s): MAT 170 or higher with C or better; Credit is allowed for only CEE 281, CNE 241 or CON 241
CNE	243	Heavy Construction Equipment, Methods and Materials	Emphasizes Horizontal construction. Fleet operations, maintenance programs, methods, and procedures to construct tunnels, roads, dams, and the excavation of buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Credit is allowed for only CON 243 or CNE 243
CNE	271	Construction Safety	Safety procedures and equipment. OSHA requirements for construction. Biological aspects of construction safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; Credit is allowed for only CNE 271 or CON 271
CNE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Construction Engineering	1-4		
CNE	296	Field Internship	Participation as interns on construction projects to observe and experience the daily activities.	N	PRA	N	OPT	Ira A. Fulton Engineering	Construction Engineering	1		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CON 271 or CNE 271; Credit is allowed for only CON 296 or CNE 296

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CNE	321	Structural Analysis and Design	Statically determinate and indeterminate structures (trusses, beams, and frames) by classical and matrix methods. Introduces structural design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	4		Prerequisite(s): Civil Engineering BSE or Construction Engineering BSE major; CEE 212 or CNE 212 or MAE 212; CEE 213 or CNE 213 with C or better; Credit is allowed for only CEE 321 or CNE 321
CNE	351	Geotechnical Engineering	Index properties and engineering characteristics of soils. Compaction, permeability and seepage, compressibility and settlement, and shear strength.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	4		Prerequisite(s): CEE 213 (or CNE 213) with C or better; BSE Civil Engineering or Construction Engineering major; Credit is allowed for only CEE or CNE 351
CNE	353	Civil Engineering Materials	Structure and behavior of civil engineering materials, including steel, aggregate, concrete, masonry, asphalt, wood, composites. Atomic structure and engineering applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Prerequisite(s): CEE 213 (or CNE 213) with C or better; BSE Civil Engineering or Construction Engineering major; Credit is allowed for only CEE or CNE 353
CNE	383	Construction Estimating	Analyzes construction drawings and specifications. Utilizes advanced technical and ethical practices in estimating process. Quantity surveying techniques for CSI divisions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	4		Prerequisite(s): Construction Management BS major; CON 243 and CON 252 OR Construction Engineering BSE major; CNE 243 or CON 243; Credit is allowed for only CNE 383 or CON 383
CNE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Construction Engineering	1-4		
CNE	400	Earth Systems Engineering and Management	Introduces earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3	(L or HU) & H	Prerequisite(s): Civil Engineering BSE major; CEE 300 with C or better OR non-CEE junior or senior; Credit is allowed for only CEE 400 or CNE 400
CNE	420	Steel Structures	Behavior of structural components and systems. Design of steel members and connections. Load and resistance factor design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Pre-requisites: BSE Civil Engineering or Construction Engineering major; CEE 321, or CNE 321 with C or better; Credit is allowed for only CEE 420 or CNE 420
CNE	421	Concrete Structures	Behavior of concrete structures and the design of reinforced and prestressed concrete members, including footings. Partial design of concrete building system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Pre-requisites: BSE Civil Engineering or Construction Engineering major; CEE 321 or CNE 321 with C or better; Credit is allowed for only CEE or CNE 421
CNE	450	Geotechnical Applications for Construction	Soil formation, engineering properties and use as building materials. Soil's influence on construction of built environment, including specifications and biological aspects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Prerequisite(s): Construction Management BS major; CON 223 with C or better; CON 310; Credit is allowed for only CNE 450 or CON 450
CNE	452	Foundations	Applies soil mechanics to foundation and retaining wall systems, including bearing capacity, settlement, and lateral earth pressure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Prerequisite(s): Civil Engineering BSE or Construction Engineering major; CEE 351 or CNE 351 with C or better; Credit is allowed for only CEE 452 or CNE 452

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CNE	453	Construction Project Management I	Building information modeling, including current computer programs and LEED methodologies for advanced project deliveries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CON 271 or CNE 271 with C or better; CON 383 or CNE 383; Pre-or Corequisite(s): CON 495 or CNE 495; Credit is allowed for only CON 453 or CNE 453
CNE	455	Construction Project Management II	Advanced topics in administrative procedures, planning processes, and coordination required to successfully complete construction projects on time and budget.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CNE 453 or CON 453; Pre-or corequisite(s): CNE 495 or CON 495; Credit is allowed for only CNE 455 or CON 455
CNE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Construction Engineering	1-12		Prerequisite(s): Construction Management BS major with CON 296 or CNE 296 OR Construction Engineering BSE major with CON 271 or CNE 271; Credit is allowed for only CON 484 or CNE 484
CNE	486	Integrated Civil Engineering Design	Requires completion of a civil engineering design in a simulated practicing engineering environment. Limited to undergraduates in their final semester.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	4	L	Pre-requisites: Civil Engineering BSE student: CEE 321; CEE 341; CEE 351; CEE 361; CEE 372 with C or better OR Construction Engineering student: CEE or CNE 321; CEE or CNE 351 with C or better. Credit is allowed for only CEE or CNE 486
CNE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Construction Engineering	1-4		
CNE	495	Construction Planning and Scheduling	Various network methods of project scheduling, such as AOA, AON Pert, bar-charting, line-of-balance, and VPM techniques. Microcomputers used for scheduling, resource allocation, and time/cost analysis.	N	LEL	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3	CS	Prerequisite(s): Construction Management BS major or Construction Engineering BSE major; CON 383 or CNE 383; Credit is allowed for only CON 495 or CNE 495
CNE	496	Construction Contract Administration	Surveys administrative procedures of general and subcontractors. Studies documentation, claims, arbitration, litigation, bonding, insurance, and indemnification. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3	L	Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CNE 453 or CON 453; Credit is allowed for only CNE 496 or CON 496
COE	501	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
COE	502	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	503	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	100	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
COM	100	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	
COM	100	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
COM	110	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisite: Minimum 2.25 GPA
COM	110	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisite: Minimum 2.25 GPA
COM	124	Media and Culture	Introduces contemporary intercultural issues as expressed through various media in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	C	
COM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Maximum 24 earned hours
COM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
COM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
COM	207	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: COM 100 with C or better; Minimum 2.50 GPA
COM	207	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: COM 100 with C or better; Minimum 2.50 GPA
COM	207	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 100 with C or better; Minimum 2.50 GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	222	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	222	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	222	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	225	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	225	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	225	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	230	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
COM	230	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	
COM	230	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
COM	235	Disability, Justice and Advocacy	Overarching history of the disability rights movement and how it is similar to and different from other civil and rights movements. Examines how policies and activism are interconnected within this movement, in addition to looking at other human categories related to disabilities such as gender, sexuality, race and socioeconomic status.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	C	Credit is allowed for only COM 235, JUS 235, SST 235, WST 235 or SST 294 (Disability Justice and Advocacy)
COM	241	Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better
COM	241	Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better
COM	250	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisite: Minimum 2.25 GPA
COM	250	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisite: Minimum 2.25 GPA
COM	250	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: Minimum 2.25 GPA
COM	259	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): non-Communication student; minimum 25 hours
COM	259	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): non-Communication student; minimum 25 hours
COM	259	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 25 hours
COM	263	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	263	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	263	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	281	Communication Activities	Nongraded participation in forensics or interpretation cocurricular activities. Maximum 3 semester hours each semester.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		
COM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
COM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	PRA	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	300	Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: BIS student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM	300	Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: BIS student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM	308	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum 2.50 GPA
COM	308	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum 2.50 GPA
COM	308	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum 2.50 GPA
COM	309	Rhetorical, Interpretive, and Critical Methods in Communication	Examines humanistic and qualitative approaches to communication. Introduces textual, interactional and ethnographic methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: COM 207 with C or better; Minimum GPA of 2.0
COM	310	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	310	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	310	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	312	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: COM 100 with C or better; Minimum GPA of 2.50
COM	312	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: COM 100 with C or better; Minimum GPA of 2.50
COM	312	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: COM 100 with C or better; Minimum GPA of 2.50
COM	314	Inner-City Families: The Cycle of Poverty	Examines issues and concerns that confront inner-city families. Blends theory and application. From a theoretical perspective, examines issues that affect families who live in the inner city (e.g., race and poverty), as well as specific skills and programmatic elements that are needed to work with families in an urban setting. In terms of application, provides an intensive service-learning-based experience. Engages students in specific service to an embedded inner-city organization for a minimum of 3 hours per week. Students work with the professor to determine appropriate service placements.	N	PRA	Y	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 100 OR Junior standing; Credit is allowed for only COM 314 or 498 (Inner City Family)
COM	316	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	316	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	316	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	317	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: Minimum 2.50 GPA; Minimum 45 hours; Credit is allowed for only COM 317 or CMN 475

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
COM	317	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; Minimum 45 hours; Credit is allowed for only COM 317 or CMN 475
COM	317	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 2.50 GPA; Minimum 45 hours; Credit is allowed for only COM 317 or CMN 475
COM	319	Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319
COM	319	Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319
COM	320	Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisite: Minimum 2.50 GPA
COM	320	Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: Minimum 2.50 GPA
COM	321	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & H	Prerequisite(s): minimum 2.50 GPA; COM 100 with C or better; ENG 101, 105, 107 or 111 with C or betterPrerequisite(s): COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	321	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	(L or HU) & H	Prerequisite(s): minimum 2.50 GPA; COM 100 with C or better; ENG 101, 105, 107 or 111 with C or betterPrerequisite(s): COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	321	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(L or HU) & H	Prerequisite(s): minimum 2.50 GPA; COM 100 with C or better; ENG 101, 105, 107 or 111 with C or betterPrerequisite(s): COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	323	Communication Approaches to Popular Culture	Critical analysis of popular culture within social and political contexts; emphasizes multicultural influences and representations in everyday life.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	C	Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	323	Communication Approaches to Popular Culture	Critical analysis of popular culture within social and political contexts; emphasizes multicultural influences and representations in everyday life.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	C	Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	324	Rhetoric and Media Criticism	Critical examination of media arts, including cinema, television, and video. Applies rhetorical, textual, and interpretive methods of criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.0 GPA
COM	325	Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM	325	Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM	326	Court Room Oratory	Increases knowledge and appreciation of the role of communication in the development of legal and public policies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
COM	326	Court Room Oratory	Increases knowledge and appreciation of the role of communication in the development of legal and public policies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		
COM	327	Civil Communication	Offers a theoretical understanding of civil communication and methods for applying civil communication practices in a variety of contexts.	N	LEC	N	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): minimum 2.50 GPA; junior standing

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COM	341	Social Contexts for Performance	Adaptation and performance of literature for the community outside the university. Research into the practical uses of performed literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Minimum 2.50 GPA
COM	342	Oral History and Storytelling	Examines the formation of culture and history through research, presentations, the collection of oral history, and the telling of stories.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: ENG 101 or 102; Credit is allowed for only CMN 394 (Storytelling and Oral History), COM 342 or 394 (Storytelling and Oral History)
COM	353	Professional Communication	Introduces both verbal and written professional communication styles and technologies in preparation for communication-related internships and careers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.0 GPA
COM	371	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	371	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	371	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	377	Communication, Terrorism, and National Security	Surveys strategic communication and its relationship to terrorism challenges facing the United States and the rest of the world. Begins with a look at language and definitions, how strategic communication functions are traditionally conceptualized, and the scope and extent of the terrorism problem. Focuses on the contemporary problems of terrorism, including its extent, tactics, and strategies and strategies that aim to combat it. Concludes with a look at new frontiers in the terrorism struggle, including new media and communication approaches.	N	LEC	N	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: minimum 2.50; minimum Junior standing; Credit is allowed for only COM 377 or 394 (Communication: Terrorism and National Security)
COM	382	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Pre-requisites: Minimum 2.50 GPA; Credit is allowed for only CMN 382 or COM 382
COM	382	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Minimum 2.50 GPA; Credit is allowed for only CMN 382 or COM 382
COM	382	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Pre-requisites: Minimum 2.50 GPA; Credit is allowed for only CMN 382 or COM 382
COM	383	Communication and Mentoring	Explores the role of communication in face-to-face and online mentoring relationships with an emphasis on message shaping, nonverbal communication, professionalism and audience analysis. Applies practice and theory from a variety of lower-division communication courses (public speaking, professional and business, small group, intercultural and interpersonal) to prepare students for mentoring roles in the Communication Assessment Learning Lab (CALL) on ASU's west campus. During the semester, students (individually and as a member of a group) are engaged in creating and delivering both online and in-person public speaking tutorials.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 100 (or COM 110 or 230 or 259 or 263) with B or better; COM 225 with B or better; Credit is allowed for only COM 383 or 498 (Call Lab Mentorship)
COM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Pre-requisite: Minimum 2.50 GPA
COM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisite: Minimum 2.50 GPA
COM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
COM	400	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & C	Prerequisites: Interdisciplinary Studies or Business Communication student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 259 (or COM 100 and COM 225) with C or better
COM	400	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	HU & C	Prerequisites: Interdisciplinary Studies or Business Communication student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 259 (or COM 100 and COM 225) with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
COM	400	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU & C	Prerequisites: Interdisciplinary Studies or Business Communication student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 259 (or COM 100 and COM 225) with C or better
COM	404	Research Apprenticeship	Direct research experience on faculty projects. Student/faculty match based on interests.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	407	Advanced Critical Methods in Communication	Examines critical approaches relevant to communication, including textuality, social theory, cultural studies, and ethnography.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better; Credit is allowed for only COM 407 or 507
COM	408	Quantitative Research Methods in Communication	Advanced designs, measurement techniques, and methods of data analysis of communication research.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better; Credit is allowed for only COM 408 or 508
COM	410	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	410	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	410	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	411	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better; Credit is allowed for only COM 411 or CMN 598 (Communication in the Family)
COM	411	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better; Credit is allowed for only COM 411 or CMN 598 (Communication in the Family)
COM	411	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better; Credit is allowed for only COM 411 or CMN 598 (Communication in the Family)
COM	414	Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Minimum 2.50 GPA
COM	414	Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.50 GPA
COM	415	Risk Communication	Understanding how risk is constructed and assessed across social spheres, developing familiarity with dominant approaches to framing risk and the principles and professional practices of risk communication.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 2.50 GPA; minimum junior standing; Credit is allowed for only COM 415 or COM 494 (Risk Communication)
COM	416	Gender, Race, Colonialism, and Media	Explores how the mass media constructs gender and race and perpetuates colonial views of minorities and varied nationalities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.0 GPA
COM	417	Communication and Aging	Critical study of changes in human communicative patterns through the later adult years, with attention on intergenerational relationships and self-concept functions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.0 GPA
COM	421	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	421	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA

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COM	421	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	422	Advanced Argumentation	Advanced study of argumentation theories and research as applied to public forums including: political, business, and legal contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisites: Minimum Junior standing; Minimum 2.00 GPA; ENG 101, 105, 107 or 111 with C or better
COM	424	Television Studies and Criticism	Surveys critical and historical approaches to television as a medium; to television research; and to television's effects.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 207 with C or better or Junior standing with minimum 3.00 GPA
COM	426	Political Communication	Theories and criticism of political communication; including campaigns, mass persuasion, propaganda, and speeches. Emphasizes rhetorical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisite: Minimum 2.50 GPA
COM	429	Semiotics and Visual Communication	Semiotic analysis of mediated forms of communication, including film, television, and photography. Includes the political and aesthetic dimensions of images.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 207 with C or better OR Junior standing with minimum 3.00 GPA
COM	430	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Minimum 2.50 GPA
COM	430	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Minimum 2.50 GPA
COM	430	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.50 GPA
COM	441	Performance Studies	Theory, practice, and criticism of texts in performance. Emphasizes the interaction among performer, text, audience, and context.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 and COM 308 with C or better
COM	442	Identity, Performance, and Human Communication	Explores communication dimensions of self and others as performance. Examines topics that include gender, race, sexuality, age, and ethnicity through performance.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: COM 225 (or COM 241); Minimum 2.50 GPA
COM	445	Narrative Performance	Theory and practice of performing narrative texts (e.g., prose fiction, oral histories, diaries, essays, letters). Includes scripting, directing, and the rhetorical analysis of storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 with C or better
COM	446	Performance of Literature Written by Women	Explores, through performance and critical writing, literature written by women.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	(L or HU) & C	Pre-requisite: Minimum 2.50 GPA
COM	450	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	450	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	450	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	451	Communication and Work Relationships	Communication principles and practices associated with supervisory, peer, and client relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: COM 100; Minimum 45 completed hours; Minimum 2.50 GPA
COM	452	Communication and the Art of Happiness	Examines how communication behaviors relate to constructing happiness and wellbeing. Topics include gratitude, forgiveness, social support, appreciation, social networks and communicative contagion of mood intersecting with issues of dyadic, group and organizational communication. Auxiliary readings come from a variety of disciplines, including psychology, management, sociology, positive organizational scholarship and appreciative inquiry. Course activities include reading, field exercises, journal writing, exams, project presentation(s) and paper(s).	N	LEC	N	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: 2.50 GPA; Junior standing; Credit is allowed for only COM 452 or 494 (Communication of Happiness)
COM	453	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 2.50 GPA
COM	453	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): minimum 2.50 GPA
COM	453	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 2.50 GPA

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COM	454	Rhetorical and Critical Approaches to Public Relations	An historical and contemporary account of how public relations messages build corporate identities and persuade audiences by shaping public values.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: COM 207 with C or better OR Junior standing with minimum 3.00 GPA; Credit is allowed for only COM 454 or CMN 598 (Rhetorical&Critical Approaches to Public Relations)
COM	456	Political Communication Campaigns	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): minimum 2.50 GPA
COM	456	Political Communication Campaigns	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 2.50 GPA
COM	457	New Media	Explores how new communication and information technologies affect communication and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 207 with C or better OR Junior standing with minimum 3.00 GPA
COM	459	Theory and Methods of Social Media Networks	A network-based perspective plays an increasingly important role in our understanding of contemporary communication process of which much has shifted from a hierarchical, densely bounded group basis to a personalized, lateral network. Especially, along with the popularity of social media, social networking has become a key term that characterizes our everyday life. Discusses the role of new media technologies in evolving networked society, and how online networks are intertwined with our offline life. Covers theories and computerized methods that help understand online network structure. Includes lectures and discussions on theoretical issues with hands-on exercises of analytic methods.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): junior standing; minimum 2.50 GPA; MAT 142 or higher with C or better; Credit is allowed for only COM 459 or COM 494 (Social Networks)
COM	463	Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	463	Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	463	Intercultural Communication Theory and Research	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	464	Communicative Sexualities	Grounded in the discipline of communicology, provides an introduction to the qualitative research practice of semiotic phenomenology. Examines sexuality as a personal, social, historical, and cultural phenomenon, wherein communication is studied as the mediating force through which meanings are ascribed to sexuality and sexual experience. Sexuality is studied as it manifests among a wide variety of people, practices, and contexts. U.S. American culture provides the primary cultural context. Addresses basic questions including: How do we understand sexuality? How have we come to know what we know about sexuality? How do we understand the relationship between sexuality as personal desire, and sexuality as social norm in specific cultural contexts.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: Junior or Senior standing; Minimum 2.50 GPA; Credit is allowed for only COM 464 or 494 (Communicative Sexualities)
COM	465	Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Minimum 2.50 GPA
COM	465	Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		Pre-requisite: Minimum 2.50 GPA
COM	471	Global Media and Cultural Identity	Explores theory and practices of global media production, dissemination and consumption. Surveys the ways in which local, regional and global sociocultural and political forces interplay to shape cultural identities and media consumption.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	Prerequisite(s): minimum 2.50 GPA; junior standing
COM	477	Sport, Culture, and Discourses	Introduces sport as a global economic and cultural force, and as a foundational discourse experienced largely through media. Facilitates the understanding of sport as a major cultural and socializing institution and, thus, as a key site for the construction of knowledge, understandings, ideologies, and identities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 2.50 GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	483	Advanced Communication and Mentoring	Students serve as peer mentors in the Communication Assessment Learning Lab (CALL) with instructional emphasis on speaker apprehension, listening, the dynamics of group communication and leadership. Through experiential learning, mentors employ ethical peer tutoring practices by coaching undergraduates in managing public speaking apprehension, speech development and organization. Further, mentors provide on-the-spot feedback to undergraduates relating to delivery techniques, style, nonverbal communication, persuasive strategies and the use of presentational material.	N	LEL	Y	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 383 with C or better
COM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): Communication major; minimum 56 hours; minimum 2.50 GPA; COM 225 with C or better; COM 308 with C or better
COM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): Communication major; minimum 56 hours; minimum 2.50 GPA; COM 225 with C or better; COM 308 with C or better
COM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Pre-requisites: Communication major or Public Relations and Strategic Communication minor student; Minimum 56 hours; Minimum 2.80 GPA; COM 225 (CMN 225) with C or better; COM 308 or 309 with C or better
COM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
COM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Prerequisite(s): Barrett Honors student
COM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
COM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
COM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6	L	Prerequisite(s): Barrett Honors student
COM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
COM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Pre-requisite: Minimum 2.50 GPA
COM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisite: Minimum 2.50 GPA
COM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
COM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Prerequisite(s): Barrett Honors student
COM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-7		
COM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-7		
COM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Minimum 2.50 GPA
COM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		Pre-requisite: Minimum 2.50 GPA

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COM	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	507	Qualitative Research Methods in Communication	Qualitative research methods, including interviewing, field methods, and other nonquantitative techniques for analyzing communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Communications Graduate student; Credit is allowed for only COM 407 or 507
COM	508	Quantitative Research Methods in Communication	Empirical research designs, measurements, and statistical strategies and techniques in analyzing and evaluating experimental and descriptive research in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Communications Graduate student. Credit is allowed for only COM 408 or COM 508
COM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student
COM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	604	Theory Construction in Communication	Review and analysis of philosophical problems inherent in communicative research and of metatheories designed to deal with these problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Communications PhD student
COM	607	Contemporary Rhetorical Methods	Analysis of issues in the practice of rhetorical communication research, including criticism and scholarship.	N	SEM	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	608	Multivariate Statistical Analysis of Data in Communication	Statistical analysis of communication research data. Multivariate procedures used in communication research and methods of causal analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Communications PhD student
COM	609	Advanced Qualitative Research Methods in Communication	Analysis of issues in the practice of qualitative communication research, including data gathering, fieldwork issues, analysis strategies, and reporting results.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Communications PhD student
COM	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications PhD student
COM	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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COM	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student
COM	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Communications PhD student; COM 600 or COM 608 with B or better; COM 601 or COM 700 with B or better
COM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	100	Introduction to Construction	Introduces construction industry sectors and professionals. Additional content includes developing personal competencies required of construction professionals.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2		
CON	101	Construction and Culture: a Built Environment	Analyzes the cultural context of construction, emphasizing its centrality in the evolution and expansion of built environments as expressions of ethical and historical value systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		HU & H
CON	106	Introduction to Concrete Materials for the Built Environment	Effects of concrete-making materials (aggregates, cements, admixtures, etc.) on the properties of fresh and hardened concrete. Discusses concrete mixture proportioning along with the calculations and statistical analysis of strength testing.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	4		SQ
CON	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CON	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	221	Applied Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2		Prerequisite(s): MAT 170 or higher with C or better; PHY 111 with C or better; PHY 113 with C or better
CON	223	Strength of Materials	Analyzes strength and rigidity of structural members in resisting applied forces. Stress, strain, shear, moment, deflections, combined stresses, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2		Prerequisite(s): CON 221 with C or better
CON	241	Surveying	Theory and fieldwork in construction and land surveys.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): MAT 170 or higher with C or better; Credit is allowed for only CEE 281, CNE 241 or CON 241
CON	243	Heavy Construction Equipment, Methods and Materials	Emphasizes Horizontal construction. Fleet operations, maintenance programs, methods, and procedures to construct tunnels, roads, dams, and the excavation of buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Credit is allowed for only CON 243 or CNE 243
CON	244	Working Drawing Analysis	Provides the ability to read and understand architectural plans; to understand drawing symbols, dimensions, abbreviations, and terms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CON	251	Microcomputer Applications for Construction	Applies the microcomputer as a problem-solving tool for the constructor. Uses spreadsheets, information management, and multimedia software.	N	LAB	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): MAT 170 or higher with C or better
CON	252	Building Construction Methods, Materials, and Equipment	Emphasizes Vertical construction. Methods, materials, codes, and equipment used in building construction corresponding to the division of the CSI Master Format.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		
CON	271	Construction Safety	Safety procedures and equipment. OSHA requirements for construction. Biological aspects of construction safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; Credit is allowed for only CNE 271 or CON 271
CON	273	Electrical Construction Fundamentals and Project Management	Electrical construction, design, estimating, scheduling and project management. Electrical safety, blueprints and symbols, theory, sequence of installation. National Electrical Code (NEC).	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		
CON	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	296	Field Internship	Participation as interns on construction projects to observe and experience the daily activities.	N	PRA	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CON 271 or CNE 271; Credit is allowed for only CON 296 or CNE 296
CON	310	Testing of Materials for Construction	Structural and behavioral characteristics, engineering properties, measurements, and application of construction materials. Not open to engineering students.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4		Prerequisite(s): Construction Management BS major; CON 221 with C or better; CON 223 with C or better
CON	345	Mechanical Systems	Design parameters and equipment related to heating and cooling systems for mechanical construction. Biorelated aspects of mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS major; CON 221 with C or better; CON 252 with C or better; PHY 111 or 121 with C or better; PHY 113 or 122 with C or better
CON	377	Residential Construction Production Procedures	Process used in residential construction. How a house is built: design, permits, scheduling, codes, contracting, site management, mechanical/electrical.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: Construction BS or Design BSD student; CON 221 with C or better; CON 252
CON	383	Construction Estimating	Analyzes construction drawings and specifications. Utilizes advanced technical and ethical practices in estimating process. Quantity surveying techniques for CSI divisions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4		Prerequisite(s): Construction Management BS major; CON 243 and CON 252 OR Construction Engineering BSE major; CNE 243 or CON 243; Credit is allowed for only CNE 383 or CON 383
CON	384	Environmental Aspects of Heavy Construction	Methods, measures and analysis related to control of erosion, dust generation and storm water discharge during projects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): BS Construction Management major. Pre- or corequisite(s): CON 243. Credit is allowed for only CON 384 or CON 394 (Environmental Aspects of Heavy Construction)
CON	389	Construction Cost Accounting and Control	Nature of construction cost. Depreciation and tax theory and variable equipment costs. Cash flow theory, investment models, profitability, and analysis. Computer applications. Funding sources and arrangements. Builder's insurance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	CS	Pre-requisite: Engineering and Design BS or BSD student; CON 221 with C or better; CON 251, or Construction Engineering student
CON	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Pre-requisite: Engineering BS or BSE student
CON	424	Structural Design	Economic use of concrete, steel, and wood in building and engineered structures. Design of beams, columns, concrete formwork, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS major; CON 223 with C or better; Pre- or corequisite(s): CON 310

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CON	430	Facilities Operations and Maintenance	Operations, maintenance and energy management requirements of various types of facilities and built environments. Ethical practices.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): minimum junior standing; Credit is allowed for only CON 430 or CON 494 (Facilities Management/Operations & Maintenance) or CON 530 or CON 598 (Facilities Management/Operations & Maintenance)
CON	446	Marketing for Construction	Provides key marketing practices to include strategic planning, marketing collateral, networking, business development, and interview preparation for project pursuits. Covers all aspects of service-based marketing topics and practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): COM 225; CON 221 with C or better
CON	448	Sustainable Construction	Studies the principles associated with sustainable construction: problem definition, definition of sustainability, measures of sustainability, examination of current industry practices, financial and resource impacts of sustainable construction, independent student investigation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Construction BS or Civil (Sustainable Engineering) student; Senior standing; Credit is allowed for only CON 448, CON 494 or CON 598 (Sustainability in Construction)
CON	450	Geotechnical Applications for Construction	Soil formation, engineering properties and use as building materials. Soil's influence on construction of built environment, including specifications and biological aspects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS major; CON 223 with C or better; CON 310; Credit is allowed for only CNE 450 or CON 450
CON	453	Construction Project Management I	Building information modeling, including current computer programs and LEED methodologies for advanced project deliveries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CON 271 or CNE 271 with C or better; CON 383 or CNE 383; Pre-or Corequisite(s): CON 495 or CNE 495; Credit is allowed for only CON 453 or CNE 453
CON	454	Trenchless Construction Methods	Theory and practice of trenchless construction methods. Types of equipment, roles of site personnel, engineering design, contractual issues and safety. Lecture, class projects, and site visits. Knowledge of heavy construction equipment, methods and materials required to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; Pre- or corequisite(s): CNE 243 or CON 243; Credit is allowed for only CON 454 or CON 494 (Trenchless Construction Mth) or CON 554
CON	455	Construction Project Management II	Advanced topics in administrative procedures, planning processes, and coordination required to successfully complete construction projects on time and budget.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CNE 453 or CON 453; Pre- or corequisite(s): CNE 495 or CON 495; Credit is allowed for only CNE 455 or CON 455
CON	457	Principles of Leadership for Project Managers	Individual, organizational and process/structure leadership in project setting. Four-step leadership transformational model for project leaders. Project leadership tools and applications to motivation, conflict management, team building and delegation of risk.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: BS Construction Management or BSE Construction Engineering major; Pre/Co-requisite(s): CON 243; Credit is allowed for only CON 457, 494 (Prin Lead & Management), 557 or 598 (Prin Lead and Mgmt)
CON	465	Deductive Logic, Leadership and Industry Structure	Simple, logical explanations of construction and other industries. State-of-the-art supply chain, profit maximizing and efficient practices.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): junior or senior standing; Credit is allowed for only CON 465 or CON 565

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CON	467	Advanced Procurement Systems	Development of multicriteria decision procurement model for selecting the performing contractor.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): junior or senior standing; Credit is allowed for only CON 467 or CON 567 or CON 494 (Advanced Procurement Systems)
CON	471	Mechanical and Electrical Project Management	Specialty contracts and agreements, scheduling, material handling, labor unit analysis, and job costing for mechanical and electrical construction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite: Construction BS student; CON 453 with C or better
CON	472	Development Feasibility Reports	Integrates economic location theory, development cost data, market research data, and financial analysis into a feasibility report.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	L	Pre-requisite: Construction BS or Design BSD student; REA 380
CON	477	Residential Construction Business Practices	Topics addressed include development, marketing, financing, legal issues, and sales.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Engineering BS or Design BSD student; MKT 382 or MKT 395 with D or better OR CON 446 with C or better; CON 377 with C or better; CON 389 with C or better
CON	483	Advanced Building Estimating	Concepts of pricing and markup, development of historic costs, life cycle costing, change order and conceptual estimating.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Construction BS student; CON 383 with C or better
CON	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): Construction Management BS major with CON 296 or CNE 296 OR Construction Engineering BSE major with CON 271 or CNE 271; Credit is allowed for only CON 484 or CNE 484
CON	486	Heavy Construction Estimating	Methods analysis and cost estimation for construction of highways, bridges, tunnels, dams, and other engineering works.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction BS major and CON 383 with C or better, or Construction Engineering BSE major
CON	487	Heavy Construction Project Management	Studies methods used to manage large magnitude heavy construction projects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): BS Construction Management major; CON 243 (or CNE 243) with C or better; Credit is allowed for only CON 487 or 494 (Heavy Const Proj Mgmt)
CON	488	Heavy Construction Earthworks	Geotechnical issues with respect to foundation grading, forming and location for various types of infrastructure and transportation projects. Also includes streets, highway and embankment developments, retaining wall system, mechanically stabilized earth walls, and required quality control methods for these activities.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; Pre- or corequisite(s): CON 243; Credit is allowed for only CON 488 or CON 494 (Heavy Construction Earthworks)
CON	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6		Prerequisite(s): Barrett Honors student
CON	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6	L	Prerequisite(s): Barrett Honors student
CON	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	495	Construction Planning and Scheduling	Various network methods of project scheduling, such as AOA, AON Pert, bar-charting, line-of-balance, and VPM techniques. Microcomputers used for scheduling, resource allocation, and time/cost analysis.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	CS	Prerequisite(s): Construction Management BS major or Construction Engineering BSE major; CON 383 or CNE 383; Credit is allowed for only CON 495 or CNE 495
CON	496	Construction Contract Administration	Surveys administrative procedures of general and subcontractors. Studies documentation, claims, arbitration, litigation, bonding, insurance, and indemnification. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	L	Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CNE 453 or CON 453; Credit is allowed for only CNE 496 or CON 496

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CON	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-7		
CON	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CON	501	Construction Research Methods	Data collection methodologies, applied parametric and nonparametric statistics, data analysis techniques, technical writing, and data presentation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Construction Graduate student
CON	530	Facilities Operations and Maintenance	Operations, maintenance and energy management requirements of various types of facilities and built environments. Ethical practices	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CON 430, 494 (Facilities Management/Operations & Maintenance), 530 or 598 (Facilities Management/Operations & Maintenance)
CON	531	Facility Management: Building Energy Management	Understand and learn energy management techniques in facilities management. Identifying and performing efficiency evaluations on various types of heating, ventilation and air conditioning systems in typical buildings. Concepts and methods of managing, adjusting and balancing equipment and systems for maximum facility performance. Facilities organizations best practices to maximize energy savings and performance, such as insulation usage, lighting optimization, energy management systems and commissioning procedures. Identification of ancillary benefits to energy-efficient building systems such as indoor air quality, sustainability and energy audits.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CON 531 or CON 598 (Facility Management Building)
CON	532	Facilities Project Management	Understand and learn project management techniques in facilities management. Stakeholder analysis, including roles, responsibilities and risk considerations. Asset owner and manager considerations within project components and deliverables. Development of project scope, requirements, schedules, budgets and communication plans from a facility manager's perspective. Best practices of facilities organizations for managing contract types, contract governance and performance management.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only CON 532 or CON 598 (Facility Project Management)
CON	540	Construction Productivity	Productivity concepts. Data collection. Analysis of productivity data and factors affecting productivity. Means for improving production and study of productivity improvement programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction MS or Construction Engineering MSE major
CON	545	Construction Project Management	Theory and practice of construction project management. Roles of designer, owner, general contractor, and construction manager.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction or Construction Engineering graduate student
CON	551	Alternative Project Delivery Methods	Design/construction interaction; conceptual estimation and scheduling; the RFQ/RFP process; legal, insurance, risk allocation issues; procurement and selection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	554	Trenchless Construction Methods	Theory and practice of trenchless construction methods. Types of equipment, roles of site personnel, engineering design, contractual issues, and safety. Lecture, class projects, and site visits. Knowledge of heavy construction equipment, methods, and materials required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Construction Graduate student
CON	557	Principles of Leadership for Project Managers	Individual, organizational and process/structure leadership in project setting. Four-step leadership transformational model for project leaders. Project leadership tools and applications to motivation, conflict management, team building and delegation of risk.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: MS or PhD Construction Management or MSE Construction Engineering major. Pre/Corequisites: CON 243; Credit is allowed for only CON 457, 494 (Prin Lead & Management), 557 or 598 (Prin Lead and Mgmt)
CON	561	International Construction	Investigation of the cultural, social, economic, political, and management issues related to construction in foreign countries and remote regions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Engineering Graduate student

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CON	565	Deductive Logic, Leadership and Industry Structure	Simple, logical explanations of construction and other industries. State-of-the-art supply chain, profit maximizing, and efficient practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking). Credit is allowed for only CON 465 or CON 565
CON	567	Advanced Procurement Systems	Development of multicriteria decision procurement model for selecting the performing contractor.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking). Credit is allowed for only CON 467, 567 or 494 (Advanced Procurement Systems)
CON	570	Introduction to Advanced Technology Facilities	Introduces advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. The constructor's viewpoint, including: planning, structures, mechanical, and tool installation. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	571	Construction of Advanced Technology Facilities	Construction issues for advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. Issues include scheduling, cost estimating, project management, mechanical, safety, commissioning and tool hookup. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: CON 570 with C or better
CON	575	Information Technology in Construction	Uses virtual construction methodologies to improve the construction enterprise using communications, facility modeling, and decision making. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	589	Construction Company Financial Control	Financial accounting and cost control at the company level in construction companies. Accounting systems. Construction project profit calculations. Financial analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Engineering MS, MSE or PHD student
CON	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisite: Construction Masters student
CON	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Ira A. Fulton Engineering	Del E. Webb Construction	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Prerequisite(s): Construction graduate student
CON	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisite: Construction Masters student
CON	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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CON	700	Research Methods	Course on research methods in a specific discipline.	N	RSC	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		Pre-requisite: Construction Doctoral student
CON	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Ira A. Fulton Engineering	Del E. Webb Construction	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		Pre-requisite: Construction Doctoral student
CPI	101	Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	
CPI	101	Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3	CS	
CPI	111	Game Development I	Introduces video game design, art theory, and concepts as they apply to video game development. Basic art principles used in game development. Covers the fundamental video game art principles of 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets. Also includes game design, game production, asset production, and game programming. Hands-on experience by creating 2-D game prototypes belonging to different video game genres and evaluating the techniques.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3	CS	
CPI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	200	Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s) with C or better: MAT 242 (or MAT 342 or 343); 243
CPI	200	Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3	MA	Prerequisite(s) with C or better: MAT 242 (or MAT 342 or 343); 243
CPI	211	Game Development II	Introduces the basics of 3D game development by using a game engine. Focuses on the pipeline of 3D game development including environment and contents creation, scripting to control components, and graphics user interfaces development. Develops several 3D games for multi platforms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 111 with C or better
CPI	220	Applied Data Structures and Algorithms	Thorough grounding in applied knowledge and skills related to algorithms and data structures used in the development of software designed to solve complex problems. Overview of computational and critical thinking skills that can be called upon to analyze and solve complex problems in multiple domains.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s): CSE 205 with C or better
CPI	221	Advanced Object-Oriented Principles Using Java	Advanced object-oriented programming using the Java language. Design concepts and problem solving.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s): CPI 220 with C or better
CPI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	310	Web-Based Information Management Systems	Relational database design, entity-relationship modeling, relational algebra, SQL, database access through Web, Web data management, introduction to XML, fundamentals of Web application development, Web server architectures, lecture, in-class lab activities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CSE 205 with C or better
CPI	311	Game Engine Development	State-of-the-art techniques for computer game design and programming with an emphasis on 3-D graphics and interaction. Focuses on a practical, example-driven approach to learning the unique art of 3-D game development. Topics include graphics game engines, textures, shader programming, artificial intelligence, physics, modeling, sound effects, and techniques for user interfaces.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 211 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
CPI	321	Fundamentals of Game Art	Introduces art theory and concepts as they apply to video game development. Covers 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 211 with C or better
CPI	350	Evaluation of Informatics Systems	Methods for evaluation of informatics systems, including design of computational and human experiments, ethnography, and analytic techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s) with C or better: GCU 495 (or IEE 380 or STP 226 or 231 or 420); BS Informatics major
CPI	360	Decision Making and Problem Solving	Practical use of database systems, computer graphics, and modeling to inform decision making.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CSE 205 with C or better
CPI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	400	Scientific Computing and Visualization	Introduces scientific computing and visualization, supported by data acquisition, geometric modeling, and computer graphics. Covers the necessary mathematical foundations, data structures, and algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 101 with C or better; CPI 200 with C or better
CPI	411	Graphics for Games	Examines real-time rendering of high-quality interactive graphics. Studies advances in graphics hardware and algorithms that make this possible. Examples of techniques and topics include nonphotorealistic rendering, occlusion culling, level of detail, terrain rendering, shadow generation, image-based rendering, and physical simulation. Helps students add graphics-related features to the game architecture developed in CPI 311.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 311 with C or better
CPI	412	Cognitive Systems and Intelligent Agents	Advanced concepts and techniques of rule-based programming and agent architectures, incorporating ideas from artificial intelligence, cognitive psychology, and linguistics, along with their use in creating intelligent synthetic characters for interactive games and other virtual environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 311 with C or better
CPI	421	3-D Modeling and Texturing	Provides working knowledge of 3-D modeling, texture mapping, and paint concepts for the creation of 3-D video games art assets. Students work on concepts such as 3-D lighting, high polygon mesh rendering, and various third-party software and how to integrate them into the asset production pipeline.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s): CPI 211 with C or better
CPI	422	3-D Animation and Rigging for Video Games	3-D rigging, skinning, and 3-D animation techniques for video game development. Includes rotoscoping for character animation, animation loops, and integration of motion capture data, as well as prop animation. Covers operation of 3-D cameras and 3-D rendering.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 321 with C or better
CPI	441	Gaming Capstone	Industry-oriented course emphasizing the video game development process, technical skills, teamwork and communication among the students enrolled in the gaming certificate. Students partner with local industry involved in game development, visual art, and educational gaming and solve real-world problems by working in a team comprised of students from the three tracks available within the certificate.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s): BS Informatics or BIS (Computer Gaming) or Computer Gaming certificate; senior standing
CPI	460	Intelligent Interactive Instructional Systems	Intelligent interactive instructional systems serve as tutors, as learning companions or both. Covers their design, the technology that powers them, the learning theories that motivate them and results from experimental evaluations. Emphasizes intelligent tutoring systems, as they are a more mature technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CSE 205 with C or better; Credit is allowed for only CPI 460 or CSE 494 (Intelligent Instr Sys)
CPI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-12		
CPI	485	Informatics Capstone I	Team-based design of an informatics system; working with clients; development of requirements, use cases, class/object diagrams, and plans for quality assurance and other evaluations; technical communication; teamwork.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3	L	Pre-requisite: CPI 310, 350 and CSE 463 with C or better; Informatics BS student
CPI	486	Informatics Capstone II	Implementation of the informatics system designed during CPI 485; work processes; keeping designs consistent with implementations; conducting QA and other evaluations; technical communication; teamwork.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	4	L	Pre-requisite: Informatics BS student; CPI 485 with C or better
CPI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-6		Prerequisite(s): Barrett Honors student
CPI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-6	L	Prerequisite(s): Barrett Honors student
CPI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CPI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CPP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-4		
CPP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-4		
CPP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-4		
CPP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-4		
CPP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-7	L	
CPP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-3		
CPP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-3		
CPP	560	Emergency Services Operations Analysis and Planning	Applies common data analysis tools and techniques appropriate to risk assessment, deployment analysis and performance measurement to evaluate an organization's abilities to respond to community risk.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic or writing a literature review of a topic.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		
CPP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		
CPP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		
CPP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		
CPP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		
CPP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	623	Counseling At-Risk Youth	Examines the behaviors that place adolescents at risk for not achieving career goals and interventions to address these behaviors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	644	Psychology of Careers	Advanced career counseling, including theory, research, and practice.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate; CED 577

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CPY	645	Professional Issues and Ethics	Ethical, legal, and professional issues of concern to practitioners and researchers functioning in a variety of settings.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	650	Counseling Latinos	Survey course addressing mental health concerns and perspectives for individuals and families of Latino, Spanish-speaking origin.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: CED 522
CPY	651	Personality Assessment	Training in the use of major objective personality instruments to assess psychological symptoms; emphasizes MMPI-2 and MCMI-III.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: CED 523
CPY	660	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CPY	668	Grant Writing and Grant Makers: The Washington Context	Develops successful proposals for educational research projects. Students gain experience writing for federal agencies, reviewing, and being evaluated on grant proposals.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CPY or HED 668
CPY	670	Individual Differences	Focuses on definitions and assessment of ways humans vary on psychological constructs.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	671	Multicultural Counseling	Provides awareness of the influence of sociocultural variables on human development and explores implications for counseling minority populations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	674	Counseling Women	Explores women's development and its implications for counseling. Sexism in mental health, sex differences in diagnosis and psychopathology, and women's particular treatment needs.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	675	Health and Wellness Counseling	Theory, research, and practice in health and wellness counseling.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CED 577 with C or better
CPY	676	Social Bases of Behavior	In-depth examination of contemporary research and theory in selected areas of social psychology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	677	Advanced Counseling	Advanced topics in counseling theory, research, and practice.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate; CED 577 with C or better
CPY	678	Supervision Theory	Models of therapist development and clinical supervision.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	679	History and Systems of Psychology	Examines the development and differentiation of the discipline of psychology from its origins in philosophy to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate

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CPY	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	694	Substance Abuse: Therapy and Psychoeducation	Develops knowledge and skills for conducting psychotherapeutic and educational interventions to address substance use disorders and associated concerns.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	701	Science and Practice of Counseling Psychology	Directed experiences involving the integration of theory, research, and practice in counseling psychology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	702	Research Methods in Counseling Psychology	Applies experimental and/or quasi-experimental methods to theory construction and treatment evaluation in counseling psychology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: COE 502
CPY	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CRD	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		Pre-requisite: Maximum 25 hours; Credit is allowed for only CRD, PRM or TDM 191
CRD	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CRD	210	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD or NLM or PRM or TDM 210

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CRD	235	Leadership and Ethics	Examines ethical questions faced by emerging leaders. Focuses on helping students develop emotional intelligence, current professional issues, and the refinement of a professional philosophy and comprehensive set of competences that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only CRD 235 or NLM 235
CRD	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301
CRD	302	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	C	Pre-requisites: ENG 102 with a C or better; MAT 142 or higher with a C or better; NLM 160 (or PRM 120) with a C or better; 2.50 GPA; 45 earned hours; Credit is allowed for only CRD, NLM, PRM or TDM 302
CRD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CRD	403	Leadership and Professional Development	Examines leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: CRD, NLM, PRM or TDM 210 with C or better; CRD, NLM, PRM or TDM 301 with C or better; senior standing; 2.50 GPA; Credit is allowed for only CRD, NLM, PRM or TDM 403
CRD	435	Service Learning for Community Development	Applies youth and adult development theories through community service immersion in collaboration with local nonprofit partners.	N	REC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): Minimum 45 hours. Credit is allowed for only CRD 435 or NLM 435
CRD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CRD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
CRD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	502	Statistical and Data Analysis	Introduces descriptive and inferential methods used in community development, with an emphasis on nonprofit, tourism, and recreation sciences. Students gain experience using statistical software.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
CRD	530	Community Services Management	Examines and applies organizational behavior, leadership, human resources, development, planning, and risk management to profession.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	552	Critical Issues	Examines critical research issues in the leisure, recreation and tourism fields.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	555	Theoretical Perspectives in Community Development	Reviews theoretical and empirical literature in community development with an emphasis on nonprofit, tourism, and recreation sciences.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
CRD	569	Advanced Tourism and Recreation Studies	Advanced study of tourism with an emphasis on relevant practices, theories, and concepts.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	570	Social Aspects of Outdoor Recreation Management	Analyzes the social aspects of natural resource science, policy, and management.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CRD	572	Community and Social Innovations	Considers community innovation and development from the perspective of achieving balance among economic, environmental, social, physical and political realms as a framework of sustainability.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CRD, NLM 572 or NLM 598 (Community & Social Innovations)
CRD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		
CRD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CRD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	610	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability. Considers issues at different scales, ranging from urban to rural, local to global, historical to contemporary. Critically examines the role of public, private, and nonprofit institutions in promoting quality of life.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	620	Community Research Methods	Introduces community research methods, with emphasis on methodological questions and techniques relevant to contemporary community-based research.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	640	Research Seminar in Community Resources and Development I	A seminar designed to explore issues related to advancing a career as a researcher in the fields associated with community resources and development (i.e., nonprofit, recreation and parks, tourism). Critical to this study is an understanding of the conduct of high quality research, an understanding of issues that arise in professional settings (e.g., expediency vs. effectiveness), and ethical principles and processes that undergird research.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Doctoral student in Community Resources and Development
CRD	650	Research Seminar II	Helps prepare doctoral students to become productive and successful social scientists in community resources and development. Covers a wide range of topics under the broader conceptual umbrella of research, teaching, and service.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Doctoral student in Community Resources and Development
CRD	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
CRD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		
CRD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CRJ	100	Introduction to Criminal Justice	History and current practice of the criminal justice system. Roles of law enforcement agencies, courts and correctional agencies.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	SB	
CRJ	201	Criminal Justice Crime Control Policies and Practices	Dimensions and causes of crime. Criminal justice system responses.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	203	Courts and Sentencing	Structure and operation of criminal court system.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	204	Juvenile Justice	History and development of the juvenile court and the juvenile justice system.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	210	Introduction to Criminal Investigations	Studies the basic principles of criminal investigation including the analysis of investigative techniques, criminal patterns and modus operandi, interviewing and interrogation strategies, collection and management of evidence, surveillance, and crime scene investigation. Covers theories, philosophies and concepts related to suppression of crime.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 100
CRJ	211	Documenting the Crime Scene	Practical approach to evidence identification; documentation of the location of evidence; crime scene sketching; and the collection and handling of evidence from the crime scene, to the crime laboratory, and to presentation in court. Includes lab exercises designed to reinforce important investigative skills.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 100
CRJ	225	Introduction to Criminology	Theoretical explanations for criminal behavior.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	SB	Credit is allowed for only CRJ 225 or 294 (Introduction to Criminology)
CRJ	230	Introduction to Policing	History of police. Contemporary police work. Problems in policing.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	240	Introduction to Corrections	Structure and operation of corrections system.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	260	Substantive Criminal Law	Statutory elements of crimes and defenses. Historical development of criminal law. Public policy implications.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	270	Community Justice	Collaborative and evidence-based approach to reducing crime, incorporating offenders, victims, the community and criminal justice agencies.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	SB	
CRJ	284	Professional Growth in Criminal Justice	Targeted field practice with criminal justice agencies. Prerequisite for internship.	N	LEC	N	YGB	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 100 with C or better
CRJ	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-4		
CRJ	300	Oral and Written Communication for Criminology and Criminal Justice	Develops critical oral and written communication skills with emphasis on locating, analyzing, properly citing, and persuasively using primary and secondary sources in criminology and criminal justice.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
CRJ	302	Research Methods	Validity and reliability of research designs and data collection.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	L	Prerequisite(s): CRJ 100 with C or better; CRJ 201 with C or better; MAT 117, 119, 142, 170, 210, or 270 with C or better

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CRJ	303	Statistical Analysis	Fundamentals and application of descriptive and inferential statistics.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	CS	Prerequisite(s): CRJ 100 with C or better; CRJ 201 with C or better; MAT 117, 119, 142, 170, 210, or 270 with C or better
CRJ	305	Gender, Crime, and Criminal Justice	Women as offenders, victims and professionals in the criminal justice system.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	C	Prerequisite(s): CRJ 100 with C or better; CRJ 201 with C or better; junior or senior standing
CRJ	306	Race, Ethnicity, Crime, and Criminal Justice	Minority issues in the criminal justice system.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	C	Prerequisite(s): CRJ 100 with C or better; CRJ 201 with C or better; junior or senior standing
CRJ	308	Advanced Criminological Theory	Critical assessment of criminological thought using original readings.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 100 with C or better; CRJ 201 with C or better; CRJ 225 with C or better; junior or senior standing
CRJ	315	Police Organization and Management	Structure, processes and behavior of police organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 100, CRJ 301, JUS 100, JUS 105, or JUS 305 with a C or better; CRJ 230 with C or better
CRJ	321	Imperatives of Proof	Problems and means of establishing identity and fact in relation to arrest, detention, adjudication, sentencing, and correctional case management.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	350	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	SB	Pre-requisite: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-4		
CRJ	403	Victims and the Criminal Justice System	Victimization theories. Nature and extent of victimization. Interactions among victims, the criminal justice system and society. Victim rights and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 403 or CRJ 494 (Victimology) or CRJ 494 (Victims and the Criminal Justice System)
CRJ	404	Juvenile Delinquency	Causes, correlations and strategies to reduce juvenile delinquency.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 404 or CRJ 494 (Juvenile Delinquency)
CRJ	405	Neighborhoods and Crime	Variation in crime across neighborhoods from ecology of crime and urban sociology perspectives. Influence of social institutions on community crime patterns.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 405 or CRJ 494 (Neighborhoods and Crime)
CRJ	406	Sex Crimes	Prevalence, nature and etiology of sex crimes. Response of criminal justice system to victims and perpetrators of sex crimes.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 406 or CRJ 494 (Sex Offenders and Sex Crimes)
CRJ	408	Drugs and Crime	Patterns of illegal drug use. Problems, practices and policies associated with drugs, crime and drug policy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	409	Police Accountability	Command and control systems. Managing police culture. Community policing and accountability to the community. Police training.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 409 or CRJ 494 (Police Accountability)
CRJ	410	Procedural Criminal Law	Criminal procedures mandated by the U.S. Constitution.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	412	International Terrorism	Structural, organizational, political and legal characteristics of international terrorism.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 412 or CRJ 494 (Homeland Security) or CRJ 494 (International Terrorism)
CRJ	413	Forensics	Overview of contemporary forensic science. Application of principles of chemistry, biology, physics and other disciplines to analysis of physical evidence.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 413 or CRJ 494 (Forensics)
CRJ	417	Cyber Terrorism	Terrorism perpetuated online. Terrorism and technology.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303

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CRJ	419	Domestic Terrorism	Evolution of domestic terrorism in the United States. History and future of domestic security. Public policy responses. Internal and external political implications.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 419 or CRJ 494 (Domestic Terrorism)
CRJ	422	Violence in America	Theories, patterns, prevention and policy responses to violence in the United States. Varieties of violence including domestic, gang-related, hate crimes, school violence and sex crimes.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 422 or CRJ 494 (Violence in America)
CRJ	433	Death Investigations: Principles of Forensic Medicine	Medico-legal investigation of death via postmortem examinations. Identification, thanatology, thanato-etiology of unexpected natural deaths, accidental deaths, suicides and homicides. Forensic examination of living people following sexual assault, traffic offenses, child abuse and drug crimes.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Investigations certificate students: CRJ 100 OR Criminal Justice and Criminology majors: CRJ 302; CRJ 303
CRJ	434	Drugs of Abuse	Pharmacological and toxicological characteristics of commonly abused drugs such as alcohol, barbiturates, amphetamines, narcotics, stimulants and hallucinogens. Forensic toxicology. Acute and long-term effects of drug abuse.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Investigations certificate students: CRJ 100 OR Criminal Justice and Criminology majors: CRJ 302; CRJ 303
CRJ	435	Crime and Forensic Mental Health	Clinical assessment of people under court jurisdiction. Topics include psychological paradigms, nomenclature of mental disorders, forensic clinical assessment, mental disorders and crime, legal standards governing mentally disordered criminal offenders.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Investigations certificate students: CRJ 100 OR Criminal Justice and Criminology majors: CRJ 302; CRJ 303; Credit is allowed for only CRJ 435 or CRJ 494 (Crime and Mental Illness)
CRJ	443	Community Corrections	Probation and parole. Types of community corrections programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	450	Crime Analysis	Tactical, strategic and administrative aspects of crime analysis and crime mapping as practiced in everyday policing. Environmental criminology.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	455	Police and International Terrorism	Suicide bomber interdiction, jihadism, and anti-terrorism intelligence gathering. History of prior attacks and policy responses.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 201 with C or better; minimum junior standing; Credit is allowed for only CRJ 455 or CRJ 555 or CRJ 494 (Police and Int'l Terrorism-Israel)
CRJ	456	Etiology of Martyrdom	Development of a jihadist mindset. Social support for beliefs that lionize martyrdom.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 201 with C or better; minimum junior standing; Credit is allowed for only CRJ 456 or CRJ 556 or CRJ 494 (Etiology of Martyrdom)
CRJ	461	Domestic Violence	Legal, historical, theoretical, and treatment aspects of domestic violence, including child abuse, woman battering, incest, and marital rape.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	462	Gangs	History and development of gangs. Criminal justice system responses. Nature of gangs and gang members.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	463	White Collar Crime	Business, professional and official lawbreaking including consumer fraud, securities violations, unethical behavior and political corruption.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	464	Organized Crime	Nature and history of organized crime. Theories of containment. Criminal justice agency responses.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	470	Discretionary Justice	Use and abuse of discretion in the criminal justice system. Theoretical and empirical links between discretion and discrimination based on race, ethnicity and gender.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	L or SB	Prerequisite(s): CRJ 302; CRJ 303
CRJ	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): CRJ 201 with C or better, CRJ 284 with Y grade if completed
CRJ	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-6		Prerequisite(s): Barrett Honors student; CRJ 302; CRJ 303
CRJ	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-6	L	Prerequisite(s): Barrett Honors student; CRJ 302 with C or better; CRJ 303 with C or better
CRJ	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-4		Prerequisite(s): CRJ 302; CRJ 303

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CRJ	496	Directed Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to contribute to a specific project such as a report or publication. Tasks may include data collection and coding, data analysis, literature reviews and producing research reports. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the faculty member with whom the student will work and the director of the school offering the course.	N	RSC	Y	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-3		Prerequisite(s): CRJ 302 with C or better; junior or senior standing
CRJ	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-3		Pre-requisites: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	501	Seminar in Criminal Justice	Overview of the American criminal justice system, with emphasis on policy issues in police, courts, sentencing, corrections.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	502	Seminar in Criminology	Theory and research on the nature, causes, and prediction of criminal careers and events.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	503	Research Methods	Introduces data analysis; overview of research methods used in social science research, including experimental design, survey research, field research, and evaluation research.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	504	Statistical Tools for Criminology and Criminal Justice	Focuses on essential statistical analysis that can be used in criminal justice and related agencies.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	505	Theory and Practice in Criminal Justice	Capstone course for the MA in Criminal Justice; provides a synthesis of the criminal justice system.	N	RSC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	510	Criminal Justice Planning and Program Evaluation	Examines the application of alternative models of strategic planning to the criminal justice system. Covers methods of evaluating criminal justice policies and practices.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	511	Applied Data Analysis in Criminal Justice	Examines a variety of tools used in the analysis of criminal justice data, including GIS mapping.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Emergency Management and Homeland Security MA or Criminology & Criminal Justice MS or Criminology & Criminal Justice PhD student
CRJ	512	Seminar in Policing	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

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CRJ	513	Seminar in Courts and Sentencing	Overview of the nature, proposed principles, and theoretical doctrine of the courts and sentencing policies in criminal justice.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	514	Seminar in Corrections	Theory, research, and policy issues regarding community-based and institutional correction programs.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	515	Seminar in Women and Crime	Introduces students to issues regarding women and the criminal justice system, focusing on their roles as offenders, victims and professionals.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	516	Seminar in Criminal Justice Organization and Management	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	517	Seminar on Juvenile Delinquency and Juvenile Justice	Examines patterns and correlates of delinquency within the context of theories of delinquency. Reviews the response of the juvenile justice system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	518	Seminar on Race/Ethnicity, Crime, and Justice	Theoretical perspectives and research on the overrepresentation of racial minorities as victims, offenders, and defendants in the criminal justice system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	519	Seminar on Victimization	Examines theory and research concerning victimization and consequences for victims, society, and the justice system. Also examines effective responses to victims' post-crime needs.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	520	Seminar on Violent Crime	Examines patterns and correlates of violent crime, as well as prevention strategies and policy implications.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	521	Seminar on the Nature of Crime	Examines patterns and correlates of crime at individual, situational, and aggregate levels. Topics include defining crime, offender typographies, and criminal careers.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	522	Seminar on Gangs and Crime	Theoretical perspectives and research on gangs and crime, and on the role of the community and the criminal justice system in causes and control.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

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CRJ	524	Seminar on Punishment and Society	Examines the fundamental philosophical principles of justice and punishment. Includes a comparative and historical perspective.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	525	Seminar on Life-Course Criminology	Provides an intensive examination of life-course explanations of crime, the life-course perspective and a theoretical orientation, and research methods used in life-course research.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	526	Theories of Crime Causation		N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Criminology and Criminal Justice MS or PhD major; Credit is allowed for only CRJ 526 or 598 (Theories of Crime Causation)
CRJ	527	Police Accountability	Examines the great authority of police, the various and most common ways that police abuse that authority, the consequences of those abuses, and accountability mechanisms that can prevent those abuses from occurring.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: MA in Criminal Justice or MS in Criminology and Criminal Justice or PhD in Criminology and Criminal Justice major; Credit is allowed for only CRJ 527 or 598 (Police Accountability)
CRJ	528	Prison and Jail Administration	Overview of prison and jail administrative practices, with emphasis on policy and management issues in modern correctional institutions.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminal Justice MA or Criminology and Criminal Justice MS or Criminology and Criminal Science PhD student
CRJ	529	Community Corrections	Provides a review of theory, research and policy focusing primarily on correctional strategies and programs that take place within the community setting, as well as the function of community corrections within the larger correctional system. Gives particular attention to the purpose and goals of community-based corrections; the historical development of probation and parole practices; and contemporary community corrections programs and strategies such as evidence-based practices, risk assessment, offender reentry, sex offender management, diversion, restitution, community service programs and other emerging alternatives to traditional incarceration.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: MA in Criminal Justice or MS in Criminology and Criminal Justice or PhD in Criminology and Criminal Science student
CRJ	530	Seminar in Forensics	Explores recent and sometimes controversial developments in forensic science. Includes topics such as quality assurance, the CSI effect and the National Academy of Sciences' report entitled "Strengthening Forensic Science in the United States: A Path Forward."	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Criminology and Criminal Justice MS or Criminology and Criminal Justice PhD student; Credit is allowed for only CRJ 530 or CRJ 598 (Seminar in Forensics)
CRJ	531	Crime Mapping	Examines the applied research methodology and conceptual framework used to conduct spatial analysis within the crime analysis profession.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Criminology and Criminal Justice MS or Criminology and Criminal Justice PhD student; Credit is allowed for only CRJ 531 or CRJ 598 (Crime Mapping)
CRJ	532	Sex Crimes	Not only discusses the distinctions among types of offenders, but also applies theory, analyzes public policy, examines the effect of sex offenses on victims, and discusses how we've legislated sexual behavior over human history.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Criminology and Criminal Justice MS or Criminology and Criminal Justice PhD student; Credit is allowed for only CRJ 532 or CRJ 598 (Sex Offenders & Sex Crimes)
CRJ	553	Terrorism and Weapons of Mass Destruction	Historical evolution of terrorism and weapons of mass destruction. Analyzes current theories and mitigation, preparedness, and response tactics.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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CRJ	554	Homeland Security	Presents skills necessary to develop policies, strategies, programs, and organizational structure of an all hazards/all risk homeland security program.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Emergency Management and Homeland Security MA or Criminology & Criminal Justice MS or Criminology & Criminal Justice PhD student; Credit is allowed for only PAF 461 or CRJ 554
CRJ	555	Police and International Terrorism	Suicide bomber interdiction, jihadism and anti-terrorism intelligence gathering. History of prior attacks and policy responses.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Criminology and Criminal Justice MS or Criminology and Criminal Justice PhD student; Credit is allowed for only CRJ 445 or CRJ 555 or CRJ 598 (Police and Int'l Terrorism-Israel)
CRJ	556	Etiology of Martyrdom	Development of a jihadist mindset. Social support for beliefs that lionize martyrdom.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Criminology and Criminal Justice MS or Criminology and Criminal Justice PhD students; Credit is allowed for only CRJ 456 or CRJ 556 or CRJ 598 (Etiology of Martyrdom)
CRJ	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CRJ	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

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CRJ	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-4		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	601	Seminar on Criminological Theory	Examines historical and contemporary criminological theories.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	602	Seminar on Criminal Justice Policies and Practices	Analyzes responses to crime and the operation of criminal justice system, with emphasis on theory and research on effectiveness of policies and practices of the system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	603	Advanced Research Design	Exposes students to advanced topics in research design and methodology in preparation for writing the doctoral dissertation.	N	RSC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	604	Advanced Statistical Analysis	Use and application of advanced statistical techniques and multivariate analysis of data.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	605	Topics in Quantitative Methods	Explores advanced techniques of statistical analysis within the field of criminal justice.	N	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	606	Advanced Topics in Theoretical Criminology	Focuses on criminological theory construction, historical and contemporary theoretical debates within criminology, theory testing, empirical support for theories, and theoretical integration.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	607	Advanced Topics in Policing	Covers the major issues related to policing and police organizations in the United States. Principal focus on policing and police organizations in large cities, with a focus on police organizational structure, police culture, police organizational environment, police decision making and change in the police organization.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	608	Advanced Topics in Courts and Sentencing	Focuses on recent research on charging, plea bargaining, bail decision making, jury decision making and sentencing, as well as the impact of recent reforms directed at the criminal court system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	609	Advanced Topics in Corrections	Provides a critical examination of the theoretical framework underpinning current correctional policy (institutional and community based), as well as advanced, in-depth analyses of contemporary issues surrounding corrections.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	610	Advanced Topics in Juvenile Justice	Examines the meaning of the concept of juvenile delinquency as a separate entity in the criminal justice system. Considers the relationship between social attitudes and definitions of youthful law violation, and reviews studies on various forms of delinquency, such as drug offenses, sex delinquency, and status offenders. Also focuses on the internal workings of the juvenile justice system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	611	Advanced Topics in Crime and Victimization	Examines research on criminal offending and victimization, focusing on the correlates of offending and victimization, risk and protective factors, and policies designed to reduce the impact of crime on victims.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	612	Advanced Topics in Race, Gender, and the Criminal Justice System	Examines the interrelationships among race and ethnicity, gender, crime and the criminal justice system. Focuses on theoretical perspectives and empirical research on racial minorities and women as victims, offenders, and criminal justice professionals.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	613	Qualitative Methods	Provides students with an examination of the design, execution, and write-up of qualitative research. Discusses methods of data collection, including participant-observation, ethnography, and interviewing.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CRJ	792	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1		Pre-requisite: Criminology and Criminal Justice PhD student

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CRJ	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student
CSE	100	Principles of Programming with C++	Principles of problem solving using C++, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	CS	
CSE	110	Principles of Programming	Concepts of problem solving using an object-oriented programming language, algorithm design, structured programming, fundamental algorithms and techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	CS	
CSE	120	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): degree- seeking student; Credit is allowed for only CSE 120 or EEE 120
CSE	180	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	
CSE	180	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	CS	
CSE	182	Applied Problem Solving with C#.Net	Introduces object oriented programming, problem solving, fundamental algorithms and techniques, computer systems concepts, and implementation of programs using Visual C#.Net platform.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		
CSE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	205	Object-Oriented Programming and Data Structures	Problem solving by programming with an object-oriented programming language. Introduces data structures. Overview of computer science topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	CS	Pre-requisite: CSE 110 with C or better. Credit is allowed for only ACO 102 or CSE 205 or CST 200
CSE	220	Programming for Computer Engineering	Introduction to C/C++, systems programming, and concurrency.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: CSE 120 or EEE 120 with C or better; CSE 205 with C or better
CSE	230	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming. Exception/interrupt handling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): degree- seeking student; CSE 100, 110, or 200; CSE 120 or EEE 120; Credit is allowed for only CSE 230 or EEE 230
CSE	240	Introduction to Programming Languages	Introduces the procedural (C/C++), applicative (LISP/Scheme), and declarative (Prolog) languages.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): CSE 205 with C or better or Geographic Information Science major with GIS 321 with C or better
CSE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		Prerequisite(s): Barrett Honors student
CSE	301	Computing Ethics	Ethics for computing majors: history of computing, intellectual property, privacy, ethical frameworks, professional ethical responsibilities, and risks of computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Pre-requisite: Computer Science BS or Computer Systems Engineering BSE student; CSE 205 with C or better
CSE	310	Data Structures and Algorithms	Advanced data structures and algorithms, including stacks, queues, trees (B, B+, AVL), and graphs. Searching for graphs, hashing, external sorting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s) with C or better: CSE 220 or 240; MAT 243 (or 300 for CMS); Computational Math Sci (CMS), Computer Science, Computer Systems Engineering, Digital Culture (Media Proc), Engineering Management, Geo Info Sci or Informatics or BMI/CSE grad
CSE	320	Design and Synthesis of Digital Hardware	Design and synthesis of digital hardware with hardware description language, computer-aided design tools, and programmable devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Systems Engineer BSE or Computer Science BS major; CSE 220 with C or better; CSE 230 or EEE 230 with C or better
CSE	325	Embedded Microprocessor Systems	System-level programming and analysis of embedded microprocessors systems. Fundamental concepts of digital system design for embedded system applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 220 with C or better; CSE 230 or EEE 230 with C or better

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CSE	330	Operating Systems	Operating system structure and services, processor scheduling, concurrent processes, synchronization techniques, memory management, virtual memory, input/output, storage management, and file systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; CSE 230 or EEE 230 with C or better; CSE 310 with C or better OR CSE Graduate student
CSE	335	Principles of Mobile Application Development	Covers topics pertaining to fundamental concepts of mobile application development principles including design patterns; data persistence; interfacing with services and devices; location and incorporation of existing frameworks; user interface and experience; context awareness; utilization of built-in tools for software profiling, testing, and version control; and security/privacy issues.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Informatics BS or Computer Systems Engineering BSE major; CSE 220 or 240 with C or better; Credit is allowed for only CSE 335 or CSE 394 (Principles of Mobile Application)
CSE	340	Principles of Programming Languages	Formal syntactic and semantic descriptions, compilation and implementation issues, and theoretical foundations for several programming paradigms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Systems Engineering BSE or Computer Science BS major; CSE 310 with C or better; CSE 230 or EEE 230 with C or better OR CSE graduate student
CSE	355	Introduction to Theoretical Computer Science	Introduces formal language theory and automata, Turing machines, decidability/undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Systems Engineering BSE or Computer Science BS major; CSE 310 with C or better OR CSE graduate student
CSE	360	Introduction to Software Engineering	Software life cycle models; project management, team development environments and methodologies; software architectures; quality assurance and standards; legal, ethical issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): CSE 220 or 240 with C or better; Biomedical Informatics BS or Computer Science BS or Digital Culture (Media Processing) BA or Geographic Information Science BS or Computer Systems BSE or Engineering Mgmt BSE, or Computer Science graduate
CSE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	408	Multimedia Information Systems	Design, use, and applications of multimedia systems. Introduces acquisition, compression, storage, retrieval, and presentation of data from different media such as images, text, voice, and alphanumeric.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student
CSE	412	Database Management	Introduces DBMS concepts. Data models and languages. Relational database theory. Database security/integrity and concurrency.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Biomedical Informatics BS or Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student; Credit allowed for only ACO 220 or ACO 320 or CSE 412 or CST 433
CSE	414	Advanced Database Concepts	Object-oriented data modeling, advanced relational features, JDBC and Web access to databases, XML and databases, object-oriented databases, and object-relational databases.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 412 with C or better OR Computer Science and Engineering graduate student

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CSE	420	Computer Architecture I	Computer architecture. Performance versus cost tradeoffs. Instruction set design. Basic processor implementation and pipelining.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 230 or EEE 230 (or CSE 330) with C or better; CSE 310 with C or better OR Computer Engineering graduate student
CSE	423	Systems Capstone Project I	Development process: specification, design, implementation, evaluation, and testing with economic, social, and safety considerations. Technical communication and team skills enrichment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Prerequisite(s): Computer Systems Engineering BSE major; CSE 320 with C or better; CSE 325 with C or better; CSE 330 with C or better; CSE 360 with C or better; senior standing or postbaccalaureate; Credit is allowed for only CSE 423 or CSE 485
CSE	424	Systems Capstone Project II	Continuation of capstone project started in CSE 423.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Prerequisite(s): Computer Systems Engineering BSE major; CSE 423 with C or better; senior standing or postbaccalaureate
CSE	432	Operating System Internals	IPC, exception and interrupt processing, memory and thread management, user-level device drivers, and OS servers in a modern microkernel-based OS.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 430 with C or better OR Computer Science and Engineering graduate student
CSE	434	Computer Networks	Network architecture and protocols, principles of network applications, socket programming, flow and congestion control, switching and routing, link-layer technologies, traffic capture and analysis, security.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 230 or EEE 230 with C or better; CSE 310 with C or better OR Computer Science and Engineering graduate student; Credit is allowed for only ACO 330 or CSE 434
CSE	438	Embedded Systems Programming	Development of embedded system software, I/O handlers, and multiple threaded programs. Scheduling algorithms. Embedded software structures. Real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 325 with C or better OR Computer Science and Engineering graduate student
CSE	440	Compiler Construction I	Introduces programming language implementation. Implementation strategies such as compilation, interpretation, and translation. Major compilation phases such as lexical analysis, semantic analysis, optimization, and code generation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Systems Engineering BSE or Computer Science BS major; CSE 310 with C or better OR Computer Engineering graduate student
CSE	445	Distributed Software Development	Distributed system architectures and design, service-oriented computing, and frameworks for development of distributed applications and software components.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 360 with C or better OR Computer Science and Engineering graduate student
CSE	446	Software Integration and Engineering	Software development using architecture design, composition, workflow, services, data resources, data representations, data management, and development tools.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engr BSE major; Pre- or corequisite(s): CSE 445 with C or better if completed OR Computer Science and Engr grad student; Credit allowed for only CSE 446 or 598 (Software Integration & Engineering)

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CSE	450	Design and Analysis of Algorithms	Design and analysis of computer algorithms using analytical and empirical methods; complexity measures, design methodologies, and survey of important algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Systems Engineering BSE or Computer Science BS major; CSE 310 with C or better OR Computer Engineering graduate student
CSE	457	Theory of Formal Languages	Theory of grammar, methods of syntactic analysis and specification, types of artificial languages, relationship between formal languages, and automata.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 355 with C or better OR Computer Science and Engineering graduate student
CSE	459	Logic for Computing Scientists	Propositional logic, syntax and semantics, proof theory versus model theory, soundness, consistency and completeness, first order logic, logical theories, automated theorem proving, ground resolution, pattern matching unification and resolution, Dijkstras logic, proof obligations, and program proving.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 355 with C or better OR Computer Science and Engineering graduate student
CSE	460	Software Analysis and Design	Object-oriented and structured analysis and design; software architecture and design patterns; component-based development; software safety and reliability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Geographic Information Science BS or Computer Systems Engineering BSE major; CSE 360 with C or better OR Computer Science and Engineering graduate student
CSE	463	Introduction to Human Computer Interaction	Design, evaluate, and implement interactive software intended for human use.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Informatics BS or Digital Culture (Media Processing) BA major; CPI 310 with C or better OR Computer Science and Engineering graduate student
CSE	464	Software Quality Assurance and Testing	Software quality assurance (SQA), software quality metrics, software configuration management, software verification and validation, reviews, inspections, understanding software testing process, functional testing, structural testing, model-based testing, integration, system, and regression testing techniques, software life cycle models and software testing, testing distributed software, bug management, and use of testing tools.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 360 with C or better OR Computer Science and Engineering graduate student; Credit is allowed for only CSE 464 or CSE 494 or 598 (Software Quality Assurance and Testing)
CSE	465	Information Assurance	Concepts of information assurance (IA); basic IA techniques, policies, risk management, administration, legal and ethics issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Info Sys BS or Computer Science BS or Computer Sys Engr BSE or Industrial Engr BSE major; CIS 300 or CSE 310 or IEE 305 with C or better OR Computer Science and Engr grad student; Credit is allowed for only CSE 465 or CSE 543
CSE	466	Computer Systems Security	Countermeasures to attacks to computer systems from miscreants (or hackers) and basic topics of cryptography and network security.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student

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CSE	467	Data and Information Security	Basic concepts of security and privacy, data and database security, access controls, trust models, watermarking, and private information retrieval.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student
CSE	468	Computer Network Security	Practical network security exposure and hands-on experience about basic concepts, case studies, and useful tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Engineering graduate student
CSE	469	Computer and Network Forensics	Identification, extraction, documentation, interpretation, and preservation of computer media for evidentiary purposes, file system forensics, and network forensics.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): CSE 310 with C or better OR Computer Science and Engineering graduate student; Credit is allowed for only CSE 469 or CSE 598 (Computer and Network Forensics)
CSE	470	Computer Graphics	Introduces basic concepts of interactive computer graphics, realistic rendering, and 3-D viewing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Digital Culture (Media Processing) BA, Computer Science BS, Geographic Information Science BS, or Computer Systems Engineering BSE major; CSE 310 with C or better; MAT 342 or 343 OR Computer Science and Engineering graduate student
CSE	471	Introduction to Artificial Intelligence	State space search, heuristic search, games, knowledge representation techniques, expert systems, and automated reasoning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS, Geographic Information Science BS, or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student
CSE	472	Social Media Mining	Network measures, social network analysis, network models, random graphs, small-world model, power laws, data mining, influence and homophily, information diffusion, epidemics, behavioral analysis, recommendation in social media, community detection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre- or corequisite(s) with C or better if completed: Computer Science BS or Computer Systems Engr BSE major; CSE 310; IEE 380; MAT 343 OR Computer Science and Engr graduate student; Credit is allowed for only CSE 472 or CSE 494 (Social Media Mining)
CSE	476	Introduction to Natural Language Processing	Principles of computational linguistics, formal syntax, and semantics, as applied to the design of software with natural (human) language I/O.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student
CSE	477	Introduction to Computer-Aided Geometric Design	Introduces basic concepts of 3-D computer geometry, including curves, surfaces, meshes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; MAT 342 or 343 with C or better OR Computer Science and Engineering graduate student
CSE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	YGB	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): junior or senior standing

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CSE	485	Computer Science Capstone Project I	First course in capstone sequence for computer science majors emphasizing development process, technical skills, teamwork, and communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Prerequisite(s): Computer Science BS major; senior standing or postbaccalaureate; CSE 330 with C or better; CSE 340 with C or better; CSE 355 with C or better; CSE 360 with C or better; Credit is allowed for only CSE 423 or CSE 485
CSE	486	Computer Science Capstone Project II	Second course in capstone sequence for computer science majors continuing the development process, technical skills, teamwork, and communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Prerequisite(s): Computer Science BS major; CSE 485 with C or better; senior standing or postbaccalaureate
CSE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		Prerequisite(s): Barrett Honors student
CSE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
CSE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Pre-requisite: CSE 310 with C or better
CSE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-7		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; Minimum cumulative GPA of 2.50 or Graduate Engineering student
CSE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-3		
CSE	509	Digital Video Processing	Concepts of digital video compression, video analysis, video indexing, browsing and retrieval, video transmission over networks, video processors, and relevant industry standards.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	510	Database Management System Implementation	Implementation of database systems. Data storage, indexing, querying, and retrieval. Query optimization and execution, concurrency control, and transaction management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	511	Semi-Structured Data Management	Addresses the data management issues for semi-structured data, which are commonly found in Web applications. Covers techniques on modeling, storing, querying and searching data without schemas, with optional confidence, and/or provenance information. Requires knowledge on relational databases and programming skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	512	Distributed Database Systems	Distributed database design, query processing, and transaction processing. Distributed database architectures and interoperability. Emerging technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	515	Multimedia and Web Databases	Data models for multimedia and Web data; query processing and optimization for inexact retrieval; advanced indexing, clustering, and search techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	520	Computer Architecture II	Computer architecture description languages, computer arithmetic, memory-hierarchy design, parallel, vector, multiprocessors, and input/output.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	522	Real-Time Embedded Systems	Development of real-time embedded systems, scheduling algorithms, embedded software structures, real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Science, Computer Engineering, Master of Engineering or Engineering Science (Software Engineering) Graduate student
CSE	530	Embedded Operating System Internals	Investigating Linux source including: memory management, kernel synchronization and driver design topics. Designing, coding, testing, and evaluating embedded operating system software in a Linux environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student

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CSE	531	Distributed and Multiprocessor Operating Systems	Distributed systems architecture, remote file access, message-based systems, object-based systems, client/server paradigms, distributed algorithms, replication and consistency, and multiprocessor operating systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	534	Advanced Computer Networks	Advanced network protocols and infrastructure, applications of high-performance networks to distributed systems, high-performance computing and multimedia domains, special features of networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	535	Mobile Computing	Mobile networking, mobile information access, adaptive applications, energy-aware systems, location-aware computing, mobile security and privacy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	536	Advanced Operating Systems	Protection and file systems. Communication, processes, synchronization, naming, fault tolerance, security, data replication, and coherence in distributed systems. Real-time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	539	Applied Cryptography	Uses cryptography for secure protocols over networked systems, including signatures, certificates, timestamps, electrons, digital cash, and other multiparty coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	543	Information Assurance and Security	Comprehensive understanding of information assurance and security problems with the solutions as well as hands-on experiences about applying these solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	545	Software Security	Theories and tools for software security, including secure design, threat analysis and modeling, security testing and coding.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	546	Cloud Computing	Virtualization, cloud computing, programmable networking, performance evaluation, information assurance, distributed and parallel computing, and cloud computing-based applications. Students must have a solid background in computer architecture, operating system and computer networking to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate standing in Computer Engineering or Computer Science; Credit is allowed for only CSE 546 or CSE 591 (Cloud Computing)
CSE	548	Advanced Computer Network Security	Comprehensive understanding of network security and corresponding solutions, including cryptography, access control, secure Web transactions, e-mail security, and viruses.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Engineering or Computer Science student; Pre- or corequisite(s): CSE 539
CSE	550	Combinatorial Algorithms and Intractability	Combinatorial algorithms, nondeterministic algorithms, classes P and NP, NP-hard and NP-complete problems, and intractability. Design techniques for fast combinatorial algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	551	Foundations of Algorithms	Advanced topics in formal algorithm design and analysis, including advanced shortest-paths algorithms, amortized analysis, network flows, NP-completeness and selected topics in computational geometry, distributed/parallel, randomized, and approximation algorithms.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Science or Computer Engineering student
CSE	552	Randomized and Approximation Algorithms	Introduces two important areas of algorithm design for graduate students. A randomized algorithm is allowed to rely on the outcome of a random experiment in deciding on its next step. In many applications, randomized algorithms are simpler than any deterministic algorithms known, but in several cases, they are in fact more powerful or more efficient than any deterministic algorithms. Covers basic paradigms for randomized algorithm design and analysis, as well as for derandomization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	555	Theory of Computation	Rigorous treatment of regular languages, context-free languages, Turing machines and decidability, reducibility, and other advanced topics in computability theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	556	Game Theory with Applications to Networks	Strategic conflict as matrix games, notions of equilibrium, definition and existence of Nash equilibrium, zero-sum games, extensive-form games, Bayes Nash equilibrium, potential games, routing games, algorithmic game theory, computation of Nash equilibrium, incentives and pricing in communication networks, application of game theory in wireless networks. Knowledge of calculus, discrete mathematics, probability theory and algorithms is necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student; Credit is allowed for only CSE 556 or CSE 591 (Game Theory with Applications to Networks)
CSE	561	Modeling and Simulation Theory and Application	Modeling theories, simulation protocols, object-oriented modeling, model design, simulation analysis, network-based systems, discrete-event modeling, continuous modeling, hybrid modeling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student

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CSE	563	Software Requirements and Specification	Examines the definitional stage of software development; analysis of specification representations, formal methods, and techniques emphasizing important application issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Engineering or Computer Science or Software Engineering student
CSE	564	Software Design	Examines software design issues and techniques. Includes a survey of design representations and a comparison of design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Engineering or Computer Science or Software Engineering student
CSE	565	Software Verification, Validation, and Testing	Test planning, requirements-based and code-based testing techniques, tools, reliability models, and statistical testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Engineering or Computer Science or Software Engineering student
CSE	566	Software Project, Process, and Quality Management	Project management, risk management, configuration management, quality management, and simulated project management experiences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Engineering or Computer Science or Software Engineering student
CSE	569	Fundamentals of Statistical Learning and Pattern Recognition	Concepts of statistical pattern recognition, Bayesian decision theory, parameter estimation, discriminant analysis, basics of artificial neural networks, basics of data clustering. Knowledge of college-level calculus, linear algebra, basic probability theory and proficiency in computer programming is necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Engineering or Computer Science Graduate student; Credit is allowed for only CSE 569 or 591 (Statistical Learning and Pattern Recognition)
CSE	570	Advanced Computer Graphics I	Hidden surface algorithms, lighting models, and shading techniques. User interface design. Animation techniques. Fractals and stochastic models. Raster algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	571	Artificial Intelligence	Definitions of intelligence, computer problem solving, game playing, pattern recognition, theorem proving, and semantic information processing; evolutionary systems; heuristic programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	572	Data Mining	Advanced data mining techniques: classification, clustering, association, preprocessing; performance evaluation; information assurance, Web mining, security and privacy issues, and other applications. Students must have a solid background in database management systems, search, learning, and statistics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	573	Semantic Web Mining	Data mining techniques for structuring and organizing unstructured sources such as text and Web data into meaningful machine-processable information; computational aspects of information extraction and data linkage; discovery and prediction tasks where text serves as data such as detecting events, measuring public opinion and making recommendations. A background in databases, algorithms and theory of computation is necessary to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate standing in Computer Engineering or Computer Science; Credit is allowed for only CSE 573 or CSE 591 (Semantic Web Mining)
CSE	574	Planning and Learning Methods in AI	Reasoning about time and action, plan synthesis and execution, improving planning performance, applications to manufacturing intelligent agents.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	575	Statistical Machine Learning	Spectral clustering, regression, classification, semi-supervised learning, feature reduction, manifold learning, ranking, kernel learning and multitask learning.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Science or Computer Engineering MCS, MS, or PhD major; Credit is allowed for only CSE 575 or 591 (Machine Learning)
CSE	576	Topics in Natural Language Processing	Comparative parsing strategies, scoping and reference problems, nonfirst-order logical semantic representations, and discourse structure.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	577	Advanced Geometric Modeling I	Advanced concepts of geometric modeling: rectangular and triangular surfaces, triangle meshes, Voronoi diagrams, discrete and continuous shape measures, volumes and volume visualization. Students must have a solid background in linear algebra, calculus, and basic 3D graphics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CSE	579	Knowledge Representation and Reasoning	Covers knowledge representation and reasoning algorithms in artificial intelligence, shows how they can be used in practice, and provides an overview of current research trends.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Science or Computer Engineering Graduate student; Credit is allowed for only CSE 579 or 591 (Knowledge, Represent/Reasoning)
CSE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CSM	201	Introduction to Community Sports	Examines the role of community sports at the local, national and international levels.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only CSM 201 or PRM 201
CSM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
CSM	303	Program Planning	Effective program planning in varied leisure delivery systems.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only CSM or PRM 303
CSM	305	Sports Facility Operations and Management	Overview of the management and operations of sports facilities.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: Community Sports Management major; CRD 210 (or NLM/PRM/TDM 210) with C or better; MAT 142 or higher; minimum 2.50 cumulative GPA; minimum 45 hours
CSM	335	Sports and Recreation for Youth Development	Provides an overview of definitions, statistics, theories and models, and types of programs surrounding youth development in relation to sports, recreation and leisure services. Addresses current trends related to youth development and collaborative partnerships in sports, recreation and leisure services at various levels within local, state, national and/or international systems.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only CSM 335 or PRM 335
CSM	350	Tourism, Recreation and Sports Marketing	Critical examination of marketing principles in leisure and related industries in diverse settings, including local, national, and international.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or CSM 201 or TDM 205; minimum 45 hours. Credit is allowed for only CSM 350 or PRM 350 or TDM 350
CSM	401	Management of Parks and Recreation Services	Analyzes administrative function, structure, and policies. Successful application in administrative situations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CSM 305 (or PRM 304) with C or better; ENG 102 with C or better; MAT 142 or higher; CSM or PRM major; minimum 2.50 cumulative GPA; minimum 45 hours. Credit is allowed for only CSM 401 or PRM 401
CSM	402	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CSM 401, NLM 410, PRM 401, or TDM 401 with C or better. Credit is allowed for only CSM 402, NLM 402, PRM 402 or TDM 402
CSM	407	Ethics and Legal Issues in Sports	Comprehensive look at ethical decision making from many perspectives in the sports environment. Presents legal issues as they relate to history, present society and future trends.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: CSM 201
CSM	463	Senior Internship	Supervised guided experience in selected agencies.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	6-12		Prerequisite(s) with C or better: CRD 403 or PRM 413; CSM 402 or NLM 402 or PRM 402 or TDM 402. Credit is allowed for only CSM 463 or NLM 463 or PRM 463 or TDM 463
CSM	483	Sports Tourism	Examines the relationship between sports and tourism, and the role of recreation and amateur sports as an economic and community development strategy. Also considers the motives, behaviors and experiences of sport tourists; the impacts of sport tourism; and trends in sports tourism.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): Minimum 45 hours. Credit is allowed for only CSM 483 or TDM 483
CSM	485	Sports Events	Expands the basic concepts of recreation, leisure or tourism program planning and leadership as they are specifically related to sport events management.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only CSM 485 or PRM 485
CSM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CST	111	Introduction to Game Development	Introduces fundamental video game development concepts and techniques prevalent in video game industry. Provides opportunity to understand these techniques and learn how they are applied during the production of a video game. Includes game design, game production, asset production, game programming, game art and animation. Hands-on experience by writing 2D game prototypes while learning different game mechanics and features. Intended to serve as an introduction into the game production cycle, breaking down the complex process of game creation into a simple step-by-step program. No programming knowledge is required; however, some degree of computer proficiency is desirable.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Credit is allowed for only CST 111 or 194 (Intro to Game Development)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CST	150	Computer Systems Fundamentals I	Logic design, number systems and arithmetic, boolean algebra; digital systems components, and hardware description languages.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3	CS	Pre- or corequisite(s): CST 100 or SER 100 or SER 101; Mathematics Placement Test score of 50% or higher or MAT 170, 171, 210, 251, 265, or 270 with C or better if completed; Credit is allowed for only CST 150 or SER 232
CST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-3		
CST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
CST	200	Core Data Structures with Object Oriented Programming	Design, implementation and use of core data structures; object-oriented software development: design, analysis and programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 100 (or 211) with C or better; Credit is allowed for only ACO 102, CSE 205 or CST 200
CST	201	Object-Oriented Software Development II Lab	Hands-on development and programming using objects, inheritance, and polymorphism; GUI programming; introduction to software engineering concepts, UML tools.	N	LAB	N	OPT	Ira A. Fulton Engineering	Software Engineering	1		Pre/Co-requisite: CST 200
CST	211	Intermediate Game Development	Introduces multiplayer games, artificial intelligence, and tile-based worlds using a scripted programming environment. Uses game scripting to automate, repeat, change, anticipate, and govern the action of games from a simple word game to a complicated multiplayer game like pool. Introduces gaming terminology and basic genres, enhancements such as fine-tuning graphics, creating optimal soundtracks, and using high score lists, as well as creating and modifying online chat files. Introduces video game scripting to the student. Scripting skills are essential in every aspect of game development and are used by designers, programmers, and artists in the game industry. Students learn the core scripting skills required to implement game features and apply those to enhance the prototype created in the introductory course.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 111; Credit is allowed for only CST 211 or 294 (Intermediate Game Development)
CST	220	Programming Languages and Their Execution Environment	Introduces the fundamental programming language concepts of data, type, control, abstraction, and structure; software development and execution environments; programming language paradigms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 200 or SER 200 with C or better; Credit is allowed for only CST 220 or SER 221
CST	230	Design and Analysis of Data Structures and Algorithms	Data structures and related algorithms for their specification, complexity analysis, implementation and application. Sorting and searching. Professional responsibilities that are part of program development, documentation and testing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 200 or SER 200 with C or better; MAT 243 with C or better; Credit is allowed for only CST 230 or SER 222
CST	251	Microcomputer Architecture and Programming Laboratory	Hands-on experience in assembly language programming and debugging. May be taken concurrently with, or subsequent to, CST 250.	N	LAB	N	OPT	Ira A. Fulton Engineering	Software Engineering	1		Pre-requisite: EGR 101 (or CST 100), or CST 150; Pre/Co-requisite: CST 250
CST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
CST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student
CST	335	Applications of Computer Theory	Introduces and applies formal language theory and automata, Turing machines, decidability, undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 230; MAT 243
CST	350	Digital Design with Hardware Description Languages	Digital system design using Verilog. Structural and behavioral modeling. Design examples include finite-state machines, RISC CPUs, and UARTs. Requires design projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	4		Prerequisite(s): CST 150 or SER 232 or Fulton Polytechnic School graduate student
CST	386	Operating Systems Principles	Fundamentals of operating systems, process management, scheduling and synchronization techniques, memory and file management, protection and security issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 200 (or SER 222) and CST 250 (or CST 251)
CST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
CST	420	Principles of Distributed Software Systems	Design and implementation of distributed software components; process and memory management underlying software applications; sockets, protocols, threads, XML, serialization, reflection, security, and events.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 222 with C or better; Pre- or corequisite(s): SER 334 (or SER 234) with C or better if completed; Credit is allowed for only CST 420 or SER 321

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CST	425	Server Software Programming	Design and implementation of software servers, threaded socket servers, servers for distributed Web-based applications; security for the Web.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 420 with C or better
CST	427	Distributed Object Systems	Distributed applications with Web services, NET, RMI, CORBA; concepts and frameworks for managing, registering, locating, and securing distributed object applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 420 with C or better
CST	428	Web-Client User Interface Programming	Client-server model for window interfaces. Java Swing, Applets, mark-up and scripting languages; Web tools and related technologies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 420 with C or better
CST	441	Software Development for Mobile Devices	Mobile computing using Java's K, Virtual Machine, MIDP for wireless applications; user interfaces, persistent data storage, and networking.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 420 with C or better
CST	452	Digital Systems Synthesis with Hardware Description Languages	Uses a hardware description language to synthesize components of computers and digital systems as FPGAs. Emphasizes optimization and satisfying performance constraints of system scale designs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 350
CST	458	Digital Computer Networks	Network hardware and software, topologies, protocols, OSI model, LANs, WANs, Internet; basic concepts of packet switching, routing, error controlling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 250; CST 251 or IFT 201 or BAS student
CST	460	Computer Graphics with Applications	Hands-on course introduces 2D and 3D computer graphics programming and some of the applications related to the topic in a studio-style learning environment. Uses data structures for computer graphics, and a graphics API such as OpenGL taught with industry examples. Intended for upper-division (senior) students in CST programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 100 (or EGR 102); CST 230 (or SER 221)
CST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		
CST	490	Reading and Conference		N	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
CST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student
CST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Software Engineering	1-6	L	Prerequisite(s): Barrett Honors student
CST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		Prerequisite(s): Fulton Schools of Engineering undergraduate student; Min GPA 2.25; OR Fulton Schools of Engineering graduate student
CST	496	Ethics and Professionalism in Computing	Studies major social and ethical issues in computing, including impact of computing on society, ethical behavior, and social responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	1		Pre-requisite: Junior or Senior standing
CST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student
CST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-7		Prerequisite(s): Fulton Schools of Engineering undergraduate student; Min GPA 2.25; OR Fulton Schools of Engineering graduate student
CST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-3		
DAH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DAH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DAH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): Barrett Honors student
DAH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Prerequisite(s): Barrett Honors student
DAH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DAH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
DAH	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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DAH	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
DAN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DBA	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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DBA	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	701	Macroeconomic Policies in a Global Environment	Provides the framework for policy makers when facing macroeconomic situations, the tools in analyzing the costs and benefits of alternative policy options, and the knowledge necessary for making recommendations to policy makers and business leaders. Students learn knowledge and skills about global economy and risks that help facilitate dissertation research.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	702	Global Financial Systems: Markets and Institutions	Examines the overall architecture of the global financial system, its major components, and their functions in the macro economy.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	703	Global Financial Systems- Institutional Investing	A large fraction of investors around the world invest in securities markets indirectly, viz. through mutual funds or separate accounts established with investment managers, whether they be endowments, foundations, pension plans or sovereign funds. Exposes students to the global marketplace for such portfolios.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	704	Design of Knowledge Base Organizations for Performance and Innovation	Covers various issues on executive compensation and management pay structure with a particular emphasis on aligning business strategy, organization design to the choice of performance standards and pay structure for managers.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	705	Global Corporate Strategy	Demonstrates that decisions affecting the international expansion of a firm are neither obvious nor totally determined by the technological or economic forces generally associated with globalization. Addresses the most transcendental decisions that multinational firms face in the course of conducting business across borders.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	706	Strategic Visioning, Leadership and Change Management	Addresses the interrelationship among organizational culture, leadership, and the management of change in order to promote continuous improvement of the organization's market position. Addresses the role of strategy, how strategy explicates vision, and how effective strategies are created.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	707	Risk Management : An Enterprise Perspective	Provides an understanding of the broad set of risks an enterprise faces; their origin, characteristics and potential impact on business; and how they can be efficiently managed at the enterprise level.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	708	Challenges of Corporate Finance and Governance	Helps students understand the link between finance and corporate strategies, as well as examine ways to establish and reform the practices of corporate governance in China.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	709	Finance and Law	Helps students learn about the philosophy of law, various legal systems, the relationships among law and economics and finance, the practice of law in a global context.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	710	Financial Decision Making	Provides a framework of conceptual knowledge and enables students to understand what the literature on financial theory is trying to do and how it all fits together. Also provides an in-depth experience with the subject of finance and equips students for their future development as a practicing executive.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	711	Finanacial Innovations	Focuses on how financial innovations influence the evolution of finance. Discusses many of the major financial innovations in recent history, the forces driving these innovations, their impact on the financial system and the real economy and the risks they bring.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	712	Advanced Topics in Global Economy and Finance: Domestic Module	Addresses many critical topics facing China today on its quest of globalization, the need for transforming its economic structure, capital markets and corporate control, and its monetary policies.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	713	Advanced Topics in Strategy and Management: Domestic	Reexamines many popular best practices through panel discussion and speaker series on why some of those practices failed to work in China, and how firms have creatively modified their strategic undertakings to fit its environment.	N	LEL	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	714	Current Trends in Global Economy, Finance and Management: US Module	Provides first-hand experiences on the world class practices by the multinationals and interactions with the leading experts on the emerging topics of interest on globalization, financial regulations, and managerial innovations.	N	LEL	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	4		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	715	Current Trends in Global Economy, Finance and Management: Europe Module	Provides direct exposure to European markets, firms, and institutions, their history, current status, and future directions.	N	LEL	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	4		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	721	Research Seminar I- Research in Action	Provides needed skills for research and thesis work. 1. Focuses mainly on research design and fundamental statistical/survey and field study methods. The key objective is to provide students with the needed required skills and concepts of the scientific method, the philosophy of science, and research design with an emphasis to solve specific problems. This course is spread out during the first year of the program.	N	SEM	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student

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DBA	722	Research Seminar II- Research in Action II	Focuses on the process of research "in actions" through faculty presentation and research workshops. Faculty with diverse research interest and methodologies present up-to-date research works. Through interaction, students gain first-hand experience on learning the process of how faculty, with diverse research interests, are able to identify specific research topic, choosing the right research methodology to address their research questions. The presentation and research workshop are scheduled at the beginning of the second year and throughout the entire year, allowing the program to leverage faculty availability during their course delivery while enabling students to seek out their faculty mentors for future dissertation engagement.	N	SEM	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	723	Research Seminar III- Research in Action III	Provides students with opportunities to present their own research proposal/ thesis ideas while allowing the participating faculty and fellow students to offer constructive comments.	N	SEM	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	100	Introduction to Dance	Overview of dance as a cultural and performative practice, exploring history and theory, philosophy, and movement practices, with reference to key pioneers in the field from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	
DCE	110	Argentine Tango I	Introduces basic movement elements, explores various contexts shaping Argentine Tango, and emphasizes social tango with exposure to vals and milonga timing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	111	Raqs Sharqi I	Familiarize students with the ancient art of Middle Eastern dance. Covers posture, styling, basic body isolations, rhythm patterns, footwork, as well as the social significance and history of the dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	112	Capoeira I	Introduces the Afro-Brazilian martial art and movement form capoeira. Molds elements of self-defense, dance, music, song, language, culture and philosophy into the course.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	113	Dances of Africa I	Introduces basic elements of West and Central African dance styles, including the traditional rhythms and cultural context.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	114	Dances of India I	Introduces Indian folk dances with an emphasis on the history and various movement elements of an ancient South Indian classical dance form, known as Bharata Natyam.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	115	Yoga I	Introduces a basic physical and philosophical understanding of yoga. Designed by a certified Yoga instructor.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	116	T'ai Chi Chuan I	Introduces an ancient Chinese internal martial art form. The structure includes the beginner level of Tai Chi Chuan theory and movement practice.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	117	Feldenkrais I	The Feldenkrais method is an approach to enhance awareness of the body, improve functional actions, and expand one's repertoire of movements.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	118	Yoga/Pilates	Provides a basic physical and philosophical understanding of yoga and Pilates mat practices.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	120	Modern Dance I	Introduces modern dance and its basic principles, including alignment, core muscular strength, and spatial exploration.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		

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DCE	121	Ballet I	Introduces principles of ballet and development of basic technical skills, including dynamic alignment, functional rotation, and musicality.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	122	Jazz I	Provides students with beginning-level technique class in different jazz styles. Focuses on alignment, technique, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	123	Hip Hop I	Equips student with understanding of hip hop dance history, culture and music through studio work on various hip-hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	124	Latin/Swing/Ballroom I	Introduces major Latin and ballroom dances and focuses on a system of elements that are found in all partnership dances, including movement components, rhythmic patterns, dance positions, and unique characteristics used to better define each dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	125	Latin/Salsa I	Introduces Latin dancing. Instruction focuses on salsa, cha-cha, merengue, and rumba.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	126	Country-Western	Initiates the student into the rhythm two-step, progressive two-step, night club two-step, country cha-cha, country waltz, triple swing and a multitude of line dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	130	First-Year Movement Practices I	Introduces diverse somatic movement principles and practices through exploration of movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance major
DCE	131	First-Year Movement Practices II	Modular structure enables a series of short intensive studies including movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance student; DCE 130 with C or better
DCE	133	Urban Movement Practices I	Designed as an introduction to dance, history, culture, and music in urban movement styles.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors, BA Performance and Movement, BIS-Dance, Dance minor; Credit is allowed for only DCE 133, 194 (Intro to Urban Mvt. Practices) or 494 (Urban Movement Practices)
DCE	134	Postmodern Contemporary I	Introduces postmodern contemporary dance technique and theory. Designed to enhance the dancer's technical and artistic proficiency by using movement that is athletically challenging, nuanced, and rhythmically complex.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	135	Contemporary Ballet I	Introduces contemporary view of ballet technique and theory with attention to enhancing student's dynamic alignment.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	136	Somatic Practices I	Survey course offers a practical and theoretical introduction to some of the major somatic practices evolving out of the 20th century. Guest practitioners and teachers of various embodied practices share theory, practice and context. Explores movement and the integration of the body and mind through a variety of somatic lenses (e.g., the Alexander Technique, Authentic Movement, and experiential anatomy).	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Credit is allowed for only DCE 136 or 194 (Intro Movemnt Language Sources)
DCE	137	African and Diaspora Movement Practices I	Foundational course in the African and the Diaspora movement practices curriculum.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance BFA, BIS-Dance concentration or Dance minor; Credit is allowed for only DCE 137, 194 (Mvt Practice: Africa/Diaspora), 294 (Mvt Practice: Africa/Diaspora) or 494 (African & Diaspora Mvt Prac)
DCE	160	First-Year Creative Practices I	Explores creativity and creative processes with reference to some key historical practices and influential artists. Seeks to encourage and develop students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	161	First-Year Creative Practices II	Explores creativity and creative processes with reference to some key historical practices and influential artists. Encourage and develops students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance BFA student; DCE 160 with C or better
DCE	170	First-Year Seminar I	Orientation to the university learning environment and profession of dance with emphasis on developing tools and processes for reflection and critical thinking.	N	LEC	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major
DCE	171	First-Year Seminar II	Continuation of First-Year Seminar I. Focuses on orientation to the larger field of contemporary dance practice with an emphasis on developing tools and processes for reflection, synthesis, and critical thinking. Requires participation in School of Dance "Dance Matters."	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance majors
DCE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
DCE	201	Dance, Culture, and Global Contexts	Introduces the study of dance as culture in diverse global contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	

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DCE	202	Dance in U.S. Popular Culture	Investigates vital cultural heritages that have shaped dance in U.S. American popular culture from 20th century to the present. Emphasizes dance as a producer of social space and cultural identity as well as a reflection of diverse social realities and dynamics of power. Following required reading and videos, the course surveys time periods of dance from the late 1800s through the 20th century to the present day.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & C	Credit is allowed for only DCE 202 or 294 (Dance in US Popular Culture)
DCE	203	Walk this Way	Addresses walking as a key component in movement studies and further brings the study of bodily movements center stage as a means to address the dynamic between self and society. Designed for nonmajors. Not eligible for majors credit.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre/Co-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only DCE 203 or 294 (Walk this Way)
DCE	210	Argentine Tango II	Builds upon concepts, figures, and elements of the Argetine Tango introduced in level one.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 110 or DAN/DCE 194 (Argentine Tango I)
DCE	211	Raqs Sharqi II	Focuses on refining beginning technique, advanced movements, layering and musical interpretation. Uses choreography and improvisation to encourage mind-body awareness.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 111 or DAN 194 (Raqs Sharqi I)
DCE	216	T'ai Chi Ch'uan II	Intermediate-level study of the ancient Chinese martial art of rounded, fluid, balanced movements. Teaches the sets of long form Yang style of Tai Chi Ch'uan in a slow and relaxed manner.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 116 or DAN 194 (T'ai Chi Ch'uan I)
DCE	220	Modern Dance II	Explores modern dance practices, including somatic techniques, stylistic versatility, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Credit is allowed for only DAN 130 (Modern II) or DCE 220
DCE	221	Ballet II	Explores contemporary and classical ballet practices, focusing on whole body integration and performance strategies.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	222	Jazz II	Explores intermediate level of jazz dance techniques.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 122 or DAN 130 (Jazz I)
DCE	223	Hip Hop II	Intermediate-level class that provides the knowledge of hip hop dance history, culture and music through studio work on various hip hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 123 or DAN 194 (Hip Hop I)
DCE	224	Latin/Swing/Ballroom II	Continues development of level one Latin/Swing/Ballroom dances to prepare student to have command of the complex rhythmic patterns and figures used in major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 124 or DAN 194 (Latin/Swing/Ballroom I)
DCE	225	Latin/Salsa II	Reviews and reinforces the basics introduced in Latin/Salsa I and builds upon more complicated concepts and figures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 125 or DAN 194 (Latin/Salsa I)
DCE	230	Second-Year Movement Practices I	Investigates selected movement forms in the second-year movement practices. New movement forms include but are not limited to contact improvisation, Alexander technique, Feldenkrais, Body Mind Centering (BMC), taekwando, aikido, wushu, LMA, yoga, or somatic bodywork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors; DCE 131 with C or better
DCE	231	Second-Year Movement Practices II	This course is set up in two modules. In module one, students will investigate a movement form, include but are not limited to contact improvisation, Alexander technique, Feldenkrais, Body Mind Centering (BMC), taekwando, aikido, wushu, LMA, yoga, or somatic bodywork. Module two expands the practice of rhythmic awareness through exploration and investigation of the close relation between thought and act, the kinesthetic and the verbal, the text and the beat, as well as the breath and the word.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors; DCE 230 with C or better
DCE	233	Urban Movement Practices II	A practical and theoretical investigation of the urban movement forms and practices developed over recent years in urban centers around the world. Addresses the evolution of hip hop/urban movement dance through the study of House style.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Prerequisite(s): DCE 133 with B+ or better
DCE	234	Postmodern Contemporary II	Investigation and practices of postmodern contemporary dance technique. Development of movement quality and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Prerequisite(s): Performance and Movement BA or Dance BFA major; DCE 134 with C or better
DCE	235	Contemporary Ballet II	Explores the possibilities of contemporary ballet technique and theory with awareness of student's individual anatomical differences.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Prerequisite(s): Performance and Movement BA or Dance BFA major; DCE 135 with C or better
DCE	236	Somatic Practices II	Laboratory for somatic education that explores the foundations of movement, voice, expression and spatial awareness. Open to nonmajors, the class welcomes and encourages the participation of students from a wide variety of disciplines. Taught through the principles of specific somatic lenses (e.g., the Alexander Technique, Bartenieff Fundamentals, and Body Mind Centering), the course highlights how embodied awareness affects artistic process and choice making, as well as enhancing physical capacities, kinesthetic intelligence, and the refinement of performance and technical skills. Emphasizes developing a holistic perception of ourselves, our relation to one another, and to the environment.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		

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DCE	240	Media for Dance	Computer applications for human movement modeling, digital video design and creation, sound composition, and the incorporation of multimedia design elements into online environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	CS	
DCE	260	Second-Year Creative Practices I	Explores concepts introduced in the first year of creative practice and further expands into the themes of analysis and investigation. Year two experience involves the investigation of learning to compose and construct choreographic material through individual, collaborative, improvisational, and group exploration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance major; DCE 161 with C or better
DCE	261	Second-Year Creative Practices II	Continues developing students' awareness of their own creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance major; DCE 260 with C or better
DCE	262	Rhythmic Theory for Dance I	Elements of music, music structures, and their relationship to dance. Emphasis on rhythmic analysis and dance accompaniment.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	270	Second-Year Seminar I	Continues developing tools and processes for reflection and critical thinking by identifying individual goals and objectives related to the students' current and future academic and professional careers	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major; DCE 171
DCE	271	Second-Year Seminar II	Provides basic understanding of costume design, sound production, and interactive performance for dance.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major; DCE 270 with a Y
DCE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DCE	300	Moving Histories	In-depth study of the history of Western dance in Europe and America. Students learn about various ways of conducting research into dance history, including interviewing, researching using primary resources and performing scholarship.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Pre-requisite: ENG 101, 105 or 107 with C or better
DCE	301	Meaning in Motion	Critical inquiry into the nature of dance through the lens of dance theory. Covers philosophical and theoretical issues raised by the study of dance in relation to specific historical and global contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better
DCE	303	The Body Condition(ed)	Examines contemporary practices of conditioning the body from a triangulation of perspectives: physical, social, and experiential. Enhances the ability to obtain a holistic understanding of how the self/social dynamic operates within the context of body conditioning. Designed for Non-Majors. Not Eligible for Dance Major Requirements.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	SB	Pre/Co-requisite: ENG 102, ENG 105 or ENG 108
DCE	324	Latin/Swing/Ballroom III	Refines dances learned in the intermediate level of Latin and ballroom dances, including foxtrot, waltz, salsa, cha cha, rumba, samba, west coast swing, bolero, tango, and swing. Prepares students to have a more advanced command of the complex rhythms and figures used in the major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 224 or DAN 294 (Latin/Swing/Ballroom II)
DCE	330	Third-Year Movement Practices I	Focuses on the application of diverse movement forms and somatic studies in a range of performance contexts. These contexts may include live and mediated performance, community-based projects, pedagogy, analysis of movement forms in relation to musical compositions or the creation of new movement languages.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance major; DCE 231
DCE	331	Third-Year Movement Practices II	Student will focus on the integration of diverse movement forms and somatic practices, as well as developing an in-depth understanding of a range of performance contexts practically and theoretically.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors; DCE 330 with C or better
DCE	333	Urban Movement Practices III	A practical and theoretical integration of the urban movement forms that have been investigated and practiced in the urban movement practices curriculum.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): DCE 233 with B+ or better
DCE	334	Postmodern Contemporary III	Integrates dance theory and practices of postmodern contemporary dance technique. Refines movement quality and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Performance and Movement BA or Dance BFA major; DCE 234 with C or better
DCE	335	Contemporary Ballet III	Expansion of student's technical skills and theoretical knowledge through utilization of a hybridized ballet movement vocabulary.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	336	Somatic Practices III	Laboratory for somatic education that explores the foundations of movement, voice, expression and spatial awareness. Open to nonmajors, the class welcomes and encourages the participation of students from a wide variety of disciplines. Taught through the principles of specific somatic lenses (e.g., the Alexander Technique, Bartenieff Fundamentals, and Body Mind Centering), the course highlights how embodied awareness affects artistic process and choice making, as well as enhancing physical capacities, kinesthetic intelligence, and the refinement of performance and technical skills. Emphasizes developing a holistic perception of ourselves, our relation to one another, and to the environment.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): minimum 45 hours

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DCE	338	Urban Movement Practices Ensemble	Focuses on building a cooperative practice among artists. The ensemble of dancers and musicians explore the connections between urban musical praxis and urban movement forms in a live, improvisatory setting. Places special emphasis on hybridization, or the blending of musical and gestic traits from two or more genres. Participants are expected to experiment in a cross-disciplinary manner throughout the semester. Course serves as an "experiment lab" for students enrolled in DCE 333 as well as other music and dance students.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): minimum 45 hours; Corequisite(s): DCE 333; Credit is allowed for only DCE 338 or DCE 294 (Urban Movement Practices Ensemble)
DCE	350	Dance in the Classroom: Learning Through Movement	Explores theories of learning, thought development, and knowledge construction through aesthetic movement experiences. Students look to theories from the fields of aesthetics, phenomenology (study of lived experiences), somatics (study of the soma or body/mind), sociology and epistemology (theory of knowledge) to understand how the intertwined relationship of human thought development and movement patterning can affect children's learning and development.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Junior standing
DCE	354	Creative Approaches to Teaching Dance I	Explores creative strategies and methodologies for teaching dance to a variety of populations in diverse settings.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance BFA student
DCE	356	Creative Approaches to Teaching Dance II	Explores creative strategies and methodologies for teaching dance to a variety of populations in diverse settings.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance major
DCE	360	Third-Year Creative Practices I	Provides an orientation to the field of community dance practice. Students investigate foundational theories pertaining to the development of community dance worldwide, are exposed to leaders in community dance practice, and have in-depth applied experiences interacting with different populations in a variety of community dance contexts.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance BFA student; DCE 261 with C or better
DCE	361	Third-Year Creative Practices II	Historical survey of music and compositional elements relative to dance. Emphasis on analysis of choreography from a musical standpoint.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance major; DCE 360 with C or better
DCE	370	Third-Year Seminar I	Provides an orientation to the field of community dance practice. Over two consecutive semesters, students investigate foundational theories pertaining to the development of community dance worldwide, are exposed to leaders in community dance practice, and have in-depth applied experiences interacting with different populations in a variety of community dance contexts.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major; DCE 271 with a Y
DCE	371	Third-Year Seminar II	Hones skills in collaborative approaches, teaching, leading, and facilitation through partnerships with community organizations in the Phoenix metropolitan area. Students study community dance practices covering a range of creative process and community building tools that can be used in diverse settings. Applies research methods, such as data collection, analysis, and reflection, to measure the efficacy of community arts practices.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major; DCE 370 with a Y.
DCE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DCE	402	Ethnography of Dance Practices	Examines the field of ethnochoreology, ethnographic methods, and interpretive research practices. Develops critical writing, thinking, and viewing skills for comparative dance study.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L	Pre-requisite: DCE 201 with C or better; ENG 102, 105, or ENG 108 with C or better
DCE	404	Dance and Ethics	Examines ethical issues as they relate to the field of dance, including the following: the ethical treatment of dancers within educational and professional institutions; the ethical creation of dances sensitive to copyright/appropriation concerns as well as issues of form and content; the ethical engagement of the arts by the state; the ethical use of dance in trauma recovery and community building.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Junior standing; ENG 102, ENG 105 or ENG 108 with C or better
DCE	405	Rhetorical Moves	Addresses creative practice from the perspective of the embodied creative artist. Embodiment is theorized using a conflation of interdisciplinary concepts to analyze the complex and fluid nexus that occurs as the artist creates. Students theorize the creative artist as a rhetor and the creative practice as a rhetorical situation to understand the deconstructive interaction of the creative act. Explores ways to utilize this new theorization of embodiment for interdisciplinary research into creative practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Prerequisite(s): minimum 45 hours
DCE	438	Dance Theatre Performance/Production	Performance or technical theatre work in designated dance productions. 3 hours a week per semester hour.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance BFA, Dance minor or BIS Dance concentration
DCE	460	Transition Project I	Original choreography for group performance with analysis and critique of problems encountered in production.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance BFA student
DCE	461	Transition Project II	Original research that integrates dance and a related field of interest. Includes production of written document and public presentation. Fall semester must be completed before spring registration. May be repeated for a total of 4 semester hours.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance students; DCE 460 with C or better

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DCE	470	Fourth-Year Seminar	Explores and investigates the larger world of dance as it pertains to transitioning out of the university environment into professional lives. Discussion revolves around career opportunities, options and finding potential work synergies that will parlay into meaningful and exciting lives.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisites: BFA Dance major; DCE 371; Credit is allowed for only DCE 470 or 494 (4th-Yr Seminar)
DCE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
DCE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): Barrett Honors student
DCE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Prerequisite(s): Barrett Honors student
DCE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DCE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-7		
DCE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
DCE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	501	Philosophy of Dance	Analyzes traditional and contemporary theories of dance with regard to issues of expression, form, and meaning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	502	Cultural Concepts of Dance	Examines the close connections among culture, dance, and movement through writings in cultural theory, dance ethnology, and philosophy.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	504	Dance and Ethics	Examination of ethical issues as they relate to the field of dance, including the following: the ethical treatment of dancers within educational and professional institutions; the ethical creation of dances sensitive to copyright/appropriation concerns as well as issues of form and content; the ethical engagement of the arts by the state; the ethical use of dance in trauma recovery and community building.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Dance MFA student
DCE	505	Rhetorical Moves	Addresses creative practice from the perspective of the embodied creative artist. Embodiment is theorized using a conflation of interdisciplinary concepts to analyze the complex and fluid nexus that occurs as the artist creates. Students theorize the creative artist as a rhetor and the creative practice as a rhetorical situation to understand the deconstructive interaction of the creative act. Explores ways to utilize this new theorization of embodiment for interdisciplinary research into creative practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Herberger Institute of Design and the Arts graduate students
DCE	530	Graduate Movement Practices I	The four-semester sequence of graduate movement practices are a sequence of graduate-level movement studies experiences designed to emphasize in-depth psychophysical explorations of specific somatic movement practices and frameworks as well as epistemological frameworks for learning in and through the body. Addresses the integrated practices and theoretical underpinnings of Laban/Bartenieff praxis, Body Mind Centering and other somatic practices that are explored within the four-course sequence that facilitate movement exploration, movement functioning, movement performance and movement creation as well as performance and social theory constructs.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: MFA Dance student
DCE	531	Graduate Movement Practices 2	The series of graduate movement practices courses are a sequence of two graduate-level movement studies experiences designed to emphasize in-depth psychophysical explorations of specific somatic movement practices and frameworks as well as epistemological frameworks for learning in and through the body. Classroom experiences are approached from theoretically grounded and contextualized perspectives that address through practice current somatic and epistemological thinking. The overarching frameworks for the first and fourth modules are designed as "bookends" for introducing, contextualizing, and synthesizing classroom experiences and concepts explored within the two-course sequence.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: MFA Dance student
DCE	534	Postmodern Contemporary	Preparation in the performance and comprehension of professional-level modern dance for first-year graduate students, 6 hours weekly.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance Graduate student
DCE	535	Contemporary Ballet	Graduate-level theoretical study and movement practice of contemporary ballet for contemporary dancers.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: MFA Dance student

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DCE	536	Somatic Practices	Laboratory for somatic education that explores the foundations of movement, voice, expression and spatial awareness. Open to nonmajors, the class welcomes and encourages the participation of students from a wide variety of disciplines. Taught through the principles of specific somatic lenses (e.g., the Alexander Technique, Bartenieff Fundamentals, and Body Mind Centering), the course highlights how embodied awareness affects artistic process and choice making, as well as enhancing physical capacities, kinesthetic intelligence, and the refinement of performance and technical skills. Emphasizes developing a holistic perception of ourselves, our relation to one another, and to the environment. Integrated lecture/lab. Prerequisite(s): degree- or nondegree-seeking graduate.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only DCE 536 or DCE 598 (Movement Language Sources) or (Somatic Practices)
DCE	537	African and Diaspora Movement Practices	Investigates and integrates historical and cultural contexts for West, Central, and South African and Post-African (diasporic) movement practices. Engages movement and physical articulation as tools to examine specific dance cultural knowledge and demonstrate/embodiment techniques representing that cultural knowledge.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance major; Credit is allowed for only DCE 537 or DCE 598 (African Diaspora Movement Practices)
DCE	538	Dance Theatre	Performance in specially choreographed dance productions.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: MFA Dance student
DCE	540	Issues in Media for Dance	Introduces desktop multimedia as it relates to dance creation, production, education, and research.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	543	Sound Design for Dance	Audio mixing for analog/digital recording and editing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors
DCE	554	Teaching Praxis I: Postsecondary Teaching Philosophies, Foundations and Practices	Provides both the theoretical basis and practical application of principles for teaching contemporary dance disciplines in a postsecondary setting. Includes discussion, co-teaching and individual teaching projects and sessions, practical application of course readings, and guest speakers. Both dance and discussion of ideas in each class session.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Dance MFA student
DCE	560	Graduate Creative Practices I	Artistic research through the practices of improvisation, choreographic choice making, and interdisciplinary collaboration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	561	Graduate Creative Practices II	Explores a variety of contemplative practices designed to cultivate awareness and serve as stimuli for generating choreography and creative approaches in interdisciplinary collaborations.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance Graduate student; DCE 560
DCE	563	Rhythmic Awareness	This course focuses on the kinesthetic aspects of weight, space, and time. It is opportunity for individual exploration as well as an ensemble experience, a chance to come together as a group through the communicative nature of sound, movement, and visual patterns.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Dance MFA student
DCE	570	Graduate First-Year Seminar I	Part of a four-semester sequence that offers a cohort experience to increase awareness of current global dance practices, present opportunities for dialoguing about topics significant to fulfilling degree requirements and that promote success in the dance program as well as to facilitate transition into the professional world. Seminar.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance Graduate student; Credit is allowed for only DCE 570 or DCE 591 (1st Year Graduate Seminar)
DCE	571	Graduate First-Yr Seminar II	Part of a four-semester sequence that offers a cohort experience to increase awareness of current global dance practices; present opportunities for dialoguing about topics significant to fulfilling degree requirements and that promote success in the dance program as well as to facilitate transition into the professional world.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): Dance MFA student
DCE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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DCE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	634	Postmodern Contemporary	Preparation in the performance and comprehension of professional-level modern dance for second-year graduate students. 6 hours weekly.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance Graduate student
DCE	654	Teaching Praxis II: Theories, Contexts, Populations, Psychomotor Development and Curriculum Design	Applies current learning theories and psychomotor development approaches to teaching practices and curriculum design for a variety of contexts and populations ranging from early childhood to late adulthood and community to institutional settings. Students develop and implement pedagogical praxis frameworks that stem from their developing teaching perspectives, values and objectives. Course experiences are designed to help students effectually integrate pedagogical theory and practice toward successful and meaningful ends.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): DCE 554; Credit is allowed for only DCE 654 or DCE 598 (Apprenticeship)
DCE	656	Teaching Praxis III: Secondary Practices and Teacher Preparation Course Development/Implementation	Prepares students to teach in secondary dance education settings; to develop and teach higher education dance pedagogy, curriculum development, and teacher prep courses that meet professional teaching standards, state and national learning standards and requirements and institutional benchmarks. Participants develop specific teaching strategies and frameworks, as well as gain practical experience, within the settings of secondary dance education and university teacher preparation courses. Utilizes Laban Movement Analysis and other social somatic frameworks as inroads into teaching, curricular design and student assessment. Students help instruct and mentor undergraduate dance majors in a secondary dance teaching methods course. Illuminates current sociocultural and educational issues that influence teaching and learning in secondary dance classrooms, and addresses strategies and requirements for pre-service teacher preparation courses.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	4		Prerequisite(s): DCE 554; Credit is allowed for only DCE 656 or DCE 680 (Secondary Teaching Praxis and Teacher Training Frameworks)
DCE	657	Pedagogical Research and Fieldwork	Provides a theoretical and practical foundation for students to engage in pedagogical research and fieldwork. Places primary emphasis on investigating and applying qualitative methods to processes of pedagogical inquiry and research. Students are mentored through processes of gathering information, focusing, designing, implementing and assessing an educational research project through fieldwork in a context of their choosing. The outcomes of students' fieldwork projects are documented and articulated in the forms of a scholarly research paper and live research presentation.	N	RSC	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Prerequisite(s): DCE 554
DCE	660	Graduate Creative Practices III	Artistic research through the practices of choreographic choice making, exploration, and experimentation of integrated environments and interdisciplinary collaboration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	661	Graduate Creative Practices IV	Culmination of a four-semester Creative Practices sequence, focusing on articulating individual creative practices and identifying the needs of each student relative to their Applied Projects. Students are also responsible for understanding the content and requirements for the selected modules of this course.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	670	Graduate Second-Year Seminar I	Part of a four semester sequence that offers a cohort experience to increase awareness of current global dance practices, presents opportunities for dialoguing about topics significant to fulfilling degree requirements and promotes success in the dance program as well as to facilitate transition into the professional world. Reflection is a key component of the School of Dance curriculum; develops ability and skills in analysis, but more importantly builds awareness of intuitive and habitual patterns of response to new stimuli. The Seminar is a key moment each week to develop a community of inquiry amongst peers.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: MFA Dance student; Credit is allowed for only DCE 591 (2nd Yr Seminar) or DCE 670
DCE	671	Graduate Second-Year Seminar II	The Second-Year Graduate Seminar is part of a four semester sequence that offers a cohort experience to increase awareness of current global dance practices, present opportunities for dialoguing about topics significant to fulfilling degree requirements and that promote success in the dance program as well as to facilitate transition into the professional world.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): Dance MFA student
DCE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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DCE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DCI	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
DCI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
DCI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
DCI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
DCI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
DCI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
DCI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
DCI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
DCI	510	Teacher as Researcher	Introduces teacher research as a new research genre; offers teachers guidance on planning and conducting research on their practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: COE 501 or DCI 510 with B or better
DCI	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DCI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCI	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	701	Curriculum Theory and Practice	Curriculum theory and practice as a field of study. Its current orientations and applications, modes of inquiry, and community of scholars and practitioners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	702	Interdisciplinary Research Seminar	Core research course for students in the interdisciplinary PhD in Curriculum and Instruction program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DCI	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCI	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DNP	601	Theoretical Foundations for Advance Practice Nursing	Examines philosophical foundations of advanced nursing practice by analyzing interrelationships among theory, philosophy, practice, and research.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	602	Evaluating Research for Practice	Provides opportunities for graduate students to develop the knowledge and skills to critically analyze scientific literature and research for application to practice.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
DNP	604	Advanced Human Pathophysiology Across Lifespan	Core course focuses on human pathophysiology and concepts of genetics for advance practice nursing.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontolog or Fam Psy MentHlth or Family NP or Women's Hlth NP or Neonatal NP or Pediatric NP) major or Family Nurse Practitioner or Family Psychiatric and Mental Health Nurse Practitioner certificate
DNP	605	Advanced Health Assessment Across Lifespan	Advanced health assessment skills, including history-taking strategies and physical, functional, developmental, and psychosocial assessment.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: DNP Adv Nursing Practice major or Family Nurse Practitioner or Family Psychiatric and Mental Health Nurse Practitioner certificate
DNP	608	Advanced Pharmacotherapeutics Across Lifespan	For advanced practice nurses, expands theoretical and evidence-based knowledge and promotes synthesis of pharmacotherapeutic concepts and principles across the lifespan.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: DNP Adv Nursing Practice major or Family Nurse Practitioner or Family Psychiatric and Mental Health Nurse Practitioner certificate
DNP	609	Advanced Practice Nursing Role I	Focuses on the historical and contemporary social and political influences on the role of the DNP-prepared advanced practice nurse.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): Doctor of Nursing Practice student
DNP	610	Advanced Practice Nursing Role II	Focuses on the ethical and professional role of the DNP, negotiation strategies, and preparation of a professional portfolio.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Pre-requisite: DNP 609 with B or better
DNP	613	Women's Health Promotion I	Didactic course focuses on theories of health behavior, health promotion, disease prevention and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 614
DNP	614	Women's Health Practicum I	Clinical assessment and education of women across the lifespan for the purposes of health promotion and disease prevention.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 613
DNP	615	Management of Common Problems in Women's Health	Focuses on management of nursing care for high-risk perinatal women and women with common health problems.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 616
DNP	616	Advanced Women's Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 615
DNP	617	Management of Complex and Chronic Disease in Women	Didactic course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health status across the lifespan and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 618
DNP	618	Advanced Women's Health Practicum III	Clinical course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health states across the lifespan and patient education.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 617
DNP	621	Health Assessment Skills	Skill-based course focuses on advanced clinical skills including suturing, splinting, x-ray, ECG and advanced lab interpretation.	N	LEL	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): DNP 605
DNP	623	Adult-Gerontology Health Promotion	Introduces health promotion and disease prevention for adults across the lifespan emphasizing principles of evidence-based practice in clinical and community settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 624
DNP	624	Adult-Gerontology Health Promotion Practicum	Clinical practicum designed to apply principles of evidence-based practice in health promotion and disease prevention in clinical and community settings.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 623
DNP	625	Management of Common Health Problems in Adults Across the Lifespan	Includes theory and research that guides the management and maintenance of adults across the lifespan with common health alterations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 626
DNP	626	Management of Common Health Problems/Adults Across the Lifespan Practicum	Diagnosis, management, and application of advanced knowledge and skills in caring for adults across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 625

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
DNP	627	Management of Complex Health Alterations in Adults Across the Lifespan	Focuses on application of EBP in care of adults of all ages with complex health alterations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 628
DNP	628	Management of Adults Across the Lifespan w/Complex Health Alterations Practicum	Clinical practicum designed to apply principles of evidence-based practice in primary care management of adults across the lifespan with complex health alterations.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 627
DNP	633	Family Health Promotion	Focuses on concepts and strategies to promote, manage, and maintain health of children, adults, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 634
DNP	634	Family Health Promotion Practicum	Clinical application of theories, concepts, and principles in the care of children,	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 633
DNP	635	Management of Common Health Problems in Children, Adults and Families	Didactic course that integrates research into clinical decision making as the context for the assessment and management of acute and common health problems in family practice across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 636
DNP	636	Management of Common Health Problems in Children, Adults, and Families Practicum	Clinical application of theories, concepts, and research related to the management of acute and common problems in family practice across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 635
DNP	637	Management of Complex and Chronic Health Problems in Children, Adults and Families	Didactic course that integrates research into clinical decision making as the context for the assessment and management of complex and chronic problems in family practice across the lifespan.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 638
DNP	638	Management of Complex and Chronic Health Problems in Children, Adults, and Families Practicum	Clinical application of theories, concepts, and research related to the management of complex and chronic problems in family practice across the life span for Family Nurse Practitioner role specialty.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 637
DNP	640	Advanced Human Pathophysiology Pediatrics	Didactic course for pediatric nurse practitioner students focuses on applying concepts of human pathophysiology and genetics in pediatric patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner)
DNP	641	Advanced Health Assessment Pediatrics	Skills-based advanced health assessment course that includes history-taking strategies and physical, functional, developmental, psychosocial health assessment of children (birth-21).	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Advanced Nursing Practice DNP (Pediatric Nurse Practitioner)
DNP	642	Applied Pharmacotherapeutics for Pediatrics	Applies evidence-based pharmacotherapeutic principles to disease treatment and health promotion and maintenance for pediatric patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner)
DNP	643	Developmentally Based Care of the Well Child	Offers information for theory-based developmental care of well children. Includes anticipatory guidance for parents and/or children/teens.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 644
DNP	644	Well Child Advanced Practicum	Clinical application of theories, concepts and principles as they relate to the developmentally based care of the well child.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 643
DNP	645	Management of Common Problems in Pediatric Primary Care	Provides health promotion and disease prevention strategies for the advanced nursing care of all children and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 646
DNP	646	Management of Common Problems in Pediatric Primary Care Practicum	Facilitates development of advanced clinical skills in the assessment and management of child health, health surveillance and promotion.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 645

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DNP	647	Management of Complex and Chronic Health Problems in Pediatric Primary Care	Third pediatric didactic course focuses on assessment and management of childhood complex and chronic health problems and special health conditions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 648
DNP	648	Management of Complex & Chronic Problems Pediatric Primary Care Practicum	Clinical course assists students in developing advanced clinical skills in decision making with chronically ill or special needs pediatric patients.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 647
DNP	650	Advanced Human Pathophysiology Neonates	Didactic course for neonatal nurse practitioner students focuses on applying concepts of human pathophysiology and genetics in neonatal patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	651	Advanced Health Assessment of Neonates	Skill-based course focuses on advanced health assessment skills, including history-taking strategies and the physical, functional, genetic, developmental, and psychosocial/cultural health assessment of neonates.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Advanced Nursing Practice (Neonatal Nurse Practitioner) DNP
DNP	652	Applied Pharmacotherapeutics for Neonates	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for neonates and their families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	653	Advanced Development and Family Health Promotion: Neonatal Theory I	Concepts, theories, interventions, and research related to the promotion, management, and maintenance of physical, behavioral, and developmental needs of at-risk newborns and infants and their families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 654
DNP	654	Neonatal Practicum I	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 653
DNP	655	Management of Common Neonatal Problems	Proactive neonatal theory course focusing on the concepts, theories, and research related to acute and chronic health deviations of neonates and infants.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner) Co-requisite: DNP 656
DNP	656	Neonatal Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 655
DNP	657	Management of Complex Problems in Neonates	Examines the application of knowledge of complex, multi-system alterations in neonatal health from a theoretical and research perspective in preparation for clinical practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	658	Neonatal Practicum III: Management of Complex Problems in Neonates	Develops and applies advanced neonatal assessment, clinical decision making, and management skills to complex health alterations in at-risk neonates to include cultural, ethical, legal, and advocacy issues.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 657
DNP	659	Embryology and Genetics	Prepares advanced practice nurses to use embryology, genetics, and physiology concepts within the nursing process in the care of pediatric and neonatal patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal, Pediatric or Family Nurse Practitioner)
DNP	660	Advanced Neuropsychopathology Lifespan	Manifestations of altered neurophysiology and psychopathology over the lifespan. Uses evidence-based support for theoretical views of psychiatric disorders to analyze the relationships of neuropsychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner

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DNP	671	Advanced Mental Health Assessment Across the Lifespan	Focuses on comprehensive mental health assessment of psychiatric disorders occurring in children, adolescents, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner
DNP	672	Psychopharmacology Across the Lifespan	Focuses on evidence-based use of medications for mental health disorders across the lifespan.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner
DNP	673	Mental Health Promotion Across the Lifespan	Focuses on evidence-based interventions to promote mental health across the lifespan.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner. Co-requisite: DNP 674
DNP	674	Mental Health Promotion Across the Lifespan Practicum	Clinical experiences to become skilled in assessment and evidence-based individual intervention of mental health disorders across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) Family Psychiatric and Mental Health Nurse Practitioner; Co-requisite: DNP 673
DNP	675	Management of Common Mental Health Disorders Across the Lifespan	Emphasizes the assessment and evidence-based management of common mental health disorders across the lifespan.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner Co-requisite: DNP 676
DNP	676	Management of Common Mental Health Disorders Across the Lifespan Practicum	Clinical experiences necessary to become skilled in the assessment and evidence-based management of the most common mental health disorders across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner; Corequisite: DNP 673
DNP	677	Management of Complex & Chronic Mental Health Disorders Across the Lifespan	Focuses on modalities of evidence-based treatment with children, adolescents, adults, and families with complex and/or chronic psychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner; Co-requisite: DNP 678

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
DNP	678	Management of Complex & Chronic MH Disorders Across the Lifespan Practicum	Clinical experiences in the assessment and evidence-based management of the most complex and chronic mental health disorders across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner; Co- requisite: DNP 677
DNP	679	Biostatistics: Principles of Statistical Inference	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, nursing, and healthcare data.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing graduate student
DNP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	682	Geriatric Health Promotion	Examines theoretical perspectives in aging and cultural and contextual approaches for health promotion in older adults.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	688	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
DNP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	703	Innovation in Communication: Scholarly and Professional Writing	Provides a review of principles of scholarly and professional writing, plagiarism and APA 6th edition format.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): Doctor of Nursing Practice student
DNP	704	Principles of Evidenced-Based Care in Advanced Practice	Foundational course focuses on the evidence-based process and understanding of evidence-based practice principles assist advanced practice nurses and other healthcare professionals in clinical decision making in order to provide best care.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: Doctor of Nursing Practice student
DNP	705	Healthcare Outcomes Management	Outcomes management methodology supports implementation of evidence-based practice and measurement of both patient and healthcare system outcomes attributed to adoption of best practices.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: Doctor of Nursing Practice student; DNP 704
DNP	706	Implementing Sustainable Change toward Evidence-Based Practice	Facilitates student learning about striving for and evaluating sustainable change that hinges on active improvement of practices through implementing evidence-based practice (EBP). Students engage strategies designed to facilitate advanced practice nurses' leadership of this change. Students analyze the success of their evidence-based applied clinical project that is implemented in their clinical residency course. Students evaluate the impact of their doctorally prepared evidence-based advanced practice nurse role on shifting culture to best practice. Students explore the use of adult learning, ethical, and mentorship principles to facilitate understanding of EBP in their workplace.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: Doctor of Nursing Practice major; DNP 704; DNP 705; Co-requisite: DNP 712
DNP	707	Disseminating Evidence to Advance Best Practice in Healthcare and Health Policy	Focuses on methods for dissemination of evidence to advance best practice within local, regional, and/or national settings, as well as advancement of EBP in health policy and the media.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): Doctor of Nursing Practice major; DNP 704, 705 or 706. Corequisite(s): DNP 712
DNP	708	Systems Thinking in a Complex Healthcare Environment	Studies basic and advanced systems principles as they relate innovation to the American healthcare system.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Doctor of Nursing Practice student
DNP	709	Individual and Innovation Leadership in Healthcare Practice	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Doctor of Nursing Practice student
DNP	710	Innovation in Communication and Information Systems in Nursing and Health	Examines principles of effective communication and information systems with a focus on evaluating and using emerging technologies as they relate to nursing and health care.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre-requisites: Doctor of Nursing Practice major
DNP	711	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy with emphasis on strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Doctor of Nursing Practice student

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DNP	712	Clinical Residency and Management	Demonstrates DNP competencies through portfolio documentation of clinical learning experiences and implementation of the DNP Evidence-Based Clinical Applied Project. Doctoral students submit the DNP Portfolio in partial fulfillment of the degree.	N	PRA	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Doctor of Nursing Practice student
DNP	713	Analysis of Organizational Cultures in Healthcare	Analyzes culture, organizational implications and relationships to change and innovation in healthcare.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Advanced Nursing Practice (Innovation Leadership) major
DNP	714	Professional Relationships in Healthcare	Analyzes professional relationships within healthcare organizations and evidence-based strategies to improve communication, coordination, and collaboration.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Advanced Nursing Practice (Innovation Leadership) major
DNP	715	Dynamics and Principles of Information in Healthcare	Analyzes and applies multiple sources of information for healthcare leaders across the continuum of evidence including research, evidence-based practice, translational research, improvement science, and quality improvement.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Advanced Nursing Practice (Innovation Leadership) major
DNP	716	Leadership of Innovation in Healthcare	Analyzes leadership theories in the creation of complex healthcare system innovation.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: Doctor of Nursing Practice concentrations major
DNP	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	100	ASU Design Experience	Covers ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	REC	N	GNA	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): BS, BSD or BSLA Design School major. Credit is allowed for only DSC 100 or 194 (ASU Design Experience)
DSC	101	Design Awareness	Surveys cultural, global, and historical context for the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & G	
DSC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
DSC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
DSC	236	Introduction to Computer Modeling	Computers in design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	The Design School	3	CS	Pre-requisite: Industrial Design student; Passed Milestone
DSC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
DSC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
DSC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
DSC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
DSC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
DSC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
DSC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
DSC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
DSC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Master of Science in Design or PhD in Environmental Design & Planning student
DSC	501	Qualitative Research in Design	Theory and application of qualitative research. Emphasizes using ethnography to identify and specify innovative concepts and strategies.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Master of Industrial Design or Master of Science in Design major

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DSC	520	Contemporary Design Issues	Issues influencing contemporary design such as sustainability, globalization, education, gender, collaboration and emotion.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	558	Daylighting	Daylighting as a design determinant; concepts, techniques, methodology, experiments, and case studies.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Herberger Institute of Design and the Arts graduate student
DSC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Master of Science in Design student
DSC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD or Design (Inter Design) MSD student
DSC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): Master of Industrial Design, Master of Interior Architecture, Master of Science in Design, or Master of Visual Communication Design major
DSC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EAC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
ECD	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
ECD	211	The Developing Child: Theory into Practice, Prenatal-Grade 3	Examines process of physical, social, emotional, cognitive, language, and literacy development of young children; includes observation, practical application, fieldwork.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	
ECD	220	Introduction to Nutrition, Health and Safety	Emphasizes providing proper nutrition, promoting a safe but challenging learning environment, and becoming knowledgeable of a child's health status. Also covers practical applications for assisting young children to develop good habits and attitudes and to assume lifelong responsibility for their own well-being.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
ECD	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
ECD	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
ECD	302	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	312	Social/Emotional Foundations of Learning	Foundations of early social development and evidence-based practices for promoting social-emotional development; young children's understanding, interactions, and relationships to the social world.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	313	Technology in Early Childhood Education	Evaluates technology and technological learning tools for early childhood classrooms; integrates technology and its tools into students' learning. Lecture, discussion, active participation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	315	Classroom Organization and Guidance of Young Children	Theories and strategies to guide children's development toward becoming self governing; typical and atypical behaviors; implementing age-appropriate classroom management techniques that foster individual, social, and academic competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	316	Teacher Research: Studying Children in Context	Introduces designing, conducting, interpreting, and reporting teacher research; methods of research and fieldwork with children to improve teaching practices and child outcomes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	321	Emerging Language and Literacy	Language and literacy development; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical observation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	323	Building Home, School, and Community Partnerships	Knowledge and skills to facilitate positive and continuous family-school partnerships; family background, social context, family involvement, and current research on family-school interaction and academic success.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	Prerequisite(s): admission to the Professional Program
ECD	324	Social Studies and Creative Arts Curriculum, Instruction and Assessment	Social studies and creative arts standards, curriculum, and instructional and assessment strategies in an integrated social studies and creative expression curriculum for children birth through grade 3.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	341	Administration/Evaluation of EC Programs	Administration and evaluation of early childhood programs. Emphasizes planning and evaluation; regulations; health, nutrition, and safety; operations, budgeting, and supervision of personnel.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
ECD	396	Student Teaching: Early Childhood (Ages Birth-5)	Student teaching in early childhood education classrooms ages birth to 5: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): admission to the Professional Program
ECD	406	Assessment: Birth-Grade 3	Examines assessments appropriate to birth - grade 3 instruction to align curriculum with learner needs. Focuses on test design, interpretation, lesson design, and aspects related to multiple classroom and formal assessments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	416	Social and Educational Policies Affecting Children and Families	Social policies at the national and state levels; values and assumptions of policies; political factors shaping policy and implementation; links between policy, educational practice, schools, and family functioning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	418	Instructional Methods for Young Children: Integrating Digital Media	Develops integrated experiences with children's literature for facilitating development in reading, writing, speaking, and listening. Further develops educational strategies for promoting growth in the social studies and creative arts curriculum, and instructional/assessment strategies for preprimary- and primary-level children; developmentally appropriate methods and strategies for effective instruction.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	477	Student Teaching: Birth to Pre-K	Supervised practicum in a birth to pre-K program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	4-6		Prerequisite(s): admission to the Professional Program
ECD	478	Student Teaching: Early Childhood (Grades K-3)	Student teaching in early childhood education classrooms grades K-3: synthesized experience in curriculum, instruction, assessment and classroom management.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-9		Prerequisite(s): admission to the Professional Program

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECD	478	Student Teaching: Early Childhood (Grades K-3)	Student teaching in early childhood education classrooms grades K-3: synthesized experience in curriculum, instruction, assessment and classroom management.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-9		Prerequisite(s): admission to the Professional Program
ECD	478	Student Teaching: Early Childhood (Grades K-3)	Student teaching in early childhood education classrooms grades K-3: synthesized experience in curriculum, instruction, assessment and classroom management.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-9		Prerequisite(s): admission to the Professional Program
ECD	478	Student Teaching: Early Childhood (Grades K-3)	Student teaching in early childhood education classrooms grades K-3: synthesized experience in curriculum, instruction, assessment and classroom management.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-9		Prerequisite(s): admission to the Professional Program
ECD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): admission to the Professional Program
ECD	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
ECD	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
ECD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
ECD	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
ECD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
ECD	503	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
ECD	504	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	505	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
ECD	520	Child Guidance and Management: Child, Family, Community, and Culture	Introductory exploration of a variety of techniques for developing a positive classroom environment. Includes overview of several classroom and school management programs and possible effects of implementation. Focuses on observations made during the students' classroom and field experiences. Provides the catalyst for introducing students to the program's professional portfolio requirement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
ECD	525	Emergent Literacy	Examines research on oral language and literacy development and effective strategies for teaching language and literacy in birth to grade 1, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	527	Mathematics in Early Childhood Education	Theory and practice in the use of manipulative materials for teaching mathematics to preschool and primary grade children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	541	Assessment of Young Children	Assessment principles, techniques, and issues related to guiding learning for children birth through eight years. Test construction, interpretation and communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	549	Foundations of Diversity, Human Development, and the Young Child	Historical foundations and theories of child development as examined with a concern for diversity, multidirectional human change, and cultural embeddedness.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
ECD	565	Appropriate Instructional Methodologies for Young Children	Surveys appropriate teaching methodologies for young children across the curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
ECD	567	Clinical Experience: Early Childhood (Ages Birth-5)	Applies course content in early childhood education preschool classrooms birth to age 5: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	0-2		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	576	Clinical Experience: Early Childhood (Grades K-3)	Applies course content in early childhood education classrooms grades K-3: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	0-2		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	577	Practicum: Early Childhood (Ages Birth-5)	Student teaching in early childhood education classrooms ages birth to 5: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	578	Student Teaching: Early Childhood (Grades K-3)	Student teaching in early childhood education classrooms grades K-3: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	4		Prerequisite(s): degree- or nondegree-seeking graduate student

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ECD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECD	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student
ECD	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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ECD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-3		
ECN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-4		
ECN	211	Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
ECN	211	Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	
ECN	212	Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
ECN	212	Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	
ECN	213	Honors Macroeconomics	Introduces modern macroeconomic analysis. Theory of national income, unemployment, inflation, and economic growth and its application to economic policy. Not open to students with credit in ECN 313.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Pre-requisites: Barrett Honors student; MAT 210, 211, 270 or 271 with C or better
ECN	214	Honors Microeconomics	Introduces modern microeconomic analysis. Theories of consumer behavior, production, and cost. Output and price determination in a variety of market settings. Not open to students with credit in ECN 314.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Pre-requisites: Barrett Honors student; MAT 211 or 271 with C or better
ECN	221	Business Statistics	Methods of statistical description. Applies probability theory and statistical inference in business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3	CS	Prerequisite(s): MAT 211 or 271 with C or better
ECN	231	Honors Business Statistics	Applies statistical methods used in business and economic modeling and research. Emphasizes regression analysis and modeling.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	CS	Pre-requisites: Barrett Honors student; MAT 211 or 271 with C or better
ECN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: Barrett Honors student; Pre/Co-requisite: MAT 210, 211, 270, 271 or 272 with C or better if completed
ECN	303	Honors Managerial Economics	Develops a basic platform for managerial decision making. Applies basic economic concepts and models to actual business practices.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: Barrett Honors student; ECN 214 or 312/314 with C or better
ECN	306	Survey of International Economics	Surveys international trade issues, commercial policy, trade theory, customs unions, and international monetary topics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-requisites: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271 with C or better
ECN	312	Intermediate Microeconomic Theory	Role of the price system in organizing economic activity under varying degrees of competition.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Prerequisite(s): ECN 211 or 213 with C or better; ECN 212 or 214 with C or better; MAT 211, 266 or 271 with C or better
ECN	313	Intermediate Macroeconomic Theory	Determinants of aggregate levels of employment, output, and income of an economy.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Pre-requisites: ECN 214 or ECN 312/314 with C or better.
ECN	315	Money & Banking	Functions of money. Monetary systems, credit functions, banking practices, and central banking policy.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	331	Economics of the European Economic Union	Examines broad economic policies seeking to influence individuals' decisions, the history of European economic development and policies, as well as institutions and social systems.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better

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ECN	335	South Asia and the World Economy	Develops and discusses alternative theories of trade, development, and growth in the context of south Asia and the world economy.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Prerequisites: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271 with C or better
ECN	345	Survey of Environmental and Resource Economics	Economic principles applied to private and public policy decisions involving environmental resources, natural resource management, and policy analyses. Focuses on how economic methods can contribute to making better environmental decisions.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271 with C or better.
ECN	355	Economics of Healthcare	Uses economic tools and models to discuss and evaluate the American healthcare system. Applies standard concepts in microeconomics, macroeconomics, and public choice economics to the study of the evolution and the current state of the healthcare system and to the study of proposals for change. Focuses on the promise and problems of using economic tools in a historical, ethical, and cultural context to understand the current healthcare system.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisites: ECN 211 or 213; ECN 212 or 214 and MAT 211 or 271 with C or better.
ECN	360	Economic Development	Theories of economic growth and development. Role of capital formation, technological innovation, population, and resource development in economic growth.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	365	Economics of Russia and Eastern Europe	Origins and analysis of contemporary institutions. Comparative development and differentiation in the 20th century.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	382	Managerial Economics	Applies economic analysis to managerial decision making. Market analysis in the context of the socio-legal environment. Does not satisfy Economics major requirements.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: Not open to Economics or Business majors. Minimum 2.0 ASU cumulative GPA and minimum of 56 total earned hours OR Non-degree student with minimum 2.0 ASU cum GPA OR Graduate student.
ECN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	404	History of Economic Thought	Development of economic doctrines, theories of mercantilism, physiocracy, classicism, neoclassicism, Marxism, and contemporary economics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Pre-requisites: ECN 214 or 314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	410	Applied Regression Analysis and Forecasting	Applies regression techniques to forecasting in business and institutional environments.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 221 (or ECN 231 or IEE 380 or STP 226) with C or better; ECN 214 or ECN 312 with C or better
ECN	413	Advanced Honors Macroeconomics	Develops and uses various macroeconomic models to evaluate important economic policies. Emphasizes honing students' policy evaluation skills.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: Barrett Honors student; ECN 213 or 313 with C or better; ECN 214 or 312/314 with C or better
ECN	414	Advanced Honors Microeconomics	Develops and uses various microeconomic models to evaluate important economic issues. Emphasizes the economics of uncertainty and information.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): Barrett Honors student; ECN 214 or 312 with C or better; Pre- or corequisite(s): ECN 213 or 313 with C or better if completed
ECN	416	Game Theory and Economic Behavior	Introduces game theory and its application to various economic situations under conditions of complete and incomplete information.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-reqs: ECN 214 or ECN 312/314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	421	Labor Economics	Labor supply and demand, unemployment, determinants of wages, earnings inequality, labor unions and the structure of labor contracts.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Prerequisites: ECN 214 or 312 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	423	Economics of Education	Focuses on educational decisions, including individual choices, institutional strategies and government policies. Topics include measuring the costs and returns of education, the relationship between education and inequality, and the role of K-12 and postsecondary institutions in economic growth.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): ECN 214 or 312 with C or better; Pre- or corequisite(s): ECN 213 or 313; Credit is allowed for only ECN 423 or 494 (Economics of Education)
ECN	425	Introduction to Econometrics	Elements of regression analysis: estimation, hypothesis tests, prediction. Emphasizes use of econometric results in assessment of economic theories.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 221 (or ECN 231 or IEE 380 or STP 226) with C or better; ECN 214 or ECN 312 with C or better

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ECN	436	International Trade Theory	Comparative-advantage doctrine, including practices under varying commercial policy approaches. Economic impact of international disequilibrium.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-reqs: ECN 214 or ECN 312/314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	438	International Monetary Economics	History, theory, and policy of international monetary economics. Balance of payments and exchange rates. International financial markets, including Eurocurrency markets.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Prerequisite(s): ECN 214 or ECN 312/314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	441	Public Economics	Public goods, externalities, voting models, public expenditures, taxation, and budget formation with emphasis on the federal government.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Pre-reqs: ECN 214 or ECN 312/314 with C or greater; Pre/Co-requisite: ECN 213 or 313
ECN	445	Environmental Economics	Advanced topics in environmental economics with quantitative methods for developing information that is used for environmental policy making.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisites: ECN 214 or 312 or 314 with C or better; Pre/Co-requisite: ECN 213 or 313.
ECN	450	Law and Economics	Economics of the legal system, including analysis of property, contracts, torts, commercial law, and other topics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-reqs: ECN 214 or ECN 312/314 with C or better
ECN	453	Industrial Organization and Competition Policy	Development of public policies toward business. Antitrust activity. Economic effects of government policies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-reqs: ECN 214 or ECN 312/314 with C or better
ECN	455	Health Economics	Focuses on health care decisions, including individual and government policies. Topics include demand for and supply of health care, payment for health care, the impact of health care reform and the techniques economists use to evaluate health care interventions.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): ECN 214 (or ECN 312) with C or better. Pre- or corequisite(s): ECN 213 (or ECN 313); Credit is allowed for only ECN 455 or 494 (Health Economics)
ECN	470	Mathematical Economics	Integrates economic analysis and mathematical methods into a comprehensive body of knowledge within contemporary economic theory.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-reqs: ECN 214 or ECN 312/314 with C or better
ECN	475	Capstone in Economics	Capstone course integrating several areas of economics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	L	Pre-reqs: ECN 213 or 313 with C or better; ECN 214 or ECN 312/314 with C or better; Senior standing.
ECN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Minimum 3.0 ASU cum GPA; ECN 213 or 313 with C or better; ECN 214 or 312/314 with C or better
ECN	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-6		Pre-requisites: Barrett Honors W. P. Carey undergraduate student; ECN 213 or 313 with C or better; ECN 214 or 314 with C or better
ECN	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Pre-requisites: Barrett Honors W. P. Carey BS or BA student; ECN 213 or 313 with C or better; ECN 214 or 314 with C or better
ECN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-4		Pre-reqs: ECN 214 or ECN 312/314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	GNA	W.P. Carey School of Business	Department of Economics	1-7		Pre-requisites: ECN 313 and 314 with C or better
ECN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		
ECN	502	Decisions, Market Structure and Games: Managerial Economics	Applies microeconomic analysis to managerial decision making in areas of demand, production, cost, and pricing. Evaluates competitive strategies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	2-4		Prerequisite(s): MBA degree program student
ECN	503	Global Business Environment	Macroeconomic analysis of issues related to economic growth, inflation, interest rates behavior, unemployment, exchange rate determination, and global competitiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	1-4		Prerequisite(s): MBA degree program student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ECN	510	Microeconomic Theory and Applications	Applies economic theory to production, consumer demand, exchange, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	525	Applied Regression Models	Simple linear regression, multiple regression, indicator variables, and logistic regression. Emphasizes business and economic applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	527	Categorical Data Analysis	Discrete data analysis in business research. Multidimensional contingency tables and other discrete models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 525
ECN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 712 and 714 with C or better
ECN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	711	Macroeconomic Analysis I	Current theories of output, employment, inflation, and asset prices as well as major aggregates. Introduces dynamic optimization techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	712	Microeconomic Analysis I	Theory of production, consumer demand, resource use, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ECN	713	Macroeconomic Analysis II	Focuses on growth theory, dynamic general equilibrium models, monetary theory, open-economy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	714	Microeconomic Analysis II	General equilibrium, welfare economics, production, and capital theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	715	Advanced Macroeconomic Analysis	Focuses on current research areas in macroeconomics and monetary theory with emphasis on methods in economic dynamics and numerical techniques.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 711 with C or better; ECN 713 with C+ or better
ECN	716	Advanced Economic Theory I	Economic behavior under uncertainty; markets and contracts under asymmetric information; the theory of games with incomplete information and applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 714 with C or better; ECN 712 with C+ or better
ECN	717	International Macroeconomics	Intertemporal approach to the current account, international business cycles, international risksharing and home bias, models of exchange rate determination, balance of payment crises, sovereign debt and default.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	721	Labor Economics I	Develops basic theoretical models for analyzing labor market issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 713 and 714 with C or better
ECN	722	Labor Economics II	Extensions/criticisms of labor market theories. Applications to a variety of policy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 721 with C or better
ECN	725	Econometrics I	Problems in the formulation of econometric models. Emphasizes estimation, hypothesis testing, and forecast of general linear models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	726	Econometrics II	Estimation and inference of qualitative and limited dependent variable models as well as general multiple equation models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 725 with C+ or better
ECN	727	Quantitative Methods in Economics	Generalized method of moment estimation, estimation with censored and truncated samples, nonlinear models, panel-data models, econometrics of nonstationarities.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 713 and 714 with C or better
ECN	736	International Trade Theory	Theories of comparative advantage and their empirical verification. Theory and political economy of commercial policy. Resource transfers and the role of the multinational corporation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 713 and 714 with C or better
ECN	741	Public Economics	Economics of collective action, public spending, taxation, and politics. Impact of central governmental activity on resource allocation and income distribution.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey Graduate degree-seeking students only; ECN 712 with B or better; Co-requisite: ECN 714
ECN	753	Industrial Organization	Analyzes structure, conduct, and performance in industrial markets; the economics of organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 713 and 714 with C or better
ECN	760	Economics of Growth and Development	Economic problems, issues, and policy decisions facing the developing nations of the world.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 711 and 712 with C+ or better; Co-requisite: ECN 713 and 714
ECN	770	Mathematics for Economists	Surveys mathematical ideas encountered in economics and econometrics. Topics include measure theory, probability theory, and mathematical statistics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	784	Internship		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey degree seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ECS	310	Foundations in Typical / Atypical Child Development	Examines the process of typical and atypical physical, social, emotional, cognitive, and language development of young children with or at risk for delay.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	312	Social and Emotional Development of the Young Child	Examines genetic, environmental and biological influences on typical and atypical social and emotional developmental processes through current research, current issues, as well as connections to practice.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	Prerequisite(s): minimum junior standing
ECS	315	Classroom Organization and Child Guidance	Develops and implements analysis, intervention, and consultation strategies for effective management of classroom behavior for students with and without disabilities. Age-appropriate techniques addressing individual, social, and academic competence.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	316	Assessment/Evidence-based Practice	Examines assessments appropriate to birth - grade 3 instruction to align curriculum with learner needs. Focuses on test design, interpretation, lesson design, and aspects related to multiple classroom and formal assessments. Introduces designing, conducting, interpreting, and reporting teacher research; methods of research and fieldwork with children to improve teaching practices and child outcomes.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	321	Communication, Language Development, and Emergent Literacy	Language and literacy development; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical observation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
ECS	397	Student Teaching: Inclusive Early Childhood (Ages Birth-5)	Student teaching in early childhood education inclusive classrooms ages birth to 5: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): admission to the Professional Program
ECS	411	Instructional Methodologies for Young Children: STEM	Explores, applies and integrates STEM (Science, Technology, Engineering and Math) content, project-enhanced instructional strategies and assessments.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECS	412	Mathematics Curriculum, Instruction and Assessment	Focuses on math content, methods, skills, and attitudes to be considered in teaching young children. Examines the theoretical foundation for young children's inquiry and learning. Methods focus on practical application of theory in classroom practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECS	413	Literacy Curriculum, Instruction and Assessment	Extends ECD 321; language and literacy development in K-3 classrooms; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Prerequisite(s): admission to the Professional Program
ECS	420	Evaluation and Intervention Strategies for Infants, Toddlers and Preschoolers with Disabilities	Students will learn to screen, assess and provide services to young children with special needs using norm-referenced, criterion-referenced, and formative assessments to determine special education eligibility, plan individualized family service programs, and monitor progress for eligible students.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	430	Systems, Policy, and Advocacy in Early Childhood/Special Education Programs	Social policies at the national and state levels; values and assumptions of policies; political factors shaping policy and implementation; links among policy, educational practice, schools, and family functioning that have a direct impact on both typical and special needs children in early childhood programs.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECS	431	Family, Community and Professional Support Systems	Covers methods and issues in cooperative teaching for special education students in general education classrooms, with an emphasis on collaborative communication skills for working with a variety of school professionals and families.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program or enrolled in Educational Studies program or enrolled in Early Childhood minor
ECS	478	Student Teaching: Special Education (Grades K-3)	Student teaching in early childhood education inclusive classrooms grades K-3: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): admission to the Professional Program

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ECS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
ECT	479	Capstone Seminar in ECT	Reflective, experience-based integration of theory and practice; professional development for preschool through grade 3 teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
EDA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
EDA	501	Competency/Performance in Educational Administration	Nature of educational administration and the concept of competency as it applies to educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	505	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	511	School Law	Interpreting state and federal law and policy in school settings. Includes statutory authority for administrators, liability, constitutional rights, law, and ethics.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	514	Leadership in Curriculum and Assessment	Curriculum and assessment responsibilities of school administrators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	526	Instructional Supervision	Administering curriculum improvement, in-service education, evaluating, and improving teaching competence; administrative instructional responsibilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	548	School, Family, and Community Connections	Administrative factors of primary importance in developing community involvement in public schools. Emphasizes theory and skill of school system and individual communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	572	School Finance and Human Resources	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and school financial affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	578	Critical Issues in Educational Leadership	Explores current critical issues in school leadership, including student support and relationships with governmental agencies and the community.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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EDA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	611	Educational Policy and the Law	Emphasizes policy analysis and application of federal and state law to policy evaluation and development in public schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	634	Instructional Leadership	Theory, practice, and issues in school change and reform with a focus on leading change efforts at the school site.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	676	The School Superintendency	Critical examination of the school superintendency and the primary functions of this educational position. Includes the duties, responsibilities, activities, and problems of the school superintendent. Examines the unique leadership role of the school superintendent.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	679	Administration of Special Programs in Education	For personnel administering special education and federal programs; responsibilities of principals, supervisors, counselors, and directors for special education and federally funded programs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	685	Education in Global Contexts	Global perspectives on education in contemporary society with emphasis on social, political, and economic factors that affect access and equity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-6		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	701	Advanced Quantitative Methods	Data collection, analysis, interpretation in studies using quantitative methods of inquiry situated in action research, evaluation and data-informed decision making.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): doctoral student; Credit is allowed for only EDA 701 or TEL 701
EDA	702	Dynamic Contexts of Education	Explores current ethical issues influencing leadership decisions with a focus on real problems in the educational setting.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	703	Innovation in Teaching and Learning	Development and psychological processes of human cognition, motivation, and performance applied to cognitively diverse, English language learners, adult professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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EDA	704	Leadership for Organizational Change	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EDA 704 or TEL 704
EDA	772	School District Human Resources and Business Management	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and business affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	773	The Superintendency and School District Leadership Roles and Responsibilities	Examines management roles and responsibilities of public school district superintendents and other leaders in identifying and addressing critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDP	302	Assessment and Evaluation in Education	Applies assessment and evaluation principles to education contexts, using a case format.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1		
EDP	310	Educational Psychology for Non-Teachers	Human behavior in educational situations. Individual differences, factors affecting learning, behavioral and cognitive learning, motivation, testing, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	SB	
EDP	311	Educational Psychology for Future Teachers	Planning and conducting effective instruction based on learning theories and principles.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3	SB	Prerequisite(s): Teachers College major, minor or certificate student
EDP	313	Childhood and Adolescence	Principles underlying total development of pre- and early-adolescent children. Emphasizes physical, intellectual, social, and emotional development with practical implications for teachers. Meets ADE requirement for one course in early adolescent psychology for middle grade endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	
EDP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDP	454	Statistical Data Analysis in Education	Role of data analysis in research and decision making. Elements of exploratory data analysis, descriptive indexes, and statistical inference.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	CS	
EDP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
EDP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
EDP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student

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EDP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
EDP	502	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	503	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	504	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	510	Psychology in Education	Planning and conducting effective instruction based on learning theories and principles.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	514	Psychology of the Adolescent	Cognitive, physical, and social development of adolescents in contemporary society. Impact of family, school, and workplace on adolescent development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	523	Educational Assessment	Increases teachers' and others' competence in classroom assessment, grading, and testing. Emphasizes integration of curriculum, instruction, and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	529	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	530	Theoretical Issues and Research in Human Development	Psychological theories, research, and methods relevant to human development, emphasizing the relations between early development and later performance.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	536	Physiology of Behavioral Disorders	Critical study of nervous system, brain function for fundamental behaviors, and system dysfunctions in mental/neurological disorders.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	540	Theoretical Views of Learning	Classical and cognitive theories of learning, plus recent orientations. Illustrative experimental and rational foundations; implications for educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate student; Credit is allowed for only EDP 540 or LSE 540
EDP	541	Motivating Students to Learn	Examines multiple perspectives on motivation and the management of learning environments as bases for reflecting on educational practice.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
EDP	552	Multiple Regression and Correlation Methods	Educational applications of regression techniques. Quantitative and qualitative predictors, curvilinear trends, and interactions. Emphasizes analyzing data and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EDP	554	Analysis-of-Variance Methods	Educational applications of ANOVA techniques. Between- and within-subjects designs, multiple comparisons. Emphasizes using statistical software and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	563	Consultation and Supervision	Examines consultation and supervision research relevant to school psychology practice.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
EDP	566	Advanced Psychoeducational Practice	Develops advanced knowledge and skills in psychoeducational assessment and intervention with an emphasis on case conceptualization and evidence-based methods.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDP 560 and 562 with B or better
EDP	567	School Psychological Services for Diverse Populations	Examines historical, legal, ethical, and practical issues involved in the delivery of school psychological services to diverse populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	568	Psychological Assessment and Intervention	Skills-building course emphasizing interventions, assessment, and outcome-based educational decisions for students experiencing emotional and/or behavioral difficulties.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
EDP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EDP	597	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	651	Methods and Practices of Qualitative Research	Advanced course for students familiar with theory and extant work. Topics include data collection, analysis, reporting, and an extensive fieldwork project.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: COE 503 with C or better
EDP	652	Multivariate Procedures for Data Analysis	Educational applications of multivariate methods, including MANOVA, discriminant analysis, and exploratory factor analysis. Emphasizes analyzing data and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	654	Structural Equation Modeling in Educational Research	Educational applications of confirmatory factor analysis, path analysis, and full latent variable models. Experience in conducting analyses and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EDP	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		Pre-requisites: Freshman standing, Maximum 25 hours
EDS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
EDS	200	Design Literacy and Communication	Builds the requisite skills for students to be able to express their ideas visually. Gives exercises to create an understanding of basic principles of design as well as design communication, principles of composition and aesthetic evaluation. Uses tools such as sketching, drawing, computer graphics and model making as a vehicle to develop an understanding of visual methods of expressing one's self.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Environmental Design or The Arts (Fashion Design) major
EDS	201	Fundamentals of Sustainability in Design	Explores sustainability as it relates to the key disciplines that comprise environmental design. Topics range from issues affecting the preservation of the urban fabric to the development of earth-friendly materials used by interior designers and product designers to the design of sustainable buildings by architects through the use of appropriate materials and requisite energy efficiencies. Surveys the literature of sustainability, identifying critical issues on the subject today. Explores the theoretical underpinnings of the sustainability movement as it affects environmental design and related disciplines.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDS	223	Design Thinking	Introduces the notion of design thinking, a concept that is gaining significant recognition in several disciplines including art, design, business, engineering and others. Design thinking can be described as a creative, multidisciplinary, human-centered approach to solving complex problems. Contemporary society faces numerous challenges, and the need for new tools and methods to tackle and solve these problems is more pressing than ever before. Offers several new techniques of design thinking and creative problem solving through engaging lectures and exciting projects.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		
EDS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
EDS	301	Contemporary Issues in Design Strategies and Innovation	Covers theories and methods needed in design, innovation and management of environmental design projects. Uses best practices and case studies related to the design of artifacts and to the design of built environments as a vehicle to develop students' understanding of different aspects of environmental design in a real-world setting. Also discusses the impact of contemporary issues such as globalization, digital tools, global connectivity on the theories and practice of environmental design.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre- or corequisite(s): EDS 200
EDS	302	Design Inquiry and Undergraduate Research	Theories and methods of design inquiry within a research environment. Prepares students for the senior-year synthesis courses. Students take on design-related research and develop and write a proposal for an integrative experience/project for an environmental design intervention and make an implementation plan to realize this intervention.	N	RSC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: EDS 301
EDS	394	Special Topics		Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
EDS	401	Environmental Design Synthesis I	First of a two-semester sequence of synthesis courses intended to be integrative, based on design research and inquiry. Serves as a culminating experience where, through the successful completion of an environmental design research project/application or experience, students demonstrate their understanding and synthesis of the knowledge and skills they have acquired in the program. Students identify a relevant research problem in environmental design and undertake the necessary literature search and reading regarding theories and methods related to the selected research question. Emphasizes the use of visual methods as a method of inquiry and research.	N	RSC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: EDS 302
EDS	402	Environmental Design Synthesis II	Second of a two-semester sequence of synthesis courses intended to be integrative, based on design research and inquiry. Serves as a culminating experience where, through the successful completion of an environmental design research project/application or experience, students demonstrate their understanding and synthesis of the knowledge and skills they have acquired in the program. Students implement the research study identified in the first semester of the two-semester sequence. Emphasizes the use of visual methods as a method of inquiry and research.	N	RSC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: EDS 401
EDS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
EDS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
EDS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
EDS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
EDT	180	Technology Literacy: Problem Solving using Digital Technology Applications	Introducing digital technologies and their place in society. Applies 21st-century skills to problem solving using digital technology applications including spreadsheets and databases.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	CS	Credit is allowed for only EDT 180 or EDT 321
EDT	184	Modeling, Inquiry, & Analysis Using Technology Tools	Project-based course as an overview of modeling, simulation, statistics, probability, and the role of technology in education, business and personal. Investigates exploration and presentation of emerging technology along with their acquisition, use, and implementation into society. Course includes the use of software programs and online simulations for scientific investigation, internet research, data collection, visual representation of data, probability, measures of central tendency, Action Research, 3D modeling, and Web page design.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDT	210	Games, Technology and Society	Introduces the role and significance of digital games in society and the process of designing games for impact in areas such as education, healthcare and social activism. Explores general theories about the relationship between technology and society, using games as examples, as well as develops a better understanding of methods that take a systemic, contextualized approach to designing games for impact.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
EDT	220	Understanding Games for Impact	Explores the nature of learning in and around games designed for entertainment as well as games designed intentionally for impact. Students gain familiarity with current research on course topics; develop a language for reflection on the cognitive, sociocultural and educational merits and drawbacks of game-centered learning environments; and gain new insights into the ways in which digital playspaces and pastimes shape how people think and learn. Develops the ability to analyze learning in games and game-related social contexts, using different theoretical perspectives and tools.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
EDT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDT	310	Games for Impact: The Full Life Cycle	Focuses on the complete life cycle of impact games, from perceived need through design to evaluating impact. Highlights ethics of game-based learning, unintended consequences of impact interventions, and how to involve stakeholders in the design process. Students collaboratively workshop an original impact game concept and publishing plan to address a key 21st-century challenge.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
EDT	321	Computer Literacy: Mobile Technologies and Your World	Uses mobile technologies across disciplines for communication, collaboration, creativity and problem solving. Employs digital tools including Microsoft Office's spreadsheets and databases, Google apps, mobile apps, and a variety of other Web-based tools in problem-based environments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	CS	Pre-requisite: Minimum 45 hours; Credit is allowed for only EDT 180 or EDT 321
EDT	329	Games, Simulations, and Virtual Environments	Focuses on the use of Gaming, Simulations, and Virtual Environments (GS/VE) in education and instruction. Examines how educational professionals and other practitioners can leverage students interests in digital culture to accelerate their learning. Participants explore the foundational, social, and cultural implications of these new media and the power they hold to engage learners in new ways. Discusses historical overview of GS/VE with an emphasis on educational applications. Analyzes the distinctive features of GS/VE from different pedagogical, psychological (cognitive/emotional), social, and entertainment perspectives. Participants learn how to analyze the design of games, simulations, and virtual environments, creating evaluative criteria for the selection of products in educational environments.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
EDT	340	Designing Games for Impact	Introduces concepts, methods, techniques and issues associated with designing interactive, game-centered experiences that are developed through a lens of impact. As a cumulative project, students create and test a digital game or game-based experience that demonstrates understanding of impact models and learning science principles.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
EDT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDT	440	Creating and Marketing Mobile Apps	Focuses on conceptualizing, creating and marketing of apps for mobile devices.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only EDT 440 or EDT 494 (Creating and Marketing Mobile Apps)
EDT	460	Games, Technology and Society	Education, healthcare and social activism. Explores general theories about the relationship between technology and society using games as examples, as well as develops a better understanding of methods that take a systemic, contextualized approach to designing games for impact. Students play and analyze existing impact games as well as conduct a landscape analysis for an impact game on a topic of their own choosing.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Junior or Senior standing; Credit is allowed for only EDT 460 or 560
EDT	461	Understanding Games for Impact	Explores the nature of learning in and around games designed for entertainment as well as games designed intentionally for impact. Students gain familiarity with current research on course topics; develop a language for reflection on the cognitive, sociocultural and educational merits and drawbacks of game-centered learning environments; and gain new insights into the ways in which digital playspaces and pastimes shape how people think and learn. Develops the ability to analyze learning in games and game-related social contexts, using different theoretical perspectives and tools.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
EDT	462	Designing Games for Impact	Concepts, methods, techniques and issues associated with designing interactive, game-centered experiences that are developed through a lens of impact. As a cumulative project, students create and test a digital game or game-based experience that demonstrates understanding of impact models and learning science principles.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing

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EDT	463	Games for Impact: The Full Life Cycle	Presents an impact game publishing methodology covering the full life cycle and key considerations for impact game design, development and publishing as well as the unique challenges in making games for impact. Applies methodology to examine an existing impact game currently in development. Students collaboratively workshop an original impact game concept and publishing plan that harnesses the power of games to address a key 21st-century challenge.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing. Credit is allowed for only EDT 463 or EDT 563
EDT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	IND	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
EDT	501	Foundations and Issues in Educational Technology	Introduces educational technology. Examines accomplishments and issues in the field.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	502	Design and Development of Instruction	Design, development, and formative evaluation of objectives-based instructional materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	503	Instructional Media Design	Uses media selection, design, and production principles to prepare design specifications for solutions to instructional messages and products.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate
EDT	504	Development of Computer-Based Instruction	Systematic design, development, and formative evaluation of computer-based instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDT 502 with C or better
EDT	506	Educational Evaluation	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDT 502 with C or better
EDT	507	Trends in Performance Improvement	Introduces the field of human performance technology. Emphasizes the analysis of performance problems, their causes, and interventions.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDT 501 with B or better
EDT	523	Distance Education Theory and Practice	Explores development of distance learning principles by examining national and international systems and applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	524	Principles and Issues in K-12 Online Learning	Examines current issues, policies, and trends pertaining to K-12 Web-based teaching and learning. Actively explores research related to online learning, with a focus on virtual schooling and emerging best practices for effective online instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Practicing or licensed K-12 teacher
EDT	530	Technology Integration Methods across the Curriculum	Examines a constructivist approach to technology in education. Investigates technology as a catalyst for rethinking instructional goals and practices.	Y	LEL	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	540	Creating and Marketing Mobile Apps	Focuses on conceptualizing, creating and marketing of apps for mobile devices.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking): Credit is allowed for only EDT 494 (Concept, creating & mktg APPS), 540 or 594 (Concept, creating & mktg APPS)
EDT	545	Using the Internet in Education	Explores the Internet as an educational tool for research, inquiry-based learning, and online learning communities. Incorporates constructivist theory.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	560	Games, Technology and Society	The role and significance of digital games in society and the process of designing games for impact in areas such as education, healthcare and social activism. Explores general theories about the relationship between technology and society, using games as examples, as well as develops a better understanding of methods that take a systemic, contextualized approach to designing games for impact.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only EDT 460 or EDT 560

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EDT	561	Understanding Games for Impact	Explores the nature of learning in and around games designed for entertainment as well as games designed intentionally for impact. Students gain familiarity with current research on course topics; develop a language for reflection on the cognitive, sociocultural and educational merits and drawbacks of game-centered learning environments; and gain new insights into the ways in which digital playspaces and pastimes shape how people think and learn. Develops the ability to analyze learning in games and game-related social contexts, using different theoretical perspectives and tools.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only EDT 461 or EDT 561
EDT	562	Designing Games for Impact	Concepts, methods, techniques and issues associated with designing interactive, game-centered experiences that are developed through a lens of impact. As a cumulative project, students create and test a digital game or game-based experience that demonstrates understanding of impact models and learning science principles.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EDT 462 or EDT 562
EDT	563	Games for Impact: The Full Life Cycle	Focuses on the complete life cycle of impact games, from perceived need through design to evaluating impact. Highlights ethics of game-based learning, unintended consequences of impact interventions, and how to involve stakeholders in the design process. Students collaboratively workshop an original impact game concept and publishing plan to address a key 21st-century challenge.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only EDT 463 or EDT 563
EDT	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: EDT 501, 502, and 503 with C or better
EDT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: EDT 501, 502, and 503 with C or better
EDT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate
EDT	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
EDT	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	701	Research in Educational Technology	Review and analysis of research studies in educational technology. Methodology for designing, conducting, and reporting educational technology research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDT 501 and 502 with C or better
EDT	704	Emerging Technologies in Education	Examines the role and impact of emerging technologies in education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only EDT 591 (Emerging Technologies in Education) or 704
EDT	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDT 502 with C or better
EDT	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: EDT 501, 502, and 503 with C or better
EDT	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisites: EDT 701 with C or better
EDT	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EED	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
EED	309	Environmental Education Project	Covers topics in environmental education that assist students with being able to learn about and investigate their environment in order to make intelligent and informed decisions.	Y	LEL	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): minimum 45 hours; Credit is allowed for only EED 309 or EED 494 (Project Wild Aquatic) or EED 494 (Project Wet)

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EED	324	Social Studies in Elementary Schools	Provides strategies for integrating social studies content knowledge with other curricular areas. Addresses a variety of issues related to social studies instruction in the elementary school, with an emphasis on valuing diverse cultures and experiences within historical and geographical perspectives. Emphasizes meeting the academic and linguistic needs of all learners including English language learners. Explores instructional materials, technology tools and social studies programs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
EED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EED	396	Clinical Experience I	Applies course content in elementary education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Prerequisite(s): admission to the Professional Program
EED	397	Clinical Experience II	Applies course content in elementary education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Prerequisite(s): admission to the Professional Program
EED	411	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 411 or SCN 411
EED	411	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 411 or SCN 411
EED	411	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 411 or SCN 411
EED	411	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 411 or SCN 411
EED	412	Mathematics in Elementary Schools	Methods of teaching mathematics to all students at the K-8 level, instructional planning and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 412 or MTE 412 or SPE 410
EED	433	Language Method Management and Assessment	Theory on the social nature of oral and written language and congruent teaching, management and assessment practices. Emphasizes skills, strategies and dispositions for teaching 21st-century multimodal literacies to diverse learners including ELL with a focus on learners as creators of content, communicators, collaborators and global citizens.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
EED	478	Student Teaching: Elementary School (Grades 1-8)	Student teaching in elementary education classrooms grades 1-8: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-15		Prerequisite(s): admission to the Professional Program
EED	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
EED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
EED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EED	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
EED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): admission to the Professional Program
EED	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	511	Curriculum Theory and Instructional Planning	Contemporary curriculum theories. Curriculum as an interrelated entity. Process for instructional planning for student understanding and achievement.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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EED	521	Instructional Planning for the Diverse Classroom	Planning and delivering instruction; making adaptations for English language learners and students with special needs.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	524	Social Studies Methods and Assessment	Provides strategies for integrating social studies content knowledge with other curricular areas. Addresses a variety of issues related to social studies instruction in the elementary school, with an emphasis on valuing diverse cultures and experiences within historical and geographical perspectives. Emphasizes meeting the academic and linguistic needs of all learners including English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	526	Communication Arts in the Elementary School	Critical examination of school language arts teaching, focusing on theoretical assumptions regarding oral- and written-language development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	529	Science Methods and Assessment	Problems and trends of current programs. Development of a balanced and articulated science program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	531	Teaching with Educational Technology	Focuses on using technology in K-12 classrooms. Addresses the integration of technology in all curricular areas for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	537	Mathematics Methods and Assessment	Contemporary mathematics teaching. Content, materials, and approaches to instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate student
EED	567	Clinical Experience I	Applies course content in elementary education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	576	Clinical Experience II	Applies course content in elementary education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): EED 567; degree- or nondegree-seeking graduate student
EED	578	Student Teaching: Elementary School (1-8)	Student teaching in elementary education classrooms grades 1-8: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	579	Apprentice Teaching: Elementary Education (Grades 1-8)	Apprentice teaching in elementary school classrooms. Synthesized experience in classroom management, curriculum, instruction and assessment. Must be taken four times for a total of 12 semester hours.	N	PRA	Y	YGB	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	2-3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EED	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EEE	101	Introduction to Engineering Design	Introduces engineering design, teaming, engineering profession; computer models and programming; communication skills; design of electrical and computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	2		
EEE	120	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): degree-seeking student; Credit is allowed for only CSE 120 or EEE 120
EEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-3		
EEE	202	Circuits I	Principles for analyzing linear and nonlinear circuits. Uses SPICE and MATLAB. Design and measurement of linear analog electrical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): degree-seeking student; Pre- or corequisite(s): MAT 274 or 275 with C or better if completed; PHY 131 with C or better if completed

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	203	Signals and Systems I	Introduces continuous and discrete time signal and system analysis, linear systems, Fourier, and z-transforms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): degree-seeking student; EEE 202; AND MAT 242 with C or better or Pre- or corequisite(s): MAT 342 or 343 with C or better if completed
EEE	230	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming. Exception/interrupt handling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): degree-seeking student; CSE 100, 110, or 200; CSE 120 or EEE 120; Credit is allowed for only CSE 230 or EEE 230
EEE	241	Fundamentals of Electromagnetics	Vector analysis, differential operators, fourier analysis, scalar, vector fields, electro/magneto statics, time-varying fields, boundary value problems, dielectric, magnetic materials, Maxwell's equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): degree-seeking student; MAT 267 or 272 with C or better; MAT 274 or 275 with C or better; PHY 131 with C or better; Pre- or corequisite(s): EEE 202
EEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-4		
EEE	304	Signals and Systems II	Communication, signal processing, control systems, continuous, discrete transforms, sampling theorem, analog, digital modulation, filter design, signal processing applications, state space.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203
EEE	307	Signal Processing for Digital Culture	Signal processing for non-majors. Digital filters, Fourier and z transform, DFT and FFT, digital signal processing computing, interdisciplinary DSP applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): non-ECEE major; MAT 210; Credit is allowed for only EEE 307 or EEE 394 (Signal Analysis for the Digital Culture)
EEE	333	Hardware Design Languages and Programmable Logic	Develops digital logic with modern practices of hardware description languages. Emphasizes usage, synthesis of digital systems for programmable logic, VLSI.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 202
EEE	334	Circuits II	Design of analog and digital circuits. Diodes/BJTs/Mosfets. Digital and analog circuit building blocks. Fundamentals of mixed signal circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, BHSE undergraduate student or Computer Systems Engineering or Computer Systems Engineering (Information Assurance) student; EEE 202
EEE	335	Analog and Digital Circuits	Analog, digital microelectronic circuits and systems. Amplifiers, frequency response, gate sizing, timing analysis, sequential digital circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 334
EEE	341	Engineering Electromagnetics	Time-varying electromagnetic fields, waves in homogeneous and stratified media, transmission lines, waveguides and cavity resonators, radiation and antennas.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203; EEE 241
EEE	350	Random Signal Analysis	Probabilistic and statistical analysis as applied to electrical signals and systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; MAE 317 or pre- or corequisite: EEE 203; or Fulton Engineering graduate student
EEE	352	Properties of Electronic Materials	Schrodinger's wave equation, potential barrier problems, bonds of crystals, the band theory of solids, semiconductors, superconductor dielectric, and magnetic properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; CHM 114, 115, 116 or 118; EEE 241; PHY 241 with a C or better
EEE	360	Energy Systems and Power Electronics	Conventional and alternate energy sources for power systems, three-phase analysis, AC generators, transformers, induction, DC motors, power electronic speed control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 202; Pre- or corequisite(s): EEE 241
EEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-4		

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EEE	404	Real-Time DSP Systems	Digital signal processors, translating signals and systems concepts into real-time multimedia and communications applications, real-time algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; CSE 230 or EEE 230; EEE 203
EEE	407	Digital Signal Processing	Time and frequency domain analysis, difference equations, z-transform, FIR and IIR digital filter design, discrete Fourier transform, FFT, and random sequences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisites: Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203; MAT 342 or 343 with C or better
EEE	425	Digital Systems and Circuits	Digital logic gate analysis and design. Propagation delay times, fan out, power dissipation, noise margins. Design of MOS and bipolar logic families, including NMOS, CMOS, standard and advanced TTL, ECL, and BiCMOS. Inverter, combinational and sequential logic circuit design, MOS memories, VLSI circuits. Computer simulations using PSPICE.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 335
EEE	433	Analog Integrated Circuits	Analysis, design, and applications of modern analog circuits using integrated bipolar and field-effect transistor technologies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 335
EEE	434	Quantum Mechanics for Engineers	Angular momentum, wave packets, Schroedinger wave equation, probability, problems in one dimension, principles of wave mechanics, scattering, tunneling, central forces, angular momentum, hydrogen atom, perturbation theory, variational techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352
EEE	435	Fundamentals of CMOS and MEMS	Introduces basic CMOS processing and fabrication tools. Covers the fundamentals of thermal oxidation, CVD, implantation, diffusion, and process integration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352
EEE	436	Fundamentals of Solid-State Devices	Semiconductor fundamentals, pn junctions, metal-semiconductor contacts, metal-oxide-semiconductor capacitors and field-effect transistors, bipolar junction transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352
EEE	437	Optoelectronics	Basic operating principles of various types of optoelectronic devices that play important roles in commercial and communication electronics; light-emitting diodes, injection lasers, and photodetectors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 436
EEE	439	Semiconductor Facilities and Cleanroom Practices	Microcontamination, controlled environments, cleanroom layout and systems, modeling, codes and legislation, ultrapure water, production materials, personnel and operations, hazard management, advanced concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352
EEE	443	Antennas for Wireless Communications	Fundamental parameters; radiation integrals; wireless systems; wire, loop, and microstrip antennas; antenna arrays; smart antennas; ground effects; multipath.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 341
EEE	445	Microwaves	Waveguides; circuit theory for waveguiding systems; microwave devices, systems, and energy sources; striplines and microstrips; impedance matching transformers; measurements.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 341 (EEE 340)
EEE	448	Fiber Optics	Principles of fiber-optic communications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 341 (EEE 340)
EEE	455	Communication Systems	Signal analysis techniques applied to the operation of electrical communication systems. Introduction to and overview of modern digital and analog communications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 350
EEE	459	Communication Networks	Fundamentals of communication networks. Study of Seven-Layer OSI model. Focus on functionality and performance of protocols used in communication networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203; Corequisite(s): EEE 350
EEE	460	Nuclear Power Engineering	Radioactivity and decay. Radiation interactions and dose. Nuclear reaction, fission and fusion theory. Fission reactors, four factor formula, moderation. Nuclear power, TMI, Chernobyl. Nuclear fuel cycle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; CHM 114 or 116; MAT 274 or 275 with C or better; PHY 241 or 361 with C or better

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EEE	463	Electrical Power Plants	Generation of electric power using fossil, nuclear, and renewable, including solar, geothermal, wind, hydroelectric, biomass and ocean, energy sources. Power plant thermal cycle analysis. Cogeneration and combined cycles. Economics, operations, and design of electric power stations. Energy storage.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; CHM 114 or 116; MAE 240 (or ECE 340) or PHY 241 with C or better; MAT 274 or 275 with C or better
EEE	465	Photovoltaic Energy Conversion	Photovoltaics for production of electricity from solar energy. The grand energy challenge. Solar radiation and utilization. Fundamentals of semiconductors for photovoltaics: crystal structures, band theory, doping, carrier statistics, optical absorption, and p-n junctions. Principles of solar cells including loss mechanisms and design principles. Current solar cell technologies. Manufacturing of silicon solar cells. Solar modules, arrays and systems. Economic analysis of solar photovoltaic systems. Terawatt-scale deployment of solar cells.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352; Credit is allowed for only EEE 465 or 498: Solar Energy
EEE	470	Electric Power Devices	Analyzes devices used for short circuit protection, including circuit breakers, relays, and current and voltage transducers. Protection against switching and lightning over voltages. Insulation coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 360
EEE	471	Power System Analysis	Review of transmission line parameter calculation. Zero sequence impedance, symmetrical components for fault analysis, short circuit calculation, review of power flow analysis, power system stability, and power system control concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 360
EEE	472	Power Electronics and Power Management	Principles of switch mode power conversion, analysis, design and control of dc-dc converters, PWM rectifiers and inverters, power management, power electronics applications in information technology, renewable energy systems, motion control and lighting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203
EEE	473	Electrical Machinery	Operating principles, modeling and speed control of DC, brushless DC, and AC machines; power converters for DC and AC motors drives.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 360
EEE	480	Feedback Systems	Analysis and design of linear feedback systems. Frequency response and root locus techniques, series compensation, and state variable feedback.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203 or MAE 318 with C or better
EEE	481	Computer-Controlled Systems	Implements computer-based, embedded, control systems using MATLAB xPC Target toolbox. Small-scale, representative projects demonstrate theoretical issues and provide hands-on expertise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203 and EEE 230/CSE 230, or MAE 318
EEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student
EEE	488	Senior Design Laboratory I	Design process: research, concept, feasibility, simulation, specifications, benchmarking, and proposal generation. Technical communications and team skills enrichment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3	L	Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; ENG 102, 105 or 108, EEE 241; EEE 334; EEE 350; three courses from the following list: EEE 304, 333, 335, 341, 352 or 360
EEE	489	Senior Design Laboratory II	Implement, evaluate, and document EEE 488 design. Social, economic, and safety considerations. Technical communications and team skills enrichment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3	L	Prerequisite(s): Fulton ECEE, SEMTE, or BHSE senior or post-bacc undergraduate student; EEE 488
EEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-6		Prerequisite(s): Barrett Honors Electrical Engineering BSE senior
EEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	0-6	L	Prerequisite(s): Barrett Honors Electrical Engineering BSE senior
EEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 433
EEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-7		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student

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EEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-3		Prerequisite(s): Electrical Engineering BSE senior
EEE	501	Overview of Electrical Engineering	Electromagnetic fields, electrical circuit analysis, transmission lines, communications systems, electromagnetic interference and compatibility, computational techniques and electromagnetic software	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	505	Time-Frequency Signal Processing	Joint time-frequency analysis of time-varying signals and systems; linear and quadratic time-frequency representations; applications in current areas of signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	506	Digital Spectral Analysis	Principles and applications of digital spectral analysis, least squares, random sequences, parametric, and nonparametric methods for spectral estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	507	Multidimensional Signal Processing	Processing and representation of multidimensional signals. Design of systems for processing multidimensional data. Introduces image and array processing issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	508	Digital Image and Video Processing and Compression	Fundamentals of digital image perception, representation, processing, and compression. Emphasizes image coding techniques. Signals include still pictures and motion video.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	509	DSP Algorithms and Software	Linear systems review, digital filter design, software aspects, DFT, FFT, random signals, programming aspects, applications projects, MATLAB and Java simulations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	510	Multimedia Signal Processing	Speech/audio coding algorithms. LPC, CELP, MPEG, Cell phone, DTV, cinema, and surround sound standards. MPEG/JPEG introduction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	511	Artificial Neural Computation	Networks for computation, learning function representations from data, learning algorithms and analysis, function approximation and information representation by networks, applications in control systems and signal analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	518	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit for only MSE 518, EEE 518, MAE 518, MSE 475, or CHE 518

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EEE	521	Low-Power Bioelectronics	Begins with fundamental theory and techniques for low-power analog circuit design especially subthreshold CMOS and BJT circuits (e.g., translinear circuits), then moves to biomedical applications and bio-inspired systems focused upon neuromorphic circuits. Also touches on concepts such as wireless challenges for implants, energy harvesting and electrochemistry. Students have the opportunity to have their final projects fabricated in a commercial CMOS process.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit is allowed for only EEE 521 or EEE 598 (Low Power Bioelectronics)
EEE	523	Advanced Analog Integrated Circuits	Analysis and design of analog integrated circuits: analog circuit blocks, reference circuits, operational-amplifier circuits, feedback, and nonlinear circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	524	Communication Transceiver Circuits Design	Communication transceivers and radio frequency system design; fundamentals of transceivers circuits; RF, IF, mixers, filters, frequency synthesizers, receivers, CAD tools, and lab work on IC design stations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	525	VLSI Design	Analysis and design of Very Large Scale Integrated (VLSI) circuits. Physics of small devices, fabrication, regular structures, and system timing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	526	VLSI Architectures	High throughput and low-power VLSI architectures for signal processing. Array processor systems; data path design and optimization; memory design; high-level synthesis; low-power design at system level, algorithm level, and architecture level.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	527	Analog to Digital Converters	Detailed introduction to the design of Nyquist rate, CMOS analog to digital converters. Requires knowledge of analog integrated circuits (analog circuit blocks, reference circuits, operational-amplifier circuits, feedback, and nonlinear circuits) to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	528	Introduction to Microelectromechanical Systems	Microelectromechanical systems and devices emphasizing analytical and numerical modeling of actuation and sensing mechanisms with an overview of fabrication technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	530	Advanced Silicon Processing	Thin films, CVD, oxidation, diffusion, ion-implantation for VLSI, metallization, silicides, advanced lithography, dry etching, rapid thermal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	531	Semiconductor Device Theory I	Transport and recombination theory, pn and Schottky barrier diodes, bipolar and junction field-effect transistors, and MOS capacitors and transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	532	Semiconductor Device Theory II	Advanced MOSFETs, charge-coupled devices, solar cells, photodetectors, light-emitting diodes, microwave devices, and modulation-doped structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
EEE	533	Semiconductor Process/Device Simulation	Process simulation concepts, oxidation, ion implantation, diffusion, device simulation concepts, pn junctions, MOS devices, bipolar transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	534	Semiconductor Transport	Carrier transport in semiconductors. Hall effect, high electric field, Boltzmann equation, correlation functions, and carrier-carrier interactions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	535	Electron Transport in Nanostructures	Nanostructure physics and applications. 2-D electron systems, quantum wires and dots, ballistic transport, quantum interference, and single-electron tunneling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	536	Semiconductor Characterization	Measurement techniques for semiconductor materials and devices. Electrical, optical, physical, and chemical characterization methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	537	Semiconductor Optoelectronics	Electronic states in semiconductors, quantum theory of radiation, absorption processes, radiative processes, nonradiative processes, photoluminescence, and photonic devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	538	Optoelectronic Devices	Provides graduate students with detailed theory and practical knowledge of semiconductors materials and optoelectronic devices such as light-emitting diodes, lasers, photodetectors and solar cells. Also discusses the applications of these devices. Offers not only classroom lectures but also demonstration of real-world experiments in research laboratories at ASU.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit is allowed for only EEE 538 or EEE 598 (Optoelectronic Devices)
EEE	539	Intro Solid-State Electronics	Crystal lattices, reciprocal lattices, quantum statistics, lattice dynamics, equilibrium, and nonequilibrium processes in semiconductors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	540	Fast Computational Electromagnetics	Method of moments, finite difference time-domain, finite element methods implemented using fast algorithms (wavelets, FMM, Nystrom) to gain high efficiency.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	541	Electromagnetic Fields and Guided Waves	Polarization and magnetization; dielectric, conducting, anisotropic, and semiconducting media; duality, uniqueness, and image theory; plane wave functions, waveguides, resonators, and surface guided waves.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	543	Antenna Analysis and Design	Impedances, broadband antennas, frequency independent antennas, miniaturization, aperture antennas, horns, reflectors, lens antennas, and continuous sources design techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
EEE	544	High-Resolution Radar	Fundamentals; wideband coherent design, waveforms, and processing; stepped frequency; synthetic aperture radar (SAR); inverse synthetic aperture radar (ISAR); imaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	545	Microwave Circuit Design	Analysis and design of microwave attenuators, in-phase and quadrature-phase power dividers, magic tees, directional couplers, phase shifters, DC blocks, and equalizers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	546	Advanced Fiber Optics	Theory of propagation in fibers, couplers and connectors, distribution networks, modulation, noise and detection, system design, and fiber sensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	547	Microwave Solid-State Circuit Design I	Applies semiconductor characteristics to practical design of microwave mixers, detectors, limiters, switches, attenuators, multipliers, phase shifters, and amplifiers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	548	Coherent Optics	Diffraction, lenses, optical processing, holography, electro-optics, and lasers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	550	Transform Theory and Applications	Introduces abstract integration, function spaces, and complex analysis in the context of integral transform theory. Applications to signal analysis, communication theory, and system theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	551	Information Theory	Entropy and mutual information, source and channel coding theorems, applications for communication and signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	552	Digital Communications	Complex signal theory, digital modulation, optimal coherent and incoherent receivers, channel codes, coded modulation, Viterbi algorithm.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	553	Coding and Cryptography	Introduces algebra, block and convolutional codes, decoding algorithms, turbo codes, coded modulation, private and public key cryptography.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	554	Random Signal Theory	Applies statistical techniques to the representation and analysis of electrical signals and to communications systems analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	556	Detection and Estimation Theory	Combines the classical techniques of statistical inference and the random process characterization of communication, radar, and other modern data processing systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	557	Broadband Networks	Physics of wireless and optical communications. Broadband multiplexing and switching methods. Blocking and queuing analysis. Network optimization, routing, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	558	Wireless Communications	Cellular systems, path loss, multipath fading channels, modulation and signaling for wireless, diversity, equalization coding, spread spectrum, TDMA/FDMA/CDMA.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	559	Wireless Networks	Design principles of cellular networks. Multiple access control protocols for wireless systems. Wireless routing and TCP/IP. Mobile management. Call admission control and resource allocation (e.g., power control and rate control). Wireless security. Future-generation wireless networks. A previous course in random signal theory is required to be successful in this class.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit is allowed for only CSE 591 (Wireless Networks), EEE 559 or 598 (Wireless Networks)
EEE	562	Nuclear Reactor Theory and Design	Principles of neutron chain reacting systems. Neutron diffusion and moderation. One-, two-, and multigroup diffusion equation solution methods. Heterogeneous reactors. Nuclear fuel steady-state performance. Core thermal-hydraulics. Core thermal design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	563	Nuclear Reactor System Dynamics and Diagnostics	Time-dependent solution to neutron diffusion equation. Reactor kinetics and reactivity changes. Dynamics, stability, and control of reactor systems. Modeling neutronic and thermal processes. System characterization in time and frequency domains. Reactor surveillance and diagnostics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	564	Interdisciplinary Nuclear Power Operations	Nuclear power plant systems. Studies interrelationship and propagation of effects that systems and design changes have on one another, especially in relation to nuclear power plant safety and operations. Case studies and design projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	565	Solar Cells	Introduction to the generation and utilization of electricity from solar energy. Exploration of the science and engineering of direct conversion (photovoltaics), including the design, fabrication, and operation of solar cells, and the construction and performance of solar cell modules. Prior knowledge of properties of electronic materials is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	571	Power System Transients	Simple switching transients. Transient analysis by deduction. Damping of transients. Capacitor and reactor switching. Transient recovery voltage. Travelling waves on transmission lines. Lightning. Protection of equipment against transient overvoltages. Introduces computer analysis of transients.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	572	Advanced Power Electronics	Analyzes device operation, including thyristors, gate-turn-off thyristors, and transistors. Design of rectifier and inverter circuits. Applications such as variable speed drives, HVDC, motor control, and uninterruptible power supplies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
EEE	573	Electric Power Quality	Sinusoidal waveshape maintenance; study of momentary events, power system harmonics, instrumentation, filters, power conditioners, and other power quality enhancement methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	574	Computer Solution of Power Systems	Algorithms for digital computation for the Newton and fast-decoupled power flow problem, and fault analysis. Sparse matrix and vector programming methods, creation of elimination trees, network equivalencing, solution of the least squares problem, introduction to state estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	575	Power System Stability	Dynamic performance of power systems with emphasis on stability. Modeling of system components and control equipment. Analysis of the dynamic behavior of the system in response to small and large disturbances. Knowledge of EEE470, 471 and 473 (or equivalents) is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	576	Power System Dynamics	Dynamic performance of power systems with emphasis on control. Modeling of control equipment, FACTS devices, wind generators, and nonlinear loads. Design of power system stabilizers. Prior knowledge of electric power devices, power system analysis, and electrical machinery is required to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit is allowed for only EEE 576 or 598 (Power System Dynamics)
EEE	577	Power Engineering Operations and Planning	Economic dispatch, unit commitment, dynamic programming, power system planning and operation, control, generation modeling, AGC, and power production.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	579	Power Transmission and Distribution	High-voltage transmission line electric design; conductors, corona, RI and TV noise, insulators, clearances. DC characteristic, feeders voltage drop, and capacitors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	581	Filtering of Stochastic Processes	Modeling, estimation, and filtering of stochastic processes, with emphasis on the Kalman filter and its applications in signal processing and control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	582	Linear System Theory	Controllability, observability, and realization theory for multivariable continuous time systems. Stabilization and asymptotic state estimation. Disturbance decoupling, noninteracting control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	586	Nonlinear Control Systems	Stability theory, including phase-plane, describing function, Liapunov's method, and frequency domain criteria for continuous and discrete, nonlinear, and time-varying systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

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EEE	587	Optimal Control	Optimal control of systems. Calculus of variations, dynamic programming, linear quadratic regulator, numerical methods, and Pontryagin's principle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	588	Design of Multivariable Control Systems	Practical tools for designing robust MIMO controllers. State feedback and estimation, model-based compensators, MIMO design methodologies, CAD, real-world applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	589	Linear Algebra and Convex Optimization	Linear algebra and convex optimization. Vector spaces, matrix algebra, linear programming, Lagrange multipliers, Karush-Kuhn-Tucker (KKT) conditions, duality theory and algorithms for convex optimization. Newton's method, gradient and steepest descent methods. Algorithms for unconstrained, equality constrained and inequality constrained problems, which include interior point methods. Applications to approximation and data fitting and some geometric problems. Applications to signal processing, communications and control systems. Background in linear algebra necessary to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit allowed for only EEE 589 or 598: Advanced Linear Algebra & Opt
EEE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Master of Engineering or Electrical Engineering MS, MSE or PHD students
EEE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Electrical Engineering Program	1		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
EEE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	606	Adaptive Signal Processing	Principles and applications of adaptive signal processing, adaptive linear combiner, Wiener least-squares solution, gradient search, performance surfaces, LMS/RLS algorithms, block time/frequency domain LMS.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	607	Speech Coding for Multimedia Communications	Speech and audio coding algorithms for applications in wireless communications and multimedia computing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	625	Advanced VLSI Design	Practical industrial techniques, circuits, and architectures appropriate to high-performance and low-power digital VLSI designs such as microprocessors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	627	Oversampling Sigma-Delta Data Converters	Introduces design and analysis of sigma delta oversampled data converters from an IC design perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	631	Advanced Optoelectronics	Principles of heterojunctions and quantum well structures, band lineups, optical, and electrical properties. Introduces heterojunction devices. Knowledge of transport and recombination theory, pn and Schottky barrier diodes, bipolar and junction field-effect transistors, and MOS capacitors and transistors. is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	641	Advanced Electromagnetic Field Theory	Cylindrical wave functions, waveguides, and resonators; spherical wave functions and resonators; scattering from planar, cylindrical, and spherical surfaces; Green's functions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	643	Advanced Topics in Electromagnetic Radiation	High-frequency asymptotic techniques, geometrical and physical theories of diffraction (GTD and PTD), moment method (MM), radar cross section (RCS) prediction, Fourier transforms in radiation, and synthesis methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
EEE	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	686	Adaptive Control	Main topics covered: adaptive identification, convergence, parametric models, performance and robustness properties of adaptive controllers, persistence of excitation, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Electrical Engineering MS, MSE, or PHD student or Master of Engineering student
EEE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	731	Advanced MOS Devices	Threshold voltage, subthreshold current, scaling, small geometry effects, hot electrons, and alternative structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
EEE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Electrical Engineering PhD students
EEE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-15		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Electrical Engineering Program	1		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Electrical Engineering Program	1-15		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EET	406	Control System Technology	Control system components, analysis of feedback control systems, stability, performance, and application.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3-4		Pre-requisites: EST 310; MAT 266; Credit for EET 506 or EET 406
EET	408	Digital Real-Time Control	Analysis, simulation, and design of discrete systems. Approach taken in this class begins with the analysis, simulation and design of a continuous system, which yields an s-based, transfer function compensator. Then, this compensator is transformed into a z-based transfer function, which can be realized with a difference equation in a microcontroller.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EET 406; Credit is allowed for only EET 408 or 494 (Digital Realtime Control)
EET	430	Instrumentation and Measurement Systems	Instrumentation and measurement techniques, sensors operating principles. Signal and error analysis. Signal conditioning and data acquisition.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 310; Credit is allowed for only EET 430 or 530
EET	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EET	506	System Dynamics and Control	Time, frequency, and transform domain analysis of physical systems. Transfer function analysis of feedback control systems performance and stability. Compensation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EET 406 or EET 506
EET	508	Digital Real-Time Control	Sample data control techniques and applications to process control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EET	530	Electronic Test Systems and Applications	Analysis, design, and application of electronic test equipment, test systems, specifications, and documentation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate (degree or non-degree) students; Credit is allowed for only EET 430 or EET 530

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EET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EGR	101	Foundations of Engineering Design Project I	Introduces engineering as a profession, critical thinking in engineering design and modeling, team dynamics, engineering communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		
EGR	102	Foundations of Engineering Design Project II	Development and experimental verification of engineering models, engineering design, data acquisition, critical analysis of data, introduction to CADD, engineering communications.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Corequisite(s): EGR 101; MAT 170 or higher; Pre- or corequisite(s): ENG 101, 105, 107, or 111
EGR	104	Critical Inquiry in Engineering	Critical thinking. Systematic evaluation of information as input to well-informed decision making. Close reading and substantive writing in a technical setting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3	L	Prerequisite(s): ENG 101, 105 or 107
EGR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EGR	201	Use-Inspired Design Project I	Design, professionalism, and engineering practice developed in a multidisciplinary project setting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 102; MAT 265 or 270 with C or better
EGR	202	Use-Inspired Design Project II	Design, problem solving, and engineering practice developed in a multidisciplinary project setting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 201 with C or better
EGR	216	Engineering Electrical Fundamentals	Introduces modeling of electrical systems using mathematical and scientific principles. Covers electrical circuit analysis techniques including Kirchhoff's and Ohm's laws, series and parallel circuit elements, equivalent elements and circuits, and nodal analysis. These techniques are developed for DC, AC, and transient conditions. Also introduces the basic structure of a modern electronic measurement system and relates this structure to measurement accuracy, precision and resolution.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only EGR 216 or EGR 294 (Engineering Fundamentals I)
EGR	217	Engineering Mechanics Fundamentals	Provides a foundation in the theory and principles of statics and dynamics. Examines the effect of forces acting on particles and rigid bodies. Vector mechanics is used extensively. Statics addresses the topics of equilibrium in two and three dimensions, to include distributed loads, trusses, frames, friction and cables. Dynamics addresses kinematics, including translating and rotating reference frames, and two-dimensional kinetics methods of force-acceleration, work-energy, and impulse-momentum.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): PHY 121 with C or better; Credit is allowed for only EGR 217 or EGR 294 (Engineering Fundamentals II)
EGR	218	Materials and Manufacturing Processes	Applies material properties and manufacturing processes to the design and fabrication of engineered artifacts.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): CHM 113 or 114 with C or better; Credit is allowed for only EGR 218 or EGR 294 (Engineering Materials & Manufacturing)
EGR	219	Computational Modeling of Engineering Systems	Introduces computing that develops software to find solutions to engineering problems. Students write and document code to solve problems in data acquisition, modeling of physical systems, and optimization.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Credit is allowed for only EGR 219 or 294 Computational Modeling
EGR	240	CADD and Solid Modeling	Uses 3-D solid modeling software to model mechanical parts and produce valid engineering drawings, including use of geometric dimensioning and tolerancing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		
EGR	280	Engineering Statistics	Applications-oriented introduction to statistics with computer-based experience using statistical software for formulating and solving engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3	CS	Prerequisite(s): MAT 265 or 270 with C or better
EGR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EGR	301	Concentration Project I	Design, communication, and critical thinking developed in a project setting based on selected concentration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MAT 267 or 272 with C or better
EGR	302	Concentration Project II	Design, engineering practice, and communication developed in a project setting based on selected concentration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 301 with C or better
EGR	303	Mechanical Systems Project I	Analyze, design, implement and characterize a mechanical system through an in-depth mechanical system design project. Project includes modeling, analysis and measurement of the dynamic behavior of the mechanical system. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 217 with C or better; EGR 218 with C or better; EGR 219 with C or better
EGR	304	Electrical Systems Project I	Analyze, design, implement and debug an electrical or electromechanical system through an in-depth electrical system design project. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 216 with C or better; EGR 219 with C or better

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EGR	305	Robotics Systems Project I	Analyze, design, implement and debug a robotic electromechanical system through an in-depth robotic system design project. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 216 with C or better; EGR 219 with C or better
EGR	306	Automotive Systems Project I	Analyze, design, implement and verify an automotive system through an in-depth design project. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 217 with C or better; EGR 219 with C or better
EGR	307	Humanitarian Engineering Project I	Analyzes, designs, implements and characterizes an engineered system that addresses a humanitarian objective. Project includes modeling, analysis and measurement of the behavior of the system. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 217 with C or better; Pre- or corequisite(s): EGR 321
EGR	313	Mechanical Systems Project II	Applies design principles to conceptualize, implement and characterize a fluid and/or thermodynamic system in a project setting. Project emphasizes communication with project stakeholders; applying an appropriate design approach in the context of a fluid and/or thermodynamic system; critical thinking in developing system specifications and evaluating a prototype relative to these specifications; and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 217 with C or better; EGR 218 with C or better, EGR 340 with C or better
EGR	314	Electrical Systems Project II	Applies design principles to conceptualize, implement and characterize an electrical or electromechanical system in a project setting. Project emphasizes communication with project stakeholders; applying a human-centered design approach in the context of an electrical system; critical thinking in developing system specifications and evaluating a prototype relative to these specifications; and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 304 with C or better; EGR 330 or 333 with C or better
EGR	315	Robotic Systems Project II	Applies design principles to conceptualize, implement and characterize an electromechanical robotic system in a project setting. Project emphasizes communication with project stakeholders; applying a human-centered design approach in the context of a robotic system; critical thinking in developing system specifications and evaluating a prototype relative to these specifications; and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 305 with C or better; EGR 455 with C or better
EGR	316	Automotive Systems Project II	Applies design principles to conceptualize, implement and characterize an automotive system in a project setting. Project emphasizes communication with project stakeholders; applying a human-centered design approach in the context of an automotive system; critical thinking in developing system specifications and evaluating a prototype relative to these specifications; and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 306 with C or better; EGR 340 with C or better
EGR	317	Humanitarian Engineering Project II	Applies design principles to conceptualize, implement and characterize an engineered system that addresses a humanitarian objective in a project setting. Project emphasizes communication with project stakeholders, applying an appropriate design approach, thinking critically in developing system specifications and evaluating a prototype relative to these specifications, and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 307 with C or better; EGR 371 with C or better
EGR	321	Water Resource Systems	Fundamentals of water supply and surface water hydrology in the context of the engineering, design and analysis of water resources systems. Places particular emphasis on those aspects of water systems that apply in the context of the developing world as well as in the context of environmentally sustainable systems. Course delivery is designed for engineering students with a broad understanding of engineering fundamentals but without specialist civil engineering knowledge.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 217 with C or better, EGR 219 with C or better
EGR	324	Structural Design for Land Development	Covers essential structural engineering concepts including loads, materials, constraints, specifications, optimization, and the design environment; structural modeling, analysis, and design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 221; EGR 222
EGR	325	Water and Wastewater Treatment	Essential elements of aquatic chemistry, water pollution and water and wastewater treatment technologies. Provides a fundamental basis for understanding sustainable water and wastewater treatment processes and their design considerations. Includes critical evaluation of contemporary issues concerning our water environment and the associated regulatory framework to strengthen and emphasize importance of adequate practices used in operation and design of engineered water and wastewater treatment systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): CHM 113 with C or better; EGR 321 with C or better
EGR	330	Design of Electrical Systems	Overview of electrical system architectures and components used in design of smart electrical and electromechanical systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216 with C or better; EGR 219 with C or better
EGR	333	Distributed Circuits and Systems	Analysis and modeling of the generation and distribution of electrical signals and energy across distributed systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 235; MAT 274 or 275

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EGR	334	Analog-Digital Interface	Signal processing and operational tools that lie between sensors and digital data processors developed from a system perspective. Includes selection, deployment and analysis of sensors, analog signal processors and converters as well as their appropriate power supplies and the impact of all these components on system performance and cost. Uses experimental and simulation tools to demonstrate typical-use cases for medical, military, industrial and consumer applications.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216 with C or better; EGR 219 with C or better
EGR	338	Microcontrollers in Smart Systems	Microcontroller implementation of smart systems. Microcontrollers applied to control dynamic systems, including the interface with sensors and actuators as well as developing simple open- and closed-loop control laws.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 330 with C or better; EGR 334 with C or better
EGR	339	Fabrication of Electrical Systems	Overview of electrical fabrication techniques; design cycle time, cost, quality, reliability, product life cycle, and testing; programmable versus hard-wired implementation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 235; MAT 274 or 275
EGR	340	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli's equation, applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MAT 266 or 271 with C or better; PHY 121 with C or better; Credit is allowed for only EGR 340 or MET 340
EGR	343	Mechanics of Solid Materials	Studies strength and physical performance, such as deformations and load-carrying capacity, of natural and artificial solid structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 217 with C or better; EGR 218 with C or better
EGR	363	Automotive Powertrains and Thermal Systems	Internal combustion engine (ICE) design in the context of automotive systems and heat management in vehicle systems, including thermal design of engine and transmission cooling systems. Operating characteristics and efficiencies of the ICE, terminology and abbreviations used in the automotive industry, contemporary fuels and the latest hybrid technology, CAFE standards and EPA vehicle emissions standards, lubrication systems and fluids appropriate for a given design, and current and future standards requirements.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 340 with C or better
EGR	371	Best Practices for Humanitarian Engineering	Technological and process-based best practices for engineering students to gain applied competence in low-cost and low-tech appropriate methods and technologies for small-scale technical problems in local and international humanitarian development contexts.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Fulton Schools of Engineering major; junior or senior standing
EGR	388	Engineering Materials And Semiconductor Science	Semiconductor technology operates at the limits of our understanding of many sciences--materials, optics, mechanics, plasma chemistry and charge movement. As well as examining the concepts, considers how they interact within tight constraints and how this affects continuous production, future development options and trouble shooting.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: Engineering BSE or Manufacturing Engineering BS major; Junior standing
EGR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EGR	401	Professional Design Project I	First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3	L	Prerequisite(s): EGR 302 (or EGR 303 and 313) or EGR 314 or 315 or 316 or 317 (or MFG 308 and 318) with C or better
EGR	402	Professional Design Project II	Second half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 401 with C or better taken within one previous term
EGR	425	Unit Treatment Technologies and Systems	Addresses fundamental concepts of unit treatment technologies and the scientific and engineering principles that govern the proper design, operation and management of these systems. Course is divided into two overlapping major categories of unit treatment technologies: air-pollution controls and soils/groundwater remediation. Enhances understanding of the unit treatment technologies by reviews of dimensional analysis, mass transport mechanisms, mass balances, modeling, kinetics and reactors.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 325 with C or better
EGR	426	Integrated Solid Waste Systems	Addresses the fundamental concepts of solid waste, pathways and transformation processes following the from cradle-to-grave approach. Follows the life of the solid waste from point of generation, reclamation and treatment to point of disposal. Emphasizes describing the present solid waste systems as an integrative set of functional units. Considers physical, chemical and biological transformations of the solid waste, together with the existing technologies and practices for management, treatment and disposal of the solid waste. Includes a specific overview of sustainable solid waste practices such as waste minimization, pollution prevention, reuse and reclamation, together with current domestic and foreign regulations. Addresses planning and design of solid waste operations and facilities.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 325 with C or better

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EGR	427	Principles of Hazardous Waste and Materials	Trains future environmental engineers and professionals in fundamental hazardous waste and materials concepts. Addresses regulatory requirements; materials hazard communication; material safety concepts; types of hazardous waste/materials (chemical, radioactive, and infectious); risk assessment and routes of exposure; personal protective equipment; prudent practices; treatment; storage and disposal of hazardous waste/materials through the lens of the cradle-to-grave concept. Gains knowledge about the hazardous waste enforcement processes.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 325 with C or better
EGR	430	Design, Fabrication, and Architecture of Electronic Devices	Comprehensive introduction to the design, operation, production and application of the most common semiconductor devices and categories of integrated circuit. Demonstrates the close interaction among materials, semiconductor physics and circuit performance, especially in terms of the applications and economics of digital systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 330 with C or better
EGR	431	Power Management	Devices and techniques to supply and manage power in electrical systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 330 with C or better
EGR	432	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 340 with C or better; Credit is allowed for only EGR 432 or MET 432
EGR	433	Transforms and Systems Modeling	State-space and transform-domain modeling and analysis of electrical and electromechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216 with C or better; EGR 217 with C or better; MAT 274 or 275 with C or better; Pre- or corequisite(s): MAT 342 or 343 with C or better if completed
EGR	438	RF Systems	Applies fundamental principles of electromagnetics to design and analyze engineered RF systems and applications. Introduces and describes transmission lines, Smith Charts, s-parameters, waves in free space, reflection and refraction and their use in engineering systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): PHY 331; Credit is allowed for only EGR 438 or EGR 494 (Fundamentals of RF)
EGR	444	Engineering Design	Applies fundamentals of mechanics in analysis and synthesis of machine components and systems, with emphasis on stress and failure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 343 with C or better
EGR	445	Mechanical Engineering Systems	Design and modeling of multicomponent electromechanical systems. Applications of computers, controllers, electronics using system hardware and software development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 303 or EGR 313
EGR	455	Robotic Systems I	Analysis and design of robotic systems focusing on kinematics, dynamics, coordinate transformations and modeling.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 217 with C or better; EGR 219 with C or better; Credit is allowed for only EGR 455 or EGR 394 (Robotics I)
EGR	456	Robotic Systems II	Design of robotic systems focusing on dynamics, modeling and controlling a robot.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 455 with C or better; Credit is allowed for only EGR 456 or EGR 494 (Robotics II)
EGR	463	Vehicle Electrical Systems and Hybrid Systems	Basic theory and operation of hybrid electric drive systems of motor vehicles. Covers fundamentals of next generation electrification including: batteries technology, charging, power electronic operation. Emphasizes the principals of HEV energy management strategies and HEV modeling fundamentals.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216 with C or better; EGR 363 or EGR 394 (Intro to Concepts in Automotive Engineering) with C or better
EGR	465	Ground Vehicle Dynamics	Basic understanding of vehicle dynamics principles and a sufficient knowledge to analyze vehicle dynamic performance and associated chassis system design concepts. Understanding of various dynamical equations of motion governing vehicle behavior as well as computer simulation.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 363 or EGR 394 (Intro to Concepts in Automotive Engineering) with C or better
EGR	476	Energy Infrastructures	Comprehensive study of sustainable energy conversion systems. Students learn to quantify and measure the concepts of sustainability of energy resources within the framework of the laws of thermodynamics. Covers conventional energy sources for primary power (fossil fuels, nuclear and hydroelectric); their sustainability, resource level and environmental impact. Covers the science and technology of heat engines and direct conversion methods. Considers conservation and storage.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 340 with C or better
EGR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		
EGR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
EGR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student

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EGR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EGR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-3		
EGR	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	520	Engineering System Design and Analysis	Develops a technical strategy to translate a user's operational needs into a physical solution to comply with specifications and requirements. Presents an approach for organizing, analyzing, designing, developing, verifying and validating systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	525	Lean Systems	Creates a framework and model of lean engineering and a methodology for applying lean practices to systems engineering as a basis for lean product development.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	530	Principles of Systems Engineering	Engineering is increasingly about complex systems. Addresses scale, scope and complexity increase that engineers need to consider to bring together technical and social issues in a highly integrated way as they design flexible, adaptable, robust systems that can be easily modified and reconfigured to satisfy changing requirements and new technological opportunities.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	535	Engineering Innovation and Entrepreneurship	Provides knowledge of innovation and entrepreneurship practices and experience in the application of engineering systems innovation within an entrepreneurial setting of driving a product or process to successful launch. Includes protection of intellectual property and contractual relations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	565	Qualitative Methods for Engineering Education Research	Provides a deep, empirical exposure to interpretive research methods in engineering education research.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	570	Capstone Design	Comprehensive project experience based on cumulative knowledge and skills gained in earlier course work. Small-group project designing, building, evaluating and analyzing components, assemblies and systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EGR 530
EGR	572	Quantitative Methods for Engineering Education Research	Specific quantitative analysis techniques used in the field of engineering education, with special focus on instrument design, ANOVA and multiple regression. Prior coursework or experience with basic statistical techniques is necessary to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Corequisite(s): EGR 673
EGR	574	Engineering Education Systems in Context	Provides a systems understanding of current trends in engineering education research to engage engineering education research graduate students with the latest developments in the field in which they will situate their research projects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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EGR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	602	Principles of Independent Research	Practice of key components of independent research that include project planning, literature survey, interview, data collection and analysis, proposal development, technical writing and presentation.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Engineering PhD major
EGR	608	Advanced Simulation	Simulation has a central role in design, operation, optimization and evolution of complex systems. There are many tools but they have a common need for rigorous science/math, parameterized models and realistic validation. Uses and compares five common platforms.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Engineering PhD major
EGR	611	Complex Engineering Systems	Advanced concepts in design and evaluation of engineering systems: subsystems, systems architectures and seamless integration of subsystems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Engineering PhD major
EGR	671	Applications of Qualitative Methods for Engineering Education Research	Provides a deep, situated exposure to making and handling data in qualitative engineering education research projects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 565; PhD standing
EGR	673	Applications of Quantitative Methods for Engineering Education Research	Applies quantitative analysis techniques to an engineering education research project. Specific focus on data collection, instrument development, and ANOVA/regression analysis techniques. Prior coursework or experience with basic statistical techniques is necessary to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): PhD standing; Corequisite(s): EGR 572
EGR	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ELL	504	Instructional Design for Culturally and Linguistically Diverse Students	Provides a foundation in instructional design to meet the academic and linguistic needs of culturally and linguistically diverse students, with a focus on English language learners.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BLE 404 or ELL 504 or SPE 404
ELL	515	Structured English Immersion (SEI) Methods	Addresses the role of language and culture in teaching, program types, and specific SEI strategies for teaching English Language Learners (ELLs).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ELL	516	Advanced SEI Methods for ELLs	More fully prepares teachers for linguistically diverse classrooms in which there are students learning through SEI methodology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	501	Environmental Life Sciences: Grand Challenge: Global Climate Change	Introduces first-year graduate students to a range of fields related to the Environmental Life Sciences graduate program. Co-instructed by an interdisciplinary faculty team, combines overview lectures and active discussion of current literature in the fields of inquiry. Culminates in synthetic collaborative research proposals on topics that foster transdisciplinary approaches to environmental life science questions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	502	Environmental Life Sciences: Field Camp	Combines lecture, field, and laboratory components; provides opportunities to develop field skills relevant to current questions in environmental life science, and to carry out a wide range of observations and measurements in natural systems. Instructed by an interdisciplinary faculty team. Travel out of the country is required and students need to be in possession of a valid passport.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: ELS 501
ELS	535	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning and the provisioning of ecosystem services; use of economic and other social-science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ELS 535 or SOS 535
ELS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ELS	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ELS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	501	Sustainability Leadership Workshop I	Formally takes students into the four learning threads of the EMSL program and the ASU brand of sustainability. Hands-on collaboration and group time with peer cohort members, field trips and deep diving into discussion, and application of sustainability theories into real-world scenarios. Sustainability speakers and practitioners engage students in critical thought.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	1		Prerequisite(s): Executive Masters for Sustainability Leadership major
EMS	502	Global Context I	Leaders in any organization face an increasingly connected and transparent world where social and environmental issues must be weighed in everyday decisions. Explores iconic sustainability issues and trends and their impact on their organization, institutions, communities and stakeholders. Applies tools to identify the relevant risks and opportunities within their organizational context and investigates potential responses.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): Executive Masters for Sustainability Leadership or Master of Sustainability Leadership major; Corequisite(s): EMS 503; Pre- or corequisite(s): EMS 501 or SOS 501
EMS	503	Strategic Sustainability I	Sustainability requires that strategic thinking reaches beyond traditional forms and horizons of strategic planning, such as forecasting and prediction, in order to deal with expanded planning dimensions, emerging "wicked problems" and to identify flexible platforms for success. Explores the interface between strategy and sustainability, developing a framework for strategic sustainability that underpins authentic and transparent strategic efforts. Students engage in mapping, planning and prioritizing methods, tools and techniques to identify and assess strategic opportunities.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): Executive Masters for Sustainability Leadership or Master of Sustainability Leadership major; Corequisite(s): EMS 502; Pre- or corequisite(s): EMS 501 or SOS 501
EMS	504	Communications and Sustainability I	One of the greatest challenges for leadership in sustainability is multidisciplinary communications. Currently, sustainability itself lacks meaning and emotion, which leads to a lack of commitment and execution. Therefore, all future executives must be proficient communicators who can convey vision and human context to the organization's sustainability initiatives. Helps you survey your internal communications environment, understand students target audiences and their unique customer centricities and develops their voices through the use of proven story structure.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 502, 503; Corequisite(s): EMS 505
EMS	505	Sustainability Leadership I	The practice of leadership in sustainability requires leading in multidisciplinary roles across multiple scales of an organization. In many of today's organizations, leadership must identify, communicate and support novel organizational contexts as sustainability emerges. Enables students to meld powerful and traditional leadership skills while challenging the student's prior knowledge with multiple lens of leadership in a sustainability context. Students create a personal plan for their unique needs and personal growth toward sustainability leadership.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 502, 503; Corequisite(s): EMS 504
EMS	506	Global Context II	As material sustainability issues are identified and prioritized and as the organization applies sustainability as core success platform, the organization looks to mitigating risks outside of its control, shaping the risks it can control, and creating new opportunities and leveraging those identified in the process. Global context comes into focus not only in expanding resource relationships and concerns, but also across dimensions of time, responsibility, success and a growing need to engage with an ever-growing group of stakeholders and potential partners. Organizations and leaders must innovate and execute at all levels of the organization to match the evolving reality. Explores and applies global sustainability as a knowledge platform for ongoing success, organizational innovation and effective organizational leadership.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 504, 505; Corequisite(s): EMS 507

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
EMS	507	Strategic Sustainability II	As sustainability becomes a core strategic goal of any organization, it impacts all aspects of the organization from informing risk and reward to the definitions and dimensions of innovation and overall success. Uses reframing, re-visioning and backcasting via a sustainability lens as constructs for introducing strategic sustainability across all aspects of an organization--both internally and externally. Applies various methods such as natural capitalism, design for sustainability/method of sustainable product design, Anderson method, cradle-to-cradle and framework for strategic sustainable development to develop flexible action platforms for sustainable enterprises. Students create a strategic vision, action plan for an organization, including critical external partnerships with communities and institutions.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 504, 505. Corequisite(s): EMS 506
EMS	508	International Immersive	The international immersive experience takes place in a compelling location where all the challenges and opportunities of sustainability are in play. It is designed as a dynamic vehicle to make real-world connections to sustainability leaders, projects and communities, and is among the most memorable experiences of the program. Students "see" and "feel" sustainability from another country and culture's perspective and see the overlap and conflict to their own context. Extending one's professional network to other host countries and generating a reflective experience and analysis report are experiential learning artifacts that are generated from this experience. Collaborative teams work through a sustainability case study and present their solutions.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 506, 507
EMS	509	Communications and Sustainability II	Marketing and communication professionals in all industries are attempting to keep up with the rapidly expanding landscape of multichannel communications. This is especially true in sustainability, given that the Chief Sustainability Officer must understand and appreciate the modes of communications across all platforms, not just in the consumer market. Maps internal, external and target audiences/markets; strategizes channels to reach them with sustainability stories; and creates a multichannel communications plan that incorporates modes of engagement for all audiences.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 506; EMS 507; Corequisite(s): EMS 510
EMS	510	Sustainability Leadership II	As sustainability emerges as a core strategic platform for an organization, leadership and sustainability intertwine; leadership opportunities--and responsibilities--greatly expand; thus requiring innovation. Individual leadership and organizational leadership are asked to find opportunity via extended definitions of critical systems; value webs, increased roles for diverse internal and external partnerships, and the need to lead within increasingly complex and unpredictable global systems. Engage students to challenge their prior definitions of systems, responsibility and community from the perspective of sustainability and leadership and provides a toolbox for leading with sustainability as a fundamental success platform.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 506; EMS 507; Corequisite(s): EMS 509
EMS	511	Global Context III	Sustainability leaders help their organizations recognize when material issues require solutions that extend beyond their control or capabilities, and when to look for, participate in and potentially lead industry, cross-industry, regional or other collaborative approaches. Global sustainability context becomes an increasingly proactive concept where individual and organizational responsibility and success extends to a global scale. Organizations organize themselves as agents of change toward sustainability that aligns with more traditional organizational success. Students learn from successes and failures of current and past attempts and assess the implications for this change in leadership perspective to their organizational context.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 509, 510. Corequisite(s): EMS 512
EMS	512	Strategic Sustainability III	Organizations that aim at sustainability come to recognize that they must be part of sustainable success on all scales, from local to global, from internal to external and for today and tomorrow. Tools such as resource plans, investment pathways, stakeholder engagement and policy influencers set the theatre for sustainability-oriented organization to challenge the status quo and advance agendas that embed both success and sustainability. Students apply their enhanced strategic sustainability skills to examine select case studies on international sustainability in corporate and nongovernmental agencies.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 509, 510. Corequisite(s): EMS 511
EMS	513	Communications and Sustainability III	Most stories of sustainability are driven and told with data as its central character. Unfortunately, data is nearly meaningless to our minds unless it is placed in an illuminating human context. The best chief sustainable storytellers bring meaning to data through the use of metaphor brought to life by thought-provoking narrative. Story grips the mind and propels people forward. Students develop proof of concepts for campaigns, expand social media presence and influence, create and record a 20-minute presentation in the style of a TedTALK, and become a leader in sustainable communications.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 511; EMS 512; Corequisite(s): EMS 514

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
EMS	514	Sustainability Leadership III	Lasting, sustainable change fully takes hold once ownership and accountability extends well into the organization and community. Engages the student to identify and apply pathways to inspire, persuade and influence others to act toward a shared global vision. Future orientation, reframing organizations to be globally scalable and still be locally focused, leadership best practices for diverse, multinational, and international human talents and redefining success and growth using sustainability as a success lens are great tasks that sustainability leaders face.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 511, 512. Corequisite(s): EMS 513
EMS	515	Capstone I	Capstone project and gateway to starting innovative sustainability initiatives and thinking. Planning, components and deliverables of the capstone from the first in-person immersion in January. Students perform a proof of concept to show viability and applicability that serves as a springboard for postgraduation continuation of capstone project into their organizations; environments. The proof of concept also becomes the final component of the e-portfolio.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 513, 514
EMS	516	Capstone II - Sustainability Leadership Workshop II	Develops a proof of concept based on project proposal and feasibility study. Requires a TED-style final project presentation.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	1		Prerequisite(s): EMS 515
EMS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	0		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic	Y	IND	Y	Z1	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	School of Sustainability	School of Sustainability	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ENE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	101	First-Year Composition	Discovers, organizes and develops ideas in relation to the writer's purpose, subject and audience. Emphasizes modes of written discourse and effective use of rhetorical principles.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): TOEFL score 560PBT/250CBT/100iBT or higher, or IELTS score >=6.5, or ACT ENG score >=19, or SAT Verbal score >=520 (or SAT Verbal score >=470 if taken before 2016), or Accuplacer score 5-7, or WAC 101 or 107 with C or better
ENG	101	First-Year Composition	Discovers, organizes and develops ideas in relation to the writer's purpose, subject and audience. Emphasizes modes of written discourse and effective use of rhetorical principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): TOEFL score 560PBT/250CBT/100iBT or higher, or IELTS score >=6.5, or ACT ENG score >=19, or SAT Verbal score >=520 (or SAT Verbal score >=470 if taken before 2016), or Accuplacer score 5-7, or WAC 101 or 107 with C or better
ENG	101	First-Year Composition	Discovers, organizes and develops ideas in relation to the writer's purpose, subject and audience. Emphasizes modes of written discourse and effective use of rhetorical principles.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): TOEFL score 560PBT/250CBT/100iBT or higher, or IELTS score >=6.5, or ACT ENG score >=19, or SAT Verbal score >=520 (or SAT Verbal score >=470 if taken before 2016), or Accuplacer score 5-7, or WAC 101 or 107 with C or better
ENG	102	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG	102	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG	102	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG	105	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ACT English score of 26 or above, or SAT Verbal score of 660 or above (or SAT Verbal score of 620 or above if taken before 2016), or Accuplacer score of 8 or above; Credit is allowed for only ENG 101 or ENG 105

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ENG	105	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ACT English score of 26 or above, or SAT Verbal score of 660 or above (or SAT Verbal score of 620 or above if taken before 2016), or Accuplacer score of 8 or above; Credit is allowed for only ENG 101 or ENG 105
ENG	105	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ACT English score of 26 or above, or SAT Verbal score of 660 or above (or SAT Verbal score of 620 or above if taken before 2016), or Accuplacer score of 8 or above; Credit is allowed for only ENG 101 or ENG 105
ENG	107	First-Year Composition	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): TOEFL score of 560PBT/220CBT/83IBT or above, or IELTS score of >=6.5, or ACT English score of >=19, or SAT Verbal score of >=520 (or SAT Verbal score of >=470 if taken before 2016), or Accuplacer score of >=5
ENG	107	First-Year Composition	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): TOEFL score of 560PBT/220CBT/83IBT or above, or IELTS score of >=6.5, or ACT English score of >=19, or SAT Verbal score of >=520 (or SAT Verbal score of >=470 if taken before 2016), or Accuplacer score of >=5
ENG	107	First-Year Composition	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): TOEFL score of 560PBT/220CBT/83IBT or above, or IELTS score of >=6.5, or ACT English score of >=19, or SAT Verbal score of >=520 (or SAT Verbal score of >=470 if taken before 2016), or Accuplacer score of >=5
ENG	108	First-Year Composition	For students for whom English is not the native language. Critical reading and writing; emphasizes strategies of academic discourse. Research writing required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG	108	First-Year Composition	For students for whom English is not the native language. Critical reading and writing; emphasizes strategies of academic discourse. Research writing required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG	108	First-Year Composition	For students for whom English is not the native language. Critical reading and writing; emphasizes strategies of academic discourse. Research writing required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		Prerequisite(s): freshman standing; maximum 25 hours
ENG	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-3		Prerequisite(s): freshman standing; maximum 25 hours
ENG	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ENG	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		

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ENG	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ENG	200	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better
ENG	200	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better
ENG	200	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better
ENG	201	World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	201	World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & H & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	202	World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	202	World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	204	Topics in Contemporary Literature	Topics in contemporary literature, which may include narrative and medicine.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	204	Topics in Contemporary Literature	Topics in contemporary literature, which may include narrative and medicine.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	205	Introduction to Writing, Rhetorics and Literacies	How do we understand the ways in which people in systems--both small and large--social, political, and economic, throughout the world use language and other symbolic resources to carry out work? Three fields of study take this kind of questioning especially seriously: studies in writing, studies in rhetoric, and studies in literacy. Inquiry--that persistent, deliberate commitment to question and to build methods sufficient to that questioning--is a generative force in each of these fields of study. Familiarizes students with such questioning traditions and to help them judge for themselves what each is good for. The goal is to strengthen your own repertoire and decision-making power for producing and circulating work (widely defined across material, print, and digital media) that matters in our risk-ridden world. Quite simply, then, this is a course in asking good questions and in evaluating responses to situations that spur questioning.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	207	Elements of English Language and Cultures I	English communication and cultural awareness for international users of English. Relies on the many contexts of English use around the world to teach aspects of grammar, reading, writing, listening and speaking.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 107; ENG 108
ENG	208	Elements of English Language and Cultures II	English communication and cultural awareness for international users of English. Relies on the many contexts of English use around the world to teach aspects of grammar, reading, writing, listening and speaking.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 107 with C or better; ENG 108 with C or better
ENG	210	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	210	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	210	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	213	Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	213	Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	214	English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	214	English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	215	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	215	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	215	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	216	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	216	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	216	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	217	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	217	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	217	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	218	Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	218	Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	219	Newspaper Production	Students work on campus newspaper to learn basics of news and column writing, digital photography, and layout.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	221	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	221	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	221	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	222	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	222	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & H	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	222	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	228	Introduction to Shakespeare		N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; credit is allowed for only ENG 228 or 294 (Shakespeare for Teachers) OR (Introduction to Shakespeare)
ENG	229	Love and Lust in Medieval Literature	The medieval period, roughly 600-1500, cannot reasonably be called the "dark ages." Indeed, the Middle Ages provides us with a corpus of literature replete with complex characters struggling to live and love, dealing with sin and lust, unity and diversity, faith and reason within a tumultuous cultural milieu and religious rigor, all of which are feeling the winds of changes. Explores medieval literature, noting the astonishing differences from our own time, as well as surprising similarities. Western civilization, our own 21st century, for better or for worse, is indebted to the love and lust of the medievals.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; credit is allowed for only ENG 229 or 294 (Love and Lust in Medieval Lit)
ENG	230	Introduction to Film Studies	Introduces the style and cultural significance of feature films.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	241	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	241	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	241	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	242	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	242	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	242	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	243	Introduction to Writing Family History	Interdisciplinary writing course on theories, methodologies, and issues in writing family history.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	244	Introduction to Researching Family History	Introduces research methods in family history.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	245	Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	245	Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	287	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	287	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	287	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	288	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	288	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	288	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	1-6		Prerequisite(s): Barrett Honors student; ENG 102, 105 or 108 with C or better
ENG	301	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	301	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	301	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	302	Business Writing	Advanced interdisciplinary writing course designed to improve the workplace writing competence of W. P. Carey School of Business professional and preprofessional students. Lecture, discussion, case studies, cooperative learning, interactive, Internet, student presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	302	Business Writing	Advanced interdisciplinary writing course designed to improve the workplace writing competence of W. P. Carey School of Business professional and preprofessional students. Lecture, discussion, case studies, cooperative learning, interactive, Internet, student presentations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	303	Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	303	Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	305	Classical and Biblical Backgrounds to Literature	Selected readings from the Bible and Greek and Latin literature in translation, emphasizing ideas, forms, and myths related to the development of English literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	307	Writing Science Fiction	Writing science fiction, primarily the short story.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	310	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 210 with C or better
ENG	310	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 210 with C or better
ENG	310	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 210 with C or better
ENG	311	Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	311	Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	312	English in its Social Setting	Introduces the sociolinguistic study of the English language.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU or SB	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	312	English in its Social Setting	Introduces the sociolinguistic study of the English language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU or SB	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	312	English in its Social Setting	Introduces the sociolinguistic study of the English language.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU or SB	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	313	Phonology and Morphology	Introduces English morphology, phonology, etymology, and phonetic aspects of rhyme, alliteration, and other sound-based literary devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	314	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	314	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	314	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	315	Medieval Literature in Translation	Medieval literature (insular and continental) in translation, from Beowulf to Malory (excluding Chaucer), emphasizing cultural and intellectual backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	316	Literary Readings of the Hebrew Bible	Literary analysis of two of the main genres of the Hebrew Bible: narrative art and poetry. Students learn the main literary conventions of biblical prose and poetry, and how these conventions are applied or subverted. Each class comprises the study of a literary aspect, close readings, and thematic discussions. Biblical texts are read only in translation. They are situated in the religious, literary and artistic traditions that have developed on their basis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only ENG 316, HEB 316, JST 316, REL 316 or HEB 394 (Literary Readings of the Bible)
ENG	317	Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	317	Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	320	Medievalism in Modern Culture	Studies the representation of Medieval narratives, characters, themes, myths, and images in modern culture.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	320	Medievalism in Modern Culture	Studies the representation of Medieval narratives, characters, themes, myths, and images in modern culture.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	321	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	321	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	321	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	323	Rhetoric and Grammar	Practical course taught in the computer lab. Emphasizes rhetorical strategies and grammar for writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	325	Restoration and the 18th Century	Writers and movements in nondramatic literature of the restoration and early 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	326	English Drama 1660-1800	English drama 1660-1800.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	
ENG	328	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	328	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	328	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	329	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	329	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	329	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	330	19th-Century British Poetry	Romantic and Victorian poets studied in context.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	331	American Drama	Major works in the development of American drama from its beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	333	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
ENG	333	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
ENG	333	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
ENG	334	The American Southwest in Literature and Film	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AMS 336 or ENG 334 or ETH 334
ENG	334	The American Southwest in Literature and Film	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AMS 336 or ENG 334 or ETH 334
ENG	334	The American Southwest in Literature and Film	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AMS 336 or ENG 334 or ETH 334
ENG	335	American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	335	American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	337	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	337	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	337	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	338	Protest Literature	Examines traditions of social protest literature across a variety of historical periods and literary and rhetorical genres.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, ENG 105, or ENG 108 with C or better; minimum 24 earned hours; credit is allowed for ENG 394 (Banned Literature), 338 or 440 (American Protest Novels)
ENG	342	20th-Century British and Irish Literature	Major works in the development of literature since 1900, studied in their historical and cultural contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	344	Intermediate Family History Research	How to locate records, analyze and interpret evidence, and write a family history narrative.	N	RSC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	345	Selected Authors or Issues	Different topics may be offered. Film topics with lab may carry 4 credits. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	345	Selected Authors or Issues	Different topics may be offered. Film topics with lab may carry 4 credits. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	352	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	352	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	352	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	353	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 353 (or AFH 353) or ENG 353
ENG	353	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 353 (or AFH 353) or ENG 353
ENG	353	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 353 (or AFH 353) or ENG 353
ENG	354	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or ENG 354
ENG	354	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or ENG 354
ENG	354	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or ENG 354
ENG	355	European Dramatic Traditions	Development of European drama since Aeschylus.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	356	The Bible as Literature	Readings in the Jewish and Christian Scriptures in modern translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	359	Indigenous American Literature	Selected oral traditions and contemporary works by Indigenous American authors.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	359	Indigenous American Literature	Selected oral traditions and contemporary works by Indigenous American authors.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	359	Indigenous American Literature	Selected oral traditions and contemporary works by Indigenous American authors.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	360	Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	360	Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	361	Scriptwriting	The art of scriptwriting using 10-minute plays as the platform. Designed to help students learn craft techniques and to expose them to the various forms of the 10-minute script. Includes lectures, writing assignments, discussion, and criticism.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): first-year composition; credit is allowed for only ENG 361 or 394 (Scriptwriting)
ENG	363	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only ENG 363 or TCL 363
ENG	363	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only ENG 363 or TCL 363
ENG	363	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only ENG 363 or TCL 363
ENG	364	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	364	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	364	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	365	History of Film	Development of motion pictures.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3-4	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	365	History of Film	Development of motion pictures.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3-4	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	365	History of Film	Development of motion pictures.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3-4	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	366	Literature on Film	Studies literary texts and their adaptation to film.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	367	Environmental Issues in Literature and Film	Evaluates literary texts and films that address interconnected cultural, historical, and environmental issues.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	367	Environmental Issues in Literature and Film	Evaluates literary texts and films that address interconnected cultural, historical, and environmental issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	368	Art of the Personal Essay	Writing personal essays drawing on both research and personal experience.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	369	Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	369	Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	370	Science, Values, and the Public	Examines science, communication, and a range of public opinion to understand science as a discourse of profound social power.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; must have 35 or more earned hours; credit is allowed for only BIO 315 or ENG 370
ENG	371	Rhetoric of the Environmental Movement	Examines how language is used to conceptualize, clarify/obfuscate, and resolve problems among those who concern themselves with the disposition of natural resources.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	372	Document Production	Introduces document design and production. Practice in critique and in writing the content of publications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	373	Publishing in Literary Magazines	Analyzes the history, publishing preferences, editorial staff, and submission guidelines of literary magazines.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	374	Technical Editing	Fundamentals of editing technical and professional materials. Role of editors in analyzing, revising, and polishing manuscripts. Successful writer-editor dialogues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	375	Titans of Business	Explores leading CEOs and corporations from a humanities perspective.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	375	Titans of Business	Explores leading CEOs and corporations from a humanities perspective.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	376	Writing a Personal History	Interdisciplinary writing course emphasizing theories, methodologies, and issues of composing personal histories.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	377	Editing Family History for Public Audiences	Fundamentals of editing family writing. Role of editors in analyzing, revising, and polishing manuscripts for publication.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	378	Environmental Creative Nonfiction	Lectures, discussion, and criticism concerning the literary history of nature writing and techniques of writing environmental creative nonfiction for publication.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	378	Environmental Creative Nonfiction	Lectures, discussion, and criticism concerning the literary history of nature writing and techniques of writing environmental creative nonfiction for publication.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	379	Travel Writing	Studies the genesis of travel writing, what theories inform travel writing, and the various genres of travel writing today.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	379	Travel Writing	Studies the genesis of travel writing, what theories inform travel writing, and the various genres of travel writing today.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	382	Digital Project Management for Humanities	Introduces Web design for the humanities; explores the use of the ADDIE process to create digital projects.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	383	Digital Media in the Humanities	Introduction to the digital arts is an introduction to the emerging "new media" with emphasis on still imaging, audio, video, multimedia and the World Wide Web.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	385	Career Development for English Majors	Theoretical and practical aspects of career planning related to skills and interests developed in English studies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	386	American Gothic	The development of modern American Gothic as a literary form from Poe to Oates. Emphasizes the short story.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	387	Intermediate Creative Writing Workshop in Poetry: Form, Theory, and Practice	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 287 (Poetry) with C or better; credit is allowed for only ENG 310 (Intermediate Poetry) or ENG 387
ENG	387	Intermediate Creative Writing Workshop in Poetry: Form, Theory, and Practice	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 287 (Poetry) with C or better; credit is allowed for only ENG 310 (Intermediate Poetry) or ENG 387
ENG	387	Intermediate Creative Writing Workshop in Poetry: Form, Theory, and Practice	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 287 (Poetry) with C or better; credit is allowed for only ENG 310 (Intermediate Poetry) or ENG 387

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	388	Intermediate Creative Writing Workshop in Fiction: Form, Theory, and Practice	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 288 (210: Fiction) with C or better; credit is allowed for only ENG 310 (Intermediate Fiction) or ENG 388
ENG	388	Intermediate Creative Writing Workshop in Fiction: Form, Theory, and Practice	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 288 (210: Fiction) with C or better; credit is allowed for only ENG 310 (Intermediate Fiction) or ENG 388
ENG	388	Intermediate Creative Writing Workshop in Fiction: Form, Theory, and Practice	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 288 (210: Fiction) with C or better; credit is allowed for only ENG 310 (Intermediate Fiction) or ENG 388
ENG	390	Methods of Inquiry	Studies in writing, rhetoric and literacy are multiple and diverse because these areas deal with complicated ways people create meaning, circulate meaning, and understand meaning in a variety of contexts and a variety of modal formats. Examines ways of developing research problems and questions, designing studies and conducting, reading and evaluating research in the areas of writing, rhetoric and literacy. Qualitative methods (e.g., case study, ethnographic methods, interviewing); historical methods (e.g., archival, document analysis and artifact interpretation); rhetorical analysis and discourse analysis; feminist approaches to research and analysis; and recent advances in research in the fields of rhetoric, writing and literacy studies. Investigates the many attitudes and assumptions about creativity and cultural work that make methods of inquiry as controversial as they are significant to contemporary public life.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	391	Writing in Context	How do we understand the ways in which people use written language to carry out work in professional, academic, social and/or personal contexts? How does our understanding of the ways writing is produced for an audience shift between and among these different contexts? More importantly, how do writers adapt their writing practices in order to facilitate audience understanding as well as cultivate an audience's capacity for action? Familiarize students with rhetorical practices that position them to read, assess and respond to the rhetorical demands of a wide range of writing contexts. Strengthens students' existing rhetorical skill sets and problem-setting capacities for producing and circulating work (widely defined across material, print and digital media) that responds to a range of problems in an applied manner. Assesses the rhetorical demands of writing contexts and in developing and producing tailored, audience-specific texts that forward work in complex, interdisciplinary environments.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	392	History of Rhetorical Theory	Begins in ancient Greece with the rise of the art of public oratory (known as rhetoric) and ends in the present, an era dominated by mass media. Engages in a great deal of reading--lots of very old writings as well as some newer ones. Covers a great many topics and ideas; focuses by continually returning to the subject of public discourse. Challenging readings designed to emphasize the connection between systems of philosophy (or "worldview") and systems of communication. By focusing on big ideas, students become a better thinker and communicator in any chosen career.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	393	Theories of Literacy	While theories of literacy have, for the most part, been determined by the primacy of reading and writing script, more recent scholarship in literacy theory and history has served to challenge such limitations. Many contemporary perspectives on literacy view scripted text as one component of complex acts and practices of written communication that occur in social contexts. Studies that examine such communicative acts in their local contexts reveal that literate practices and the texts that are produced are imbued with social and cultural values and traditions and the needs and desires of individuals. As the statements above illustrate, theories of literacy themselves are embedded within the values and assumptions of individuals, institutions, and academic specialization. Examines some of these theories, their influences on academic scholarship and pedagogy, the ideological assumptions that inform them, and how we might view these theories within broader social-cultural landscapes.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	400	History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 200 & one 200-level literature course with C or better, OR Integrative Sciences and Arts undergrad; minimum junior standing & one 200-level (or higher) ENG course with C or better, OR New College undergrad major with minimum 45 hours
ENG	400	History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 200 & one 200-level literature course with C or better, OR Integrative Sciences and Arts undergrad; minimum junior standing & one 200-level (or higher) ENG course with C or better, OR New College undergrad major with minimum 45 hours
ENG	401	Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR New College or Integrative Sciences and Arts undergraduate and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	401	Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR New College or Integrative Sciences and Arts undergraduate and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	403	Semantics	Program and methods of contemporary formal semantics. Characterizes knowledge of meaning as knowledge of truth conditions. The goal of semantics is thus to uncover the rules that allow the speakers of a language to know under what conditions any sentence is true; or in other words, to construct a theory of truth for natural language. Simple fragments including: predication, quantification, definite descriptions, simple temporal and modal expressions, and attitude verbs.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 314 with C or better; Credit is allowed for only ENG 403 or ENG 414
ENG	404	Studies in Second Language Acquisition	Specialized topics in second language teaching and learning, including theory, pedagogy, curriculum, and assessment.	Y	LEC	Y	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 and 213 with C or better OR 1 year language study and minimum 56 hours
ENG	410	Writing for Publication	Lectures and conferences concerning techniques of writing for publication.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 and one 200-level literature course with C or better, OR New College undergraduate student with minimum 45 hours
ENG	411	Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 310 with C or better
ENG	411	Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 310 with C or better
ENG	412	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 310, 388 or 411 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	412	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 310, 388 or 411 with C or better
ENG	413	History of English Language	Development of English from the earliest times to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites:ENG 200 and one 200-level literature course OR New College undergraduate student with minimum 45 hours. Credit is allowed for only ENG 413 or LIN 517
ENG	413	History of English Language	Development of English from the earliest times to the modern period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites:ENG 200 and one 200-level literature course OR New College undergraduate student with minimum 45 hours. Credit is allowed for only ENG 413 or LIN 517
ENG	414	Studies in Linguistics	Specialized topics in linguistics including phonology, syntax, semantics, pragmatics, discourse, language variation, and change.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 200 and 213 with C or better OR 1 year language study and minimum 56 hours
ENG	415	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	415	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	415	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	416	Chaucer in Middle English	Yearly alternate between Chaucer's The Canterbury Tales and Troilus and Criseyde.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate with minimum junior standing and one 200-level (or higher) English course with C or better
ENG	416	Chaucer in Middle English	Yearly alternate between Chaucer's The Canterbury Tales and Troilus and Criseyde.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate with minimum junior standing and one 200-level (or higher) English course with C or better
ENG	418	Renaissance Literature	Prose, poetry, and drama of the Renaissance Era with an emphasis on cultural history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	418	Renaissance Literature	Prose, poetry, and drama of the Renaissance Era with an emphasis on cultural history.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	420	Multicultural Autobiographies	Examines the human experience via autobiographies and personal narratives. Multicultural, literary, and psychological perspectives on individual lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits; Credit is allowed for only ENG or IAS 420

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	421	Studies in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	421	Studies in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	422	Special Topics in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	422	Special Topics in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	423	Renaissance Drama	Topics, authors, and themes in the drama of the Tudor and early Stuart periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	423	Renaissance Drama	Topics, authors, and themes in the drama of the Tudor and early Stuart periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	424	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	424	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	425	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	425	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	426	British Culture and Empire	Examines British imperial culture in art and literature, 1870-1914, and postcolonial theory.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: One course in ARS, ENG, or HST at 200 level or higher with B or better
ENG	427	Studies in 18th-Century Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	428	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): one course in ARS, ENG, or HST at 200 level or higher with B or better; Credit is allowed for only ARS 435 or ARS 533 or ENG 428
ENG	429	Studies in European Literature and Culture	Literary, cultural, and historical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better; Credit is allowed for only ENG, SLC or THE 429
ENG	430	Studies in Victorian Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	430	Studies in Victorian Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	431	Whitman and Dickinson	Evaluates the 19th-century American Literary Renaissance through the specialized examination of its poetry and authors in their historical context.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	432	The American Renaissance	Novels, poetry, short fiction, and criticism of the major literary figures of the early to mid-nineteenth century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	433	Southern Writers	Analyzes Southern culture through the eyes of the region's novelists, short story writers, poets, filmmakers, photographers, and song writers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	433	Southern Writers	Analyzes Southern culture through the eyes of the region's novelists, short story writers, poets, filmmakers, photographers, and song writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	434	Studies in the Literature and Culture of the Americas	Literature and culture of North America, South America, and the Caribbean. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	435	Literatures and Cultures of Immigration and Diaspora	Specialized topics in literary and cultural representations of immigration and diaspora studied in an interdisciplinary context.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: A 200-level ENG course with C or better; Minimum 56 hours
ENG	436	Studies in Anglophone Literature and Culture	Literary, social, and cultural issues of English-speaking former colonial territories. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	437	The American Novel, 1900 - 1960	Developments in theory and practice of major novelists.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	438	American Novel Since 1960	Major novelists of the period. Developments in theory and practice.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	440	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	440	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	442	Studies in 20th-Century British and Irish Literature and Culture	Major literary genres (novel, poetry, and drama) in their cultural and historical contexts. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	444	Studies in American Romanticism	Fiction, poetry, and essays of such 19th-century authors as Hawthorne, Emerson, Melville, Thoreau, Fuller, Whitman, and Dickinson. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	445	Studies in American Realism	Writers and influences that shaped the development of literary realism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	447	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200; one ENG 200-level literature course, or SLC 202 or FMS 100 and FMS 200; Credit is allowed for only ENG 447, FMS 442 or SLC 450
ENG	448	Studies in Irish Literature and Culture	Themes and problems pertaining to Irish literature, film, and social and cultural history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	450	The British Novel	Focuses on the British novel from the 18th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	452	Studies in the Novel	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	453	Studies in the American Novel	Poetics and politics of the novel, 18th through 21st centuries. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	454	Gender and Literature	Focuses on the representation of gender in literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	455	Contemporary Women Writers	Critical examination of literature by contemporary women writers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	455	Contemporary Women Writers	Critical examination of literature by contemporary women writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	456	Studies in Forensic Linguistics	Focuses on the three main aspects of that branch of applied linguistics, namely language and the law, court cases where language is the central dispute, and linguistic evidence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better; minimum 45 hours; Credit is allowed for only ENG 456 or FOR 456 or PAX 456 or ENG/FOR 494 (Studies in Forensic Linguistics)
ENG	457	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	457	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	458	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Credit is allowed for only ENG 458 or FMS 464 or TCL 464
ENG	459	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & G	Prerequisite(s): ENG 200 and one other 200-level Literature course with C or better; Credit is allowed for only AFR 459 (or AFH 459) or ENG 459
ENG	460	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Hispanic, and Asian American.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours; Credit is allowed for only ENG 460 or WST 467
ENG	461	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	461	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	462	Africana Literature	Focuses on the literature of the African Diaspora, including texts from the Caribbean, the Americas, and Africa. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	463	African American Literature	Thematic and cultural study of African American literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	464	Great Directors	Studies the work of one or more influential directors.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	465	Studies in Film	Advanced topics in cinema.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	466	Studies in International Film	Studies non-American narrative film.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	467	American Film Musicals	A cultural history of American film musicals.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	468	Environmental Literary Criticism	Evaluates the disparate critical practices that constitute what is the emerging literary project known as "ecocriticism" or "environmental literary criticism."	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	468	Environmental Literary Criticism	Evaluates the disparate critical practices that constitute what is the emerging literary project known as "ecocriticism" or "environmental literary criticism."	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	469	Science and Literature	Historical and theoretical links between science and literature, from Francis Bacon to the present, examined in cultural context. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better
ENG	470	Symbols and Archetypes in Children's Literature	Various critical approaches and recurring themes studied in relation to classical and contemporary children's literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	471	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level lit course with C or better, OR Integrative Sciences and Arts undergrad with min 56 hours and one 200-level (or higher) English course with C or better, OR New College undergrad with min 45 hours
ENG	471	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	REC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level lit course with C or better, OR Integrative Sciences and Arts undergrad with min 56 hours and one 200-level (or higher) English course with C or better, OR New College undergrad with min 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	471	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better; one 200-level lit course with C or better, OR Integrative Sciences and Arts undergrad with min 56 hours and one 200-level (or higher) English course with C or better, OR New College undergrad with min 45 hours
ENG	472	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	472	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	472	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	474	Review Writing	Advanced writing course exploring rhetorical approaches to writing reviews.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Completed ENG 102, 105, or 108 with C or better; Minimum 56 hours
ENG	475	Popular Periodical Writing	Advanced writing course analyzing and imitating genres in popular periodical writing.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Minimum 56 hours
ENG	476	Studies in Folklore	Surveys the history, genres, and dynamics of folklore, with emphasis on oral traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU or SB) & C	Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	476	Studies in Folklore	Surveys the history, genres, and dynamics of folklore, with emphasis on oral traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU or SB) & C	Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	477	World Literature	Readings in world literature, mostly outside the United States and England.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours; Credit is allowed for only ENG 477 or IAS 477

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	478	Studies in Modernism	Cultural, historical, and literary issues in American and European modernism.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	478	Studies in Modernism	Cultural, historical, and literary issues in American and European modernism.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	479	Studies in Postmodernism	Literary, social, and cultural topics in postmodernism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU & G	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	479	Studies in Postmodernism	Literary, social, and cultural topics in postmodernism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	480	Methods of Teaching English: Composition	Methods of instruction, organization, and presentation of appropriate content in the teaching of composition and other writing skills.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	480	Methods of Teaching English: Composition	Methods of instruction, organization, and presentation of appropriate content in the teaching of composition and other writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	480	Methods of Teaching English: Composition	Methods of instruction, organization, and presentation of appropriate content in the teaching of composition and other writing skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	482	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	482	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	REC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	482	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	483	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR New College or Integrative Sciences and Arts undergraduate and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	485	Digital Tools	Digital (online, electronic) tools as best utilized in language arts curriculum and instruction for junior and senior high schools. Addresses many practical classroom matters; broadens knowledge of Web 2.0 opportunities for teaching and learning. Creates a detailed inventory of the digital tools familiar to secondary students, and compares these to what a clever English teacher can access in a public school classroom. Imaginations, studies, and designs digital tools to enhance student achievement. Uses digital tools to increase student access to history and culture and opportunities for individuals to find and articulate their voices, as well as opens avenues for their creativity. Empowers the English language arts classroom with critical understandings of media, culture and public relations (digital information manipulation) and develops secondary students from passive consumers to literate participants in democracy.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course with C or better
ENG	485	Digital Tools	Digital (online, electronic) tools as best utilized in language arts curriculum and instruction for junior and senior high schools. Addresses many practical classroom matters; broadens knowledge of Web 2.0 opportunities for teaching and learning. Creates a detailed inventory of the digital tools familiar to secondary students, and compares these to what a clever English teacher can access in a public school classroom. Imaginations, studies, and designs digital tools to enhance student achievement. Uses digital tools to increase student access to history and culture and opportunities for individuals to find and articulate their voices, as well as opens avenues for their creativity. Empowers the English language arts classroom with critical understandings of media, culture and public relations (digital information manipulation) and develops secondary students from passive consumers to literate participants in democracy.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course with C or better
ENG	486	Teaching Text	Approaches to texts (poetry, nonfiction and fiction) as best utilized in language arts curriculum and instruction for junior and senior high schools. Language arts teachers want all of their students to love literature and become immersed in the texts they assign (poems, short stories, plays, nonfiction and informative texts, and novels). Explores activities and philosophies for building a strong reading workshop in the secondary language arts classroom. Through identifying proficient readers, conducting thoughtful conversations about students and reading, and using a variety of ways to invite readers into books, designs and experiences reading workshops based on innovative and effective teaching strategies. Offers hands-on strategies for supporting struggling readers and for teaching reading from a critical lens.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course with C or better; Credit is allowed for only ENG 486 or 598 (Teaching Text)
ENG	486	Teaching Text	Approaches to texts (poetry, nonfiction and fiction) as best utilized in language arts curriculum and instruction for junior and senior high schools. Language arts teachers want all of their students to love literature and become immersed in the texts they assign (poems, short stories, plays, nonfiction and informative texts, and novels). Explores activities and philosophies for building a strong reading workshop in the secondary language arts classroom. Through identifying proficient readers, conducting thoughtful conversations about students and reading, and using a variety of ways to invite readers into books, designs and experiences reading workshops based on innovative and effective teaching strategies. Offers hands-on strategies for supporting struggling readers and for teaching reading from a critical lens.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course with C or better; Credit is allowed for only ENG 486 or 598 (Teaching Text)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	487	Advanced Creative Writing Workshop in Poetry	Advanced writing of poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 387 (Poetry) with C or better; Credit is allowed for only ENG 411 (Poetry) or 487
ENG	488	Advanced Creative Writing Workshop in Fiction	Advanced writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 388 (Fiction) with C or better; Credit is allowed for only ENG 411 (Fiction) or 488
ENG	489	Culturally Sustaining Pedagogy	Methods of designing and implementing culturally responsive secondary curriculum and instruction using students' cultural backgrounds and languages as an asset in the teaching of English language arts. Students gain a repertoire of techniques and sources for curriculum content, instruction design and assessment techniques in the English language arts that capitalizes on the students' prior knowledge and includes community input and collaboration.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Pre-requisite: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course
ENG	489	Culturally Sustaining Pedagogy	Methods of designing and implementing culturally responsive secondary curriculum and instruction using students' cultural backgrounds and languages as an asset in the teaching of English language arts. Students gain a repertoire of techniques and sources for curriculum content, instruction design and assessment techniques in the English language arts that capitalizes on the students' prior knowledge and includes community input and collaboration.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course
ENG	490	Literary Forms: Theory and Practice in Poetry	Types, history, analysis of traditional forms, and contemporary adaptations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 487 (Poetry) with C or better; Credit is allowed for only ENG 490 or 495 (Poetry)
ENG	491	Literary Forms: Theory and Practice in Fiction	Types, history, analysis of traditional forms, and contemporary adaptations.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 488 (Fiction) with C or better; Credit is allowed for ENG 491 or 495 (Fiction)
ENG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
ENG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-6		Prerequisite(s): Barrett Honors student
ENG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
ENG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
ENG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	Department of English	1-6	L	Prerequisite(s): Barrett Honors student
ENG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
ENG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-6		Prerequisite(s): Barrett Honors student
ENG	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-7	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	501	Approaches to Research	Theories, methods and/or methodologies as well as qualitative and/or quantitative approaches to the specific discipline. Familiarizes students with the areas of research.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ENG 501 or LIN 501
ENG	502	Contemporary Critical Theories	Studies the principles and techniques of contemporary theory and criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	502	Contemporary Critical Theories	Studies the principles and techniques of contemporary theory and criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	504	Cross-Cultural Studies	Theoretical and analytical issues for comparative research across distinct cultural regions and traditions.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	504	Cross-Cultural Studies	Theoretical and analytical issues for comparative research across distinct cultural regions and traditions.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	506	Methods and Issues in Teaching Language	Developing the language skills of native and non-native speakers through a process approach and advanced writing workshops in junior and senior high schools.	N	REC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	506	Methods and Issues in Teaching Language	Developing the language skills of native and non-native speakers through a process approach and advanced writing workshops in junior and senior high schools.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	507	Methods and Issues in Teaching Composition	Up-to-date theory, practice, and implementation of secondary writing instruction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	510	Linguistics	Overview of linguistics, its subfields, and some of its applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Students who have credit for BLE 537, may not enroll in LIN 510
ENG	513	Semantics	Current approaches to linguistic meaning with particular attention to English.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	525	Teaching Second Language Writing	Provides a critical introduction to the field of second language writing as well as issues and strategies in the teaching of second language writing in a wide variety of contexts. After exploring various instructional contexts as well as the characteristics of different types of students and their texts, considers various instructional practices and strategies, focusing on course and assignment designs, reading-writing connection, teacher and peer feedback, grammar instruction, classroom assessment, plagiarism and text borrowing strategies, and negotiating language differences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)/Credit is allowed for only LIN 525, 591 (Teaching 2nd Language Writing) or ENG 525
ENG	530	Old English	Study of Old English grammar, syntax, and phonology, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	531	Old English Literature	Intensive literary, linguistic, and cultural study of Old English literature.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	531	Old English Literature	Intensive literary, linguistic, and cultural study of Old English literature.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	532	Middle English Dialects	Study of the principal dialects of Middle English, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	533	Studies in Medieval Literature	Selected topics in English literature from the 11th through the 15th centuries.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	533	Studies in Medieval Literature	Selected topics in English literature from the 11th through the 15th centuries.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	534	Studies in Renaissance Literature	Selected topics and literary works studied in the contexts of English Renaissance culture.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	534	Studies in Renaissance Literature	Selected topics and literary works studied in the contexts of English Renaissance culture.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	535	Studies in 18th- and 19th-Century British Literature	Selected topics, issues, figures, and genres in British literature and culture of the 18th and 19th centuries.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	535	Studies in 18th- and 19th-Century British Literature	Selected topics, issues, figures, and genres in British literature and culture of the 18th and 19th centuries.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	536	Studies in American Literature before 1900	Selected topics, issues, figures, and genres in 17th-, 18th-, and 19th-century American literature, including the literature of conquest and contact.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	536	Studies in American Literature before 1900	Selected topics, issues, figures, and genres in 17th-, 18th-, and 19th-century American literature, including the literature of conquest and contact.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	537	Studies in Modern and Contemporary British Literature	Selected topics, issues, figures, and genres in British literature and culture after 1900.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	537	Studies in Modern and Contemporary British Literature	Selected topics, issues, figures, and genres in British literature and culture after 1900.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	538	Studies in Modern and Contemporary American Literature	Selected topics, issues, figures, and genres in American literature and culture after 1900.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	538	Studies in Modern and Contemporary American Literature	Selected topics, issues, figures, and genres in American literature and culture after 1900.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	539	Studies in Modernist and Postmodernist Literature and Theory	Selected topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	539	Studies in Modernist and Postmodernist Literature and Theory	Selected topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	540	Teaching Young Adult Literature	Issues and new approaches in teaching contemporary literature in high school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	540	Teaching Young Adult Literature	Issues and new approaches in teaching contemporary literature in high school.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	542	Studies in North American Ethnic Literatures	Selected works studied in their cultural contexts from authors representing ethnic experiences in the United States.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	542	Studies in North American Ethnic Literatures	Selected works studied in their cultural contexts from authors representing ethnic experiences in the United States.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	544	Studies in Colonial and Postcolonial Literature	Selected topics, periods, theories, and figures in works by authors representing colonial and postcolonial regions and/or experiences.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	544	Studies in Colonial and Postcolonial Literature	Selected topics, periods, theories, and figures in works by authors representing colonial and postcolonial regions and/or experiences.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	550	Translation	Surveys theories and practices of translation into English. Considers target, audience and market.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	550	Translation	Surveys theories and practices of translation into English. Considers target, audience and market.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	551	Rhetorical Traditions	Examines rhetorical traditions spanning ancient to contemporary rhetorics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	551	Rhetorical Traditions	Examines rhetorical traditions spanning ancient to contemporary rhetorics.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	552	Composition Studies	Selected topics in the history and theories of composition.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	552	Composition Studies	Selected topics in the history and theories of composition.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	553	Technologies of Writing	Critical study and cultural analysis of information technologies and their effects on various writing practices.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	553	Technologies of Writing	Critical study and cultural analysis of information technologies and their effects on various writing practices.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	554	Rhetorics of Race, Class, and Gender	Study of interdependent relationships of race, class, and gender in rhetorical constructions of self and community.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	554	Rhetorics of Race, Class, and Gender	Study of interdependent relationships of race, class, and gender in rhetorical constructions of self and community.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	556	Theories of Literacy	Examines various theories of literacy, their embedded values and assumptions, and their influences on academic scholarship and pedagogy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	556	Theories of Literacy	Examines various theories of literacy, their embedded values and assumptions, and their influences on academic scholarship and pedagogy.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	557	Computer-Assisted Language Learning	Explores the field of computer-assisted language learning. Traces the development of computer-assisted language learning (CALL) over the last three decades. Focuses on research that explores how computer technology can help facilitate second language development; relies primarily on empirical data to do so. Examine established as well as new research methods in CALL. Participants participate in one research study and apply theoretical and practical aspects of CALL in these projects.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only APL 557, ENG 557 or LIN 591 (Intro to Computer Assisted Language Learning)
ENG	560	Genre Studies	Critical analysis and study of works from a single genre or comparative analysis and study of multiple genres.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	560	Genre Studies	Critical analysis and study of works from a single genre or comparative analysis and study of multiple genres.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	561	Film Studies	Analysis and study of film genres, cinematic techniques, and problems of interpretation and representation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	561	Film Studies	Analysis and study of film genres, cinematic techniques, and problems of interpretation and representation.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	562	forms of Poetry	Types, history, criticism, and schools of theory of metrical form. Analyzes lyric, narrative, and dramatic poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	562	forms of Poetry	Types, history, criticism, and schools of theory of metrical form. Analyzes lyric, narrative, and dramatic poetry.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	563	Forms of Fiction	Types, history, criticism, and schools of theory in the forms of fiction. Analyzes narrative and dramatic structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	563	Forms of Fiction	Types, history, criticism, and schools of theory in the forms of fiction. Analyzes narrative and dramatic structure.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	571	Foundations for Teaching English Learners	Provides teachers with foundational knowledge of English language learner education including: identification and knowledge of English language learners in school contexts, the role of culture in learning, principles of second language acquisition and teaching, historical and current perspectives and policies related to English learner education, and the role of parents and communities in the education of English learners.	N	LEC	Y	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 580 (1 hour); Credit is allowed for only ENG 571 or ENG 598 (Foundations for Teaching English Learners)
ENG	572	Strategies for Teaching English Learners	Supports teachers through a review of core knowledge of strategies and correlated assessments for the instruction of English learners. Teachers learn to assess EL language needs and apply appropriate teaching strategies for supporting learning English and content. Primary emphasis is in the integration of EL language and learning needs and implementation of lesson planning, strategies and appropriately leveled instruction. Teachers complete a semester-long inquiry on integrating course content into their teaching practices.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 571; Pre- or corequisite(s): ENG 580 (2 hours); Credit is allowed for only ENG 572 or ENG 598 (Strategy/Assessment/Core for Teaching Eng Learners)
ENG	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	581	Methods of Teaching Secondary Writing	Emphasizes methods of planning, teaching, and assessing appropriate content in the instruction of composition and related skills in secondary classrooms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Credit is allowed for only ENG 481 or 581

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	582	Pedagogy	Overview of diverse theories of English instruction, including composition/rhetoric, linguistics and literary, with emphasis upon development and implementation for high school- and community college-level instructors.	N	SEM	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): admission to any graduate program
ENG	583	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	583	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
ENG	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	0-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	0-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	597	Graduate Capstone Seminar	The capstone seminar is required for graduate students who must complete a culminating experience for a degree or certificate program.	N	RSC	N	OPT	Liberal Arts and Sciences	Department of English	1-3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	597	Graduate Capstone Seminar	The capstone seminar is required for graduate students who must complete a culminating experience for a degree or certificate program.	N	RSC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	602	Advanced Studies in Theory and/or Criticism	Seminar courses on the principles, strategies, and applications of critical, cultural, and/or literary theory and/or criticism.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	603	Advanced Studies in Comparative Literature	Seminar courses on the problems, methods, and principles of comparative analysis.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	604	Interdisciplinary Cultural Studies	Seminar courses on work from literature, anthropology, and/or other disciplines, with an emphasis on cultural influences and functions.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	606	Advanced Studies in English Education	Current research, issues, and trends in English education.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	625	Advanced Studies in Second Language Writing	Provides opportunities to explore advanced research topics as well as current issues and controversies in the field of second language writing--an interdisciplinary field of inquiry simultaneously situated in applied linguistics, rhetoric and composition, and teachers of English to Speakers of Other Languages.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ENG or LIN 625
ENG	632	Advanced Studies in Medieval and Renaissance Literature and Culture	Seminar in works of the Medieval or Renaissance periods, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	635	Advanced Studies in British Literature	Seminar courses on works produced in or about England, Scotland, and Wales, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	636	Advanced Studies in American Literature	Seminar courses on works produced in or about the United States, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	639	Advanced Studies in Modernism and Postmodernism	Seminar courses on topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	642	Advanced Studies in Ethnic, Anglophone, or Post-Colonial Literatures	Seminar courses that consider the influence of cultural or geopolitical developments on the production and circulation of texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	651	Advanced Studies in History and Theories of Rhetoric	Selected topics in the history and/or theory of rhetoric.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	652	Advanced Composition Studies	Selected topics on particular composition theories, practices, pedagogies, and figures.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	654	Advanced Studies in Rhetoric, Writing, Technology, and Culture	Advanced study of theoretical, methodological, and pedagogical issues concerning the interrelationships among rhetoric, culture, writing, and writing technologies.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	655	Disciplinary Discourses	Investigation of professional and disciplinary issues related to linguistics and applied linguistics.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ENG 655 or LIN 655
ENG	656	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	662	Poetic Genres	Creative writing courses in the long poem, the erotic image, death and transfiguration, reading and influence, and others.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	664	Mixed Genres	Creative writing courses in the prose poem, magical realism, the literature of obsession.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	665	Creative Methods	Creative writing courses in theory of the novel, poetics, story into film, and others.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	667	Issues in the Writing Professions	Focuses on career preparation, resources, the role of writing in the community, creative writing, and the Internet.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ENG	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ENV	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
ENV	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
ENV	201	Fundamentals of Environmental Science	Examines the functioning of the earth system and how it has changed over long and short time scales. Emphasizes understanding global processes and how human activities can disrupt these processes, changing the ability of our global environment to support life. Also emphasizes important feedbacks between biological and physical processes and their effects on the biosphere. Discusses the response of natural and managed ecosystems to global change along with prospects for the future.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181 and 182 with C or better; CHM 116 with C or better
ENV	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
ENV	310	Soil Science	Fundamental principles of soil science, including physical, chemical, biological and ecological properties. Applies these principles to explain the importance of soil as both a natural resource and ecosystem. Discusses the role of soils as the heart of terrestrial ecosystems, both natural and managed, and the importance of this key natural resource to environmental health and biological productivity. Explores how human activity and global change are impacting this vital natural resource and ecosystem that is crucial to life on earth. The laboratory component also introduces applications and standard methodology for investigating these principles.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisite(s): BIO 320 with C or better; CHM 116 with C or better; PHY 101 or higher with C or better
ENV	345	Spatial Analysis in the Environmental Sciences	Develops an understanding of the methods, tools and technologies used to collect, display, analyze and interpret spatial data in environmental science and natural resource management. Provides overview of geographic information system (GIS) applications in these fields. Basics of integrating the global position system (GPS) and remote sensing (RS) into GIS to solve problems in environmental science and natural resource management.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ENV 201 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENV	385	Environmental Impact Assessment	An understanding of federal and state environmental laws, including the scientific processes that are incorporated into decision making, is critical for a variety of careers in the environmental sciences. Provides an overview of these laws and processes and develops the specific written and oral communications skills needed for many environmental, biophysical and natural science professions.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ENV 201 with C or better
ENV	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): minimum 45 hours
ENV	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): minimum 45 hours
ENV	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student; minimum 45 hours
ENV	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student; minimum 45 hours
ENV	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): minimum 45 hours
ENV	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student; minimum 45 hours
ENV	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7		Prerequisite(s): minimum 45 hours
ENV	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		Prerequisite(s): minimum 45 hours
EPA	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	532	Becoming an Informed Consumer of Educational Research	Development of critical analyses skills in the examination and synthesis of educational research.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: EPA 555
EPA	555	Translating Research for Educational Change	Teaches educators how to translate research to promote educational change in their schools and districts. Three concepts emerge to empower practitioners to translate research to their individual schools and communities: (1) a needs assessment to understand the context (student population, community, networks); (2) an emphasis on the generalizability of research to provide an understanding of which findings are most applicable to specific contexts at which times and under which conditions; and (3) explicit training on ways of knowing to encourage practitioners to develop their own theoretical perspectives and test them against the academic research.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	556	Data Analysis for Education Decision Makers	Prepares educators to use the sources of information (i.e., results, reports and interactive programs) at their disposal to make educational decisions. Dynamic content is adapted based on the real-world information sources brought forth by the course participants.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	559	Systematic Inquiry for Problem Solving	Trains participants to produce a policy analysis aimed at addressing a problem they identify within their own organizations. Participants identify a problem, gather, analyze data and evidence to draw conclusions, and clearly and succinctly report their findings and recommendations to policymakers.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	565	Critical Topics in Education Policy	Critical topics in contemporary educational policy debates in the USA. Explores the dominant ideological and theoretical perspectives about what should be the purposes of schooling. Students analyze the humanist, core-curriculum, vocational, pragmatic as well as the standards-based, market-driven, professionally led, and networked models of reform, theories of change, implementation challenges, and the critiques leveled against these approaches. Students analyze critical topics such as policy formation, leadership, teachers unions, academic performance and community involvement. Encourages students to learn critical "policy skills" and reach reflexive and research-based conclusions about what are the requirements to develop "good school systems" and what their individual and collective contributions could be.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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EPA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		
EPA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		
EPA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	795	Continuing Registration		N	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
EPD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	700	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisite: EPD 710, 712 or 714 with C or better
EPD	710	Current Research in Design	Review and critical evaluation of contemporary literature and research in design, environment and the arts.	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisite: Design, Environment and the Arts PhD OR Design, Environment and the Arts (Digital Culture in Design) PhD OR Environmental Design and Planning PhD OR Environmental Design and Planning (Healthcare and Healing Environments) PhD
EPD	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	1-3		
ERM	201	Environmental Management	Develops an understanding of the fundamentals of environmental science, environmental issues and major environmental standards. Topics covered include basic ecology, population dynamics, environmental resources, environmental pollution and its prevention, the environmental management regulatory framework, sustainability, pollution prevention, waste minimization, and environmental management systems. Provides the foundational knowledge used by environmental professionals who manage environmental problem solving for industry, regulatory agencies, municipalities, consulting firms, military installations, academic institutions and nonprofit organizations specializing in environmental advocacy. Overview course covering elements that are developed in more depth in other ERM courses.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): SOS 101 or SOS 110 or any SG or SQ course

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ERM	203	Environmental Regulations	Explains and discusses federal environmental laws and regulations that apply to the field of environmental management. Addresses the most important Arizona state and county/local regulations that impact decision making in the environmental management practice area. Emphasizes the federal-level requirements, including laws that are most likely to be used by professionals who are not lawyers and working in positions having environmental management and engineering assignments. Uses case studies to help students learn how the laws are applied and implemented in practical situations. Develops an understanding of the fundamentals of environmental laws and regulations. Provides essential knowledge used by environmental and engineering professionals who manage regulatory issue problem solving for industry, government, consulting firms, military installations, academic institutions and nonprofit organizations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): SOS 101 or SOS 110 or any SG or SQ course
ERM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	1-4		
ERM	302	Water and Wastewater Treatment Technology	Explores the development of treatment technologies. Addresses regulatory standards. Emphasizes theory and practice of system design, lab analysis standards and procedures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): MAT 210 or higher; CHM 113; CHM 116 OR MAT 210 or higher; CHM 101; PHY 121
ERM	364	Toxicology and Biohazards in Emergency Management	Introduces poisons. Dose response routes of exposure and toxicokinetics. Diseases associated with natural disasters. Clinical presentation of treatments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		
ERM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	1-4		
ERM	401	Hazardous Waste Management	Definition of hazardous waste, RCRA and CERCLA regulations, hazardous waste classification system. Overview of hazardous waste management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): CHM 101 or higher
ERM	402	Unit Treatment Technologies	Addresses various treatment technologies for contaminated air, water, and soil. Emphasizes design based upon medium, type of contamination, and concentration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Pre- or corequisite(s): ERM 302
ERM	406	Environmental Chemistry	Examines reactions, transport, and fates of hazardous chemicals in water, soil, air, and living organisms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Pre-requisites: CHM 101 (or 113) and MAT 170 or higher
ERM	407	Occupational Hygiene	Overview of occupational health hazards, including recognition, evaluation, and control. Includes regulatory status and health standards.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		
ERM	426	Environmental Issues	Explores the science and policy implications of contemporary problems that threaten the environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		
ERM	428	International Environmental Management	Emphasizes technological and economic pressures experienced by developing countries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3	G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ERM 428 or ERM 528
ERM	432	Sustainable Solid Waste Management	Addresses engineering and management principles associated with integrated solid waste systems. Follows the life of the solid waste from point of generation, reclamation and treatment to point of disposal. Emphasizes the functional units of a solid waste system and the relationships among them. Addresses the physical, chemical and biological transformations of the solid waste, together with the existing technologies and engineering practices for collection, management, treatment and disposal of the solid waste. Emphasizes the sustainable practices such as waste minimization, pollution prevention, reuse and reclamation of the solid waste. Also discusses existing domestic and foreign regulations guiding the proper solid waste management techniques, as well as planning and design of solid waste system operations and facilities.	N	LEL	N	GNA	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): CEE 361 or EGR 325 or ERM 302; Credit is allowed for only ERM 432 or ERM 532 or ERM 494 (Integrated Solid Waste Systems) or ERM 494 (Sustainable Solid Waste Management)
ERM	480	Senior Project	Capstone project experience refining skills in communication, research and information retrieval, critical analysis and criticism, and demonstrating technical competence in each student's area of study.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): senior standing; Pre- or corequisite(s): GIT 413 or Applied Science (Graphic Information Technology) BAS major or Applied Science (Internet & Web Development) BAS major
ERM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-12		
ERM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-6		Prerequisite(s): Barrett Honors student
ERM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-6	L	Prerequisite(s): Barrett Honors student
ERM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	1-4		

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ERM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	1-7	L	
ERM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-3		
ERM	501	Principles of Hazardous Materials and Waste Management	Foundation for courses in curriculum. Topics include definitions of toxic and hazardous substances and wastes, RCRA classification, and OSHA criteria.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	502	Regulatory Framework for Toxic and Hazardous Substances	Examines federal, state, and local regulations for hazardous materials and wastes. Includes history and trends in regulatory development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	503	Principles of Toxicology	Interaction of chemicals with life and environment. Mechanisms of toxic action, dose-response relationships, toxicity testing models, predictive toxicology, and epidemiology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	506	Chemistry of Hazardous Materials	Chemistry and toxicology of hazardous chemicals. Topics include proper handling, storage, transportation, and disposal.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	507	Industrial Hygiene	Emphasizes chemical hazards in industrial settings. Topics include recognizing and measuring hazards, control techniques, and regulatory standards.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	520	Sustainability and Sustainable Development	Explores broad field of environmental sustainability with U.S. and international coverage of green living practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	522	Air Pollution and Toxic Chemicals	Examines issues in the measurement analysis and control of toxic chemicals in air pollution.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	523	Soils and Groundwater Contamination	Theoretical and practical hydrogeology as it applies to cleaning up contamination. Investigative techniques, monitoring, risk assumptions, and assessment methodology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	527	Environmental/Resources Regulations Concepts	Environmental regulations related to water, land use, endangered species, NEPA and other policy issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	528	International Environmental Management	Studies environmental issues and laws outside the U.S., impact of free trade, and multinational corporations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ERM 428 or ERM 528
ERM	532	Sustainable Solid Waste Management	Addresses engineering and management principles associated with integrated solid waste systems. Follows the life of the solid waste from point of generation, reclamation and treatment to point of disposal. Emphasizes the functional units of a solid waste system and the relationships among them. Addresses the physical, chemical and biological transformations of the solid waste, together with the existing technologies and engineering practices for collection, management, treatment and disposal of the solid waste. Emphasizes the sustainable practices such as waste minimization, pollution prevention, reuse and reclamation of the solid waste. Also discusses existing domestic and foreign regulations guiding the proper solid waste management techniques, as well as planning and design of solid waste system operations and facilities.	N	LEL	N	GNA	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): Fulton Schools of Engineering or School of Sustainability or Urban and Environmental Planning graduate student or enrolled in ERM 4+1 program; Credit is allowed for only ERM 432 or ERM 532 or ERM 598 (Sustainable Solid Waste System)
ERM	540	International Environmental Law and Policy	Studies international environmental agreements, enforcement mechanisms, and the role of NGOs and international organizations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ERM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Environmental and Resource Management	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Environmental and Resource Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	501	Social Theory and the Environment	Investigates key conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	502	Political Ecology: Theory and Research	Investigates key theories and research of political ecology through the conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	504	Analysis of Large-Scale Socio-Technological Systems	Provide skills and methods to analyze the design and management of large-scale socio-technological systems and the societal impacts of large-scale technological systems change. Emphasizes assessing the intertwining of lives and livelihoods in large-scale technological systems and the risks and vulnerabilities associated with large-scale systems failures, including the effects of both technological failures and natural hazards.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	510	Urban Environments	Investigates major issues and themes on the urban environment, from urban sprawl to environmental justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	513	Institutions	Studies formal and informal institutional arrangements for the governance of natural resources using case studies, experiments, and formal models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	514	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	540	Statistical Modeling for Sustainability	Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to begin conducting empirical analyses in their domains of interest; bring students to a high level of competency in using a cutting-edge statistical software package (Stata) for data management and data analysis tasks; expose students to applications of statistical methods in the economics/policy/social science sustainability literatures in order to develop an understanding for how statistical tools are operationalized in the research world; and develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations and command of statistical tools that constitute quality empirical research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only AML, ESS or SOS 540
ESS	577	Interdisciplinary Writing Seminar	If you want your work to make a difference in the world, you need to be able to communicate your ideas to diverse audiences in a way that is interesting and accessible. Teaches students to write clearly, persuasively and ethically to people in their disciplines, in other disciplines, and outside academia. Approaches writing as a way to think critically and refine ideas, as well as to communicate them to others.	N	SEM	Y	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	2		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is only allowed for ESS 577 or SOS 577 or SOS 598 (Interdisciplinary Writing) or SOS 598 (Writing Seminar)
ESS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ESS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ESS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EST	115	Digital Systems I	Introduces digital electronics. Topics include number systems and codes used in digital systems, Boolean algebra, logic gates, logic families, and combinational and memory circuits.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		
EST	160	Introduction to Electronic Systems	Introduces the components, devices, and practical design principles that are used to create competitive electronic systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Credit is allowed for only EST 160 or 194 (Intro to Electronic Systems)
EST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EST	200	Project Lab	Provides theoretical and practical overview of principles of measuring instruments and the main objective is to build good lab disciplines.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	2		Pre-requisites: Sophomore standing
EST	210	Circuit Analysis I	Parallel/Series circuits, ohm's law, network theorems, capacitors/inductors and transient analysis. Overview of electronic devices, BJT's, FETs, op-amps.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisites: MAT 266 (or 271); PHY 112 (or 131)
EST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EST	310	Circuit Analysis II	Electronic device analysis and introduction to design. Power supplies, diode circuits, FETs, BJT's, op-amps. Emphasizes frequency response.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 210
EST	315	Digital Systems II	Digital electronics systems, HDL circuits and systems design techniques, and device applications.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 115 and 210; Credit is allowed for only EST 315 or 394 (Digital Electronics II)
EST	345	Planning and Delivering Engineering Projects	Project-based, hands-on course teaches team building, planning, soft skills, tracking progress, and powerful methods that deliver successful, on-time projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 200
EST	350	Microcontroller Applications	Interfacing of microcontrollers to sensors, switches, indicators, and other human interfaces using the C programming language. Applications involve the integration of both hardware and software. Also addresses applications dealing with open- and closed-loop applications.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 315; Credit is allowed for only EST 350 or 394 (Adv Micro Controllers)
EST	370	Sensors	Overview of sensor technology, including mechanical, magnetic, radiation, thermal, chemical, and biological applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 200; EST 210; UET 331
EST	372	Wireless Networking	Systems-level coverage of advanced information communication technology (ICT) topics including both digital and analog wireless communications systems used in today's ICT networks. Transmission systems covered include microwave, satellite, cellular radio, Bluetooth and wireless fidelity communications systems. Topics include: PCM, TDM, antennas, transmission lines, microwave radio, satellite radio, Bluetooth, cellular and wireless fidelity systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): IFT 201 or IFT 358; Credit is allowed for only EST 372 or IFT 372
EST	380	Electronic Devices	Covers materials, structures, and technology for the design, production, and application of the major categories of electronic devices.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: UET 331; Credit is allowed for only EST 380 or 394 (Intro to Electronic Devices)
EST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EST	410	Electronic System Design	Analysis and design of Op-amps, power amplifiers, and digital logic families. Feedback design using frequency response. Computer analysis and design.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 310; Credit is allowed for only EST 410 or 494 (Electronics Systems Design)
EST	465	Statistical Process Control	Introduces statistics, seven QC tools, and control charts for data analysis and interpretation; process capability, 6-sigma, lean manufacturing, and quality system.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Fulton Schools of Engineering undergraduate student; Senior standing; Credit is allowed for only EST 465, 494 (Statistical Process Control) or 565
EST	470	Capstone Design I	Small-group projects designing, building, evaluating, and analyzing components, assemblies, and systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 345; EST 370; EST 372
EST	471	Capstone Design II	Continuation of a small-group project encompassing designing, building, evaluating, and analyzing components, assemblies, and systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 470
EST	471	Capstone Design II	Continuation of a small-group project encompassing designing, building, evaluating, and analyzing components, assemblies, and systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 470
EST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		

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EST	490	Electronics Project	Individual or small group projects in applied electronics; emphasizes lab practice or hardware solutions to practical problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): Fulton Schools of Engineering undergraduate student; min GPA 2.25; OR Fulton Schools of Engineering graduate student
EST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
EST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student
EST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-7	L	Prerequisite(s): Fulton Schools of Engineering undergraduate student; min GPA 2.25; OR Fulton Schools of Engineering graduate student
EST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-3		
EST	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Fulton Polytechnic School graduate student; minimum 15 hours graduate level courses
EST	565	Statistical Process Control	Seven QC tools and control charts for data analysis and interpretation; process capability, 6-sigma, lean manufacturing, quality system, case study and lab experiment.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate (degree seeking or nondegree seeking) student; Credit is allowed for only EST 465, 565 or 598 (Statistical Process Control)
EST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Pre-requisites: MS in Technology graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
EST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
ETH	100	Ethnic and Indigenous Lives	Undertakes an introductory comparative analysis of ethnic groups to understand cultural diversity within the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	
ETH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ETH	300	Principles of Ethnic Studies	Familiarizes students with a range of analytical and theoretical frameworks in the field of ethnic studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	C	
ETH	310	Critical Research Methods	Examines methodological approaches common to programs in such disciplines as American Studies, Ethnic Studies, and Women's Studies. Critical qualitative, historical, archival, and feminist methodological approaches to the study of diverse United States populations comprise the focus of this course.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	Pre-requisite: Minimum 40 hours
ETH	334	The American Southwest in Literature and Film	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AMS 336 or ENG 334 or ETH 334
ETH	380	Race, Gender, and Class	In-depth examination of how social inequalities are reproduced and perpetuated. Explores the intersections of race, class and gender in culture and society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only AMS 380 or ETH 380 or WST 380
ETH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
ETH	428	Chicano Cultures in the Southwest	Examines the history and cultures of people of Mexican descent in the Southwestern region of the United States through exploration of "cultural citizenship" and "belonging" as they relate to the pursuit of civil rights, equality, justice and cultural production.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AMS 428 or ETH 428 or LAS 428 or MAS 598 (Chicano Cultures in Southwest)
ETH	430	Gender on the Borderlands	Examines women's status in the U.S.-Mexico borderlands through key issues such as migration, labor, violence, education, and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours OR WST 100 or 300 with C or better; Credit is allowed for only ETH 430 or LAS 430 or WST 430 or JHR 598 (Gender on the Borderlands)
ETH	449	Hate Speech, Manifestos, and Radical Writings	Examines writings, speeches and texts that provoke radical or even revolutionary social change. At its core, this course asks: What is the radical and what does it do? How do radical writings function as texts, speech acts, inspirational documents, testimonies, accounts of madness, frightening moments, calls to arms, peacekeeping entities or speaking truth to power? Examines injurious speech and provocative writings that span a range of social movements and topics, including radical feminism, radical queer, Black power, indigenous rights, art and performance, anti-technology, animal rights, violence, madness and revolutionary resistance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): minimum 35 hours; minimum 2.50 GPA; Credit is allowed for only AMS 449 or ETH 449 or WST 449 or WST 394 (Hate Speech and Manifestos)
ETH	450	Latina/os, Schooling and Social Inequality	Advanced interdisciplinary understanding of the issues facing Chicano, Mexican American and Latino communities in relation to K-16 schooling in the southwestern United States. Examines various schools of thought that have shaped social discourse and policies, develops a critical perspective on the social and political issues affecting education, and identifies issues--both historical and contemporary--affecting Chicanos in public education.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only AMS 450 or ETH 450 or LAS 450 or AMS 429 (Latino/a School & Social Inequty)
ETH	469	Abject Bodies and the Politics of Trash	Examines the possibilities inherent in "theorizing from the gutter"; looking at the world not from a lofty "Ivory Tower" but from the slime, the muck, the dumpster, the trash heap, the wasteland, the discarded and the downtrodden. Takes its theoretical framework from a radical 1960s manifesto called SCUM Manifesto by Valerie Solanas and from the French feminist philosophies of Julia Kristeva, who theorized the abject as a relationship with the grotesque that reveals the deep-seated fear of death. Uses these theoretical positions to examine trash, both abstractly and literally. Works through a variety of concepts ranging from actual trash, garbage, waste, toxic sludge, pollution and dirt, and tackles more abstract notions of trash such as the knowledge produced on the fringe in circuses, amusement parks, "trailer trash" zones, freak shows and the bodies of those marked as "Other" or different.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 36 hours; Credit is allowed for only AMS 469 or ETH 469 or WST 469 or WST 494 (Trash, Freaks and SCUM) or JHR 598 (Trash, Freaks and SCUM) or MAS 598 (Trash, Freaks and SCUM)
ETH	473	Indigenous and Latina/Chicana Representation	Examines from an interdisciplinary perspective contemporary issues experienced by Indigenous and Chicana/Latina women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 45 hours; Credit is allowed for only ETH 473 or LAS 473 or WST 473
ETH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
ETH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ETH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
ETH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
EVO	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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EVO	520	Evolution and Ecology of Emerging Infectious Diseases	Applying principles and concepts from Ecology, Evolution, and Epidemiology for studying emerging infectious diseases. Emphasizing the interplay of these areas. Intended for life sciences majors and first year graduate students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BIO 494 (Emerging Infectious Diseases) or EVO 520 or MIC 520
EVO	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	600	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	601	Principles of Evolution	Introductory course for graduate students; covers the principles of evolutionary biology from theoretical, empirical, and historical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	610	Research Areas of Evolution	Broadly conceived description of the current research areas of evolutionary biology. Expected of all first-year evolution students.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
EVO	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	100	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Credit is allowed for only EXW, HSC or KIN 100
EXW	101	Foundations in Exercise Science and Wellness	Student-centered instructional course designed to excite and propel the student into the development of a successful academic and professional career path in the field of exercise science and wellness. Presents a general overview of the career opportunities for students in the field with group and individual assignments that enable students to more thoroughly explore options related to their goals. Divided into 3 major sections: academic preparation, professional development and career exploration. Helps students develop their own individual blueprint for accomplishing their professional goals and understand the skills they need to develop along the way to be successful.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		
EXW	102	Principles and Foundations of Health Education and Health Promotion	Designed for students who anticipate working as a health educator in clinical, governmental, worksite/corporate, research-based, or other professional settings. Students gain an understanding of the selected historical, cultural, philosophical, professional and ethical issues in the practice of health education.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		
EXW	105	Physical Activity Instruction: Beginning	Beginning instruction in a variety of physical activities such as aerobics, aquatics, racquet sports, physical conditioning, and golf. Y grade only. May be repeated for credit. 2 hours per week.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		

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EXW	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
EXW	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
EXW	212	Instructional Competency Laboratory	Methods of instructing and leading fitness activities including aerobic, resistance, and flexibility activities.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Prerequisite(s): Exercise and Wellness or Physical Education major
EXW	214	Flexibility Instructional Competency Laboratory	Science and methods of instruction related to flexibility exercises and activities.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Prerequisite(s): Exercise and Wellness or Physical Education major.
EXW	216	Muscular Strength Instructional Competency Laboratory	Science and methods of instruction related to resistance training and muscular strength activities.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Prerequisite(s): Exercise and Wellness or Physical Education major
EXW	218	Cardiovascular Instructional Competency Laboratory	Science and methods of instruction for cardiovascular exercise and fitness activities.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Prerequisite(s): Exercise and Wellness or Secondary Education (Physical Education) major
EXW	284	Exercise and Wellness Preinternship	Professional development course designed to help students prepare for their respective senior-year internships and post-graduate career fields, while developing and enhancing professional practice skills. Students engage in individual assessment and group learning with student peers through activities such as required readings and self assessments, career-related exploration assignments and networking. Utilizes on-campus resources, such as Career Services and the Writing Center, for support and assistance with course work and assignments. Focuses on developing long-term professional and interpersonal competencies career preparation, professional self marketing, and workplace professionalism.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		
EXW	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
EXW	302	Fundamentals of Wellness	Overview of fundamental health, exercise and wellness concepts. Emphasizes personal wellness assessment and application.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	
EXW	310	Computer Skills and Technology for Exercise and Wellness	Applies computer technology to principles of social marketing, tailored communication, e-health consumerism, and statistical analysis.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	CS	Pre-requisites: Exercise and Wellness student; MAT 114, 117, 119, 142 or 170 with C or better
EXW	311	Special Populations in Exercise and Wellness	Introduces the challenged population and surveys the agencies that work with special populations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		
EXW	315	Physiological Foundations of Movement	Studies human movement with emphasis on physiological function of the body in response to physical activity and fitness training.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 201 and 202 with C or better
EXW	316	Physiological Foundations of Movement Laboratory	Investigates theories and methods of exercise physiology in a laboratory and/or applied setting.	N	LAB	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): BIO 201 with C or better; BIO 202 with C or better; Corequisite(s): Exercise and Wellness BS major: EXW 315
EXW	320	Management and Leadership in Exercise and Wellness	Studies management, leadership, legal, ethical, and programmatic theories and applications in fitness and wellness settings.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: ENG 102, 105 or 108; Minimum 30 hours
EXW	322	Spa Management I	History of the spa industry. Overview of different types of spas, spa programs and services, facilities and equipment, operational procedures and systems, the wellness component of spas, and computer applications in spa operations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		
EXW	325	Fitness for Life	Analyzes physical fitness and benefits of exercise with emphasis on application of strategies for fitness and wellness evaluation, behavior change, and lifelong program planning.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: ENG 101; Minimum 30 hours
EXW	330	Kinesiological Foundations of Movement	Study and consideration of human movement with emphasis on kinesiology principles and their application to movement and fitness.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	4		Pre-requisites: BIO 201 with C or better
EXW	335	Physical Activity and Fitness Concepts	Topics are designed for the physical activity and health education professional and focus on application of basic exercise physiology and nutritional concepts in the design and implementation of exercise and physical activity programs to increase physical function and improve health risk factors.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 201 and 202 with C or better
EXW	340	Health Behavior Theory	Focuses on health behavior change theories and concepts that are necessary for planning, implementing and evaluating health education and health promotion programs.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): PSY 101 (or PGS 101); minimum 45 hours
EXW	342	Health Behavior Change	Examines major theories of health behavioral change. Develops intervention strategies and techniques employed to facilitate health behavioral change.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: PSY 101 (PGS 101); minimum hours 45

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EXW	344	Physical Activity in Health and Disease	Examines the role of physical activity and fitness in the development of morbidity and mortality throughout the human life span.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): BIO 202; Pre- or corequisite(s): EXW 101 or 102 (or EXW 290 or 300)
EXW	348	Methods of Health Education	Intended for the pre-professional health educator to learn how to develop sound, effective, and appropriate presentation methods to create learning experiences that facilitate voluntary changes leading to health-enhancing behaviors. Focuses on the knowledge and skills necessary to understand learning and the diverse learner; structure the learning environment; develop appropriate behavioral learning objectives; select appropriate instructional methods; and develop quality lesson, presentation, and unit plans with sound strategies for evaluating learning.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre- or corequisite(s): EXW 101 or 102 (or EXW 290 or 300)
EXW	350	Substance Abuse and Addictive Behavior	In depth study of the pharmacology and effects of addictive substances and the psychosocial risk factors and consequences of substance abuse.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): BIO 201; PSY 101 (or PGS 101); Pre- or corequisite(s): BIO 202
EXW	380	Body Image and Wellness	Explores body image in American culture from physical, psychological, historical, and societal perspectives.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: PSY 101 (PGS 101) with C or better; Minimum 30 hours
EXW	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
EXW	400	Stress Management for Wellness	Examines the stress response and management from a behavioral perspective as it pertains to individuals or groups.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 202; PSY 101; 45 minimum hours
EXW	410	Obesity Perspectives and Prescriptions	Provides a structure for understanding, critiquing and synthesizing the information and misinformation about obesity, weight loss and health. Explores topics: the obesity epidemic; health consequences of obesity; fitness and fatness; etiology of weight gain; health implications of weight loss; psychological, cultural, social and political considerations of obesity; and a review of the application of prevention and treatment of obesity. Examines a wellness perspective about obesity by considering obesity as a normal physiological response within a pathological environment.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: BIO 202; PSY 101. Credit is allowed for only EXW 410 or EXW 494 (Obesity Perspectives and Prescriptions)Pre-req for EXW 410
EXW	412	Pediatric Obesity	Covers a variety of aspects related to pediatric obesity including the causes and consequences in terms of physiologic, genetic, psychosocial, environmental and economic. Also discusses potential interventions such as behavioral, pharmacologic, surgical and public health and policy. Evidenced-based course where research guides class lectures and discussions.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 315 or KIN 340; Credit is allowed for only EXW 412 or KIN 446 or EXW 494 (Pediatric Obesity) or KIN 494 (Pediatric Obesity)
EXW	420	Exercise Testing	Theoretical basis and practical application of pre-exercise screening, exercise testing, estimates of energy expenditure, and interpretation of results.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	4		Prerequisite(s): EXW 214 with C or better; EXW 216 with C or better; EXW 218 with C or better; EXW 315 with C or better; EXW 316 with C or better
EXW	425	Exercise Prescription	Theoretical basis for and application of general principles of exercise prescription to various ages, fitness levels, and health states.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: EXW 214, 216, 218, 315, and 330 with C or better; Pre/Co-requisites: EXW 420 with C or better if completed
EXW	434	Fitness and Strength Conditioning	Applied course covering advanced fitness, strength and conditioning concepts and techniques. Applies to professionals working with individuals in whom a major goal of their physical activity program is to maximize human performance potential either for personal fitness goals or success in specific sports or for applications in occupational athletes (military, fire and police). Guides in development of techniques and skills critical to safe, effective and motivating instruction of advanced speed, power, agility and conditioning exercises and programs for varying individuals and teams. Includes both lecture and participatory application labs. Expects students to search and analyze the literature on advanced fitness conditioning concepts and techniques. Addresses a significant number of core competencies identified for the NSCA Certified Strength and Conditioning Specialist (CSCS) examination.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 216; minimum 75 hours; Pre- or corequisite(s): EXW 315 or 330; Credit is allowed for only EXW 434 or EXW 494 (Sports and Fitness Conditioning)
EXW	444	Epidemiology	Introduces epidemiological concepts and prepares the student to read, comprehend, and report epidemiological research.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 101 or 102 (or EXW 290 or 300); any CS statistics course with C or better
EXW	446	Health Promotion and Program Evaluation	Applies theory-based concepts and methods of health promotion and program evaluation.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 101 or 102 (or EXW 290 or 300) with C or better; EXW 342 with C or better

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EXW	450	Social Determinants of Health and Health Behavior	Examines the social determinants (e.g., early childhood, family, schools, worksites, built and food environments, and socio-economic status) of health and health behavior, particularly physical activity behavior and eating.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	(L or SB) & C	Prerequisite(s): EXW 101 or 102 (or 290 or 300) with C or better; PSY 101 (or PGS 101) with C or better
EXW	452	Health Advocacy in Health Education	Links advocacy for individual patients/consumers (patient advocacy) with advocacy for groups of patients/consumers (policy advocacy). Identifies and explores specific skills needed by community health educators, pre-professional primary/secondary health teachers and health education specialists for developing a practice of advocacy in their work. Methods, techniques and resources used in advocating in health promotion.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 45 hours
EXW	454	Health Promotion Program Planning and Implementation	Applies theory-based concepts and methods of health promotion (HP). Covers selected topics in HP across a variety of domains of health. Program planning concepts include the use of planning frameworks, needs assessments, and the use of theory in health promotion program planning. Also covers practical issues related to health promotion program implementation such as resource management and program marketing.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 101 or 102 (or EXW 290 or 300); EXW 340 or 342; Pre- or corequisite(s): EXW 444 with C or better if completed
EXW	456	Health Promotion Program Evaluation	Covers program evaluation concepts including how to plan an evaluation, how to analyze and interpret data, and how to report evaluation results. Students learn a basic framework for conducting a program evaluation, various research/evaluation designs, and data analysis and statistics. Topics are covered in enough detail so that the student may understand how inferences are made regarding program evaluation.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 444; EXW 454
EXW	460	Resistance Training Application and Theory	Fosters critical thinking as it applies to resistance training theory.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: EXW 216 and 315 with C or better
EXW	466	Health Promotion Program Management and Administration	Uses a dynamic team process to build knowledge and skills for the effective administration of health promotion program proposals. Areas of emphasis are strategic planning, managing fiscal resources, demonstrating leadership, developing human resources, facilitating community partnerships, formative and summative evaluation. Aligns with specific objectives required for the Certified Health Education Specialist offered by the National Commission for Health Education Credentialing.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: EXW 454; Pre/co-requisite: EXW 456
EXW	476	Community Health	Applies major concepts of community health. Focuses on populations, settings and social issues related to community health. Basics of epidemiology, disease prevention, and health promotion. Explores community health concepts related to organizing and building community coalitions and health programs. Also explores school health, maternal, infant and child health, minority health, and environmental influences on community health.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 101 or 102 (or EXW 290 or 300) with C or better; EXW 342 or EXW 394 (Health Behavior Theory) with C or better; EXW 446 or 454 with C or better; EXW 456 with C or better
EXW	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): 2.00 GPA; Exercise & Wellness concentration: EXW 420 and 425 with C or better OR Health Promotion concentration: EXW 348 and 456 with C or better OR Health Education and Health Promotion major: EXW 348 and 454 and 456
EXW	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6		Prerequisite(s): Barrett Honors student
EXW	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6	L	Prerequisite(s): Barrett Honors student
EXW	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
EXW	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-7	L	
EXW	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
EXW	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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EXW	501	Research Statistics	Statistical procedures; sampling techniques, hypothesis testing, and experimental designs as they relate to research publications.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	534	Sports and Fitness Conditioning	Bases of sports and fitness conditioning, including aerobic and anaerobic power, strength, flexibility, and analysis of conditioning components for sports and fitness.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	535	Advanced Exercise Assessment and Prescription	Theory and practice of laboratory methods in applied exercise physiology. Procedures for assessment and prescription for individuals with chronic disease.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	536	Physiological Aspects of Physical Activity and Chronic Disease	Role of physiological mechanisms associated with acute and long-term physical activity and its influence on chronic disease and wellness.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	538	Obesity, Exercise and Health	Critically examines scientific and medical evidence concerning obesity, exercise, and health across the life span.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	542	Health Promotion	Theory and research concerning fitness and wellness programs in nutrition, physical activity, smoking cessation, and stress management.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	544	Fitness/Wellness Management	Development of the fitness/wellness industry. Planning, organizing, promoting, and managing fitness/wellness programs.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	560	Cardiopulmonary Rehabilitation	Exercise testing and prescription for cardiac and pulmonary patients as well as pharmacology, electrocardiography, pathophysiology of chronic diseases, and leadership of patients in cardiac rehabilitation and pulmonary rehabilitation programs.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	562	Functional Assessment and Exercise Prescription for Older Adults	Assessment of functional capacity and prescription of exercise that is appropriate for older adults including healthy, frail, diseased and very old.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): MS Clinical Exercise Physiology or Exercise and Wellness major
EXW	564	Aging and Lifestyle Behaviors	Provides an overview of health behaviors in older adults. Centers on the perceptions and behaviors of older adults in reference to illness prevention, health promotion and reactions to acute and chronic illness and the context in which these behaviors occur. Specifically examines the psychological, familial, cultural and contextual factors which influence older adults' personal health practices and illness behaviors. Considers the older person as an individual in a complex system, engaged in decision making and his/her subsequent actions to maintain or improve health status. Solidifies concepts through the use of in-class case studies and discussions.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: EXW 542
EXW	565	Cardiovascular and Pulmonary Physiology	In-depth study of the physiology of exercise with special regard to cardiovascular and pulmonary responses in healthy and chronically diseased individuals.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): MS in Clinical Exercise Physiology major
EXW	568	Management and Treatment of Chronic Disease for the Clinical Exercise Physiologist	Investigates the physiology, pathophysiology and treatment options for a variety of diseases that the clinical exercise physiologist routinely encounters in the work environment. Prepares students to qualify for ACSM Clinical Exercise Physiologist certification.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: EXW 560
EXW	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	597	Capstone Project	For non-thesis students in the MS degree program to provide a culminating field experience or non-research project for students to apply the coursework and healthy aging concepts.	N	RSC	N	YGB	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): EXW 500; EXW 501; EXW 536; EXW 542; EXW 591

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
EXW	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	635	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	640	Analysis of Variance for Exercise and Wellness	Analyzes variance methods with an emphasis on research measures of human performance.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	641	Qualitative Research Methods	Introductory overview of qualitative research methods frequently used in education and health. Emphasizes analysis of research and practical application.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	642	Exercise Epidemiology	Physical activity, exercise, and physical fitness and the development of chronic disease.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: EXW 500 with C or better; EXW 501 with C or better
EXW	643	Correlation/Regression/Multivariate Statistics	Graduate-level statistics course for PhD/master's students who will be doing research in the area of exercise and wellness.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	645	Advanced Applied Methods and Data Analysis	Heavily applied focus on implementing research methods and statistical modeling techniques in the health promotion sciences. Addresses practical issues in specifying, interpreting and presenting research findings using appropriate statistical techniques. Addresses reporting standards (e.g., CONSORT, STROBE, PRISMA) and practical issues related to manuscript submission. Covers analytical methods including multiple regression and logistic regression, ANOVA, mediation and moderation, exploratory factor analysis, multilevel models for hierarchical data and intensive longitudinal data, basic time-to-event analyses (i.e., survival), and meta-analysis; also remains flexible to address critical and emerging methodologies in the health promotion sciences. Covers statistical methods in a conceptual nature with a focus on the use of statistical software packages (primarily SPSS) and interpretation of outputs.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 640, 643
EXW	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	701	Advanced Research Methods	Provides doctoral students in Nutrition and Health Promotion with instruction in methods to enhance scientific writing skills in the health sciences and guidance through the process required to organize and submit a fundable research grant proposal.	N	SEM	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 700
EXW	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	101	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
FAS	101	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
FAS	101	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	

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FAS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
FAS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
FAS	264	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only FAS 264 or SOC 264
FAS	264	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only FAS 264 or SOC 264
FAS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
FAS	301	Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
FAS	301	Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
FAS	324	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & H	Credit is allowed for only FAS or SOC 324
FAS	331	Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
FAS	331	Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
FAS	332	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
FAS	332	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
FAS	332	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
FAS	360	Black Families in the Diaspora	Within a historical, cultural, social-economic, and international context, the institution of Black families begins with their lives in Africa, South America, and the Caribbean and follows the cultural continuities and adaptations impacting the structure and functioning of contemporary African America families. Theoretical models provide focus to studying voluntary and involuntary migration, family labor force involvement, gender roles, marital relations, parenting, kinship and community networks. Throughout the course attention is given to the role of social policies in shaping the well-being of Black families.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Prerequisite(s): AFR 200 (or AFS 200) or FAS 101; Credit is allowed for only AFR 360 (or AFS 360) or FAS 360
FAS	361	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Prerequisite(s): SOC 101 or SOC 301 or CDE 232; SOC 390; Credit is allowed for only FAS 361 or SOC 391
FAS	370	Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Credit is allowed for only AFR 370 (or AFS 370) or FAS 370
FAS	370	Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Credit is allowed for only AFR 370 (or AFS 370) or FAS 370
FAS	390	Supervised Research Experience	Practical, firsthand experience within current faculty research projects in family studies or child development. Y grade only; may be repeated for total of 6 hours.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		
FAS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
FAS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
FAS	403	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	410	Military Family Systems in a Democracy	In-depth overview of recent research, issues, trends relating to military families and the interactions within the military culture and societal cultures.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): FAS 101 or PSY 101 (or PGS 101) or SOC 101; minimum 30 hours
FAS	421	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC). Credit is allowed for only ALD 431, 531 or FAS 421

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FAS	431	Parent-Adolescent Relationships	Dynamics of the relationships between parents and adolescents. Developmental characteristics of adolescence and the corresponding adult stage.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
FAS	435	Advanced Marriage and Family Relationships	In-depth examination of research, issues, and trends relating to marriage and family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Pre-requisites: Minimum 30 hours; SOC 101, PSY 101(PGS 101), FAS 101 or FAS 331 with C or better; Credit is allowed for only SOC or FAS 435
FAS	436	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	440	Fundamentals of Marriage and Family Therapy	Introduces the fundamental orientations of marriage and family therapy.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
FAS	460	Leadership, Research, and Collaboration in Community Change	Advanced understanding of leadership and the development of proposals for innovative plans that enhance the well-being of children, youth and families.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: Minimum 60 hours; Credit is allowed for only FAS 460, SOC 460 or FAS 498 (Leadership Research & Collaboration in Change)
FAS	461	Community Action Research Experience Research Internship	Second course in Community Action Research Experience (CARE) sequence. Students apply leadership, professional collaboration, project management and research skills in conducting an approved community action research project.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: FAS 460 (or SOC 460); Minimum 60 hours. Credit is allowed for only FAS 461 or SOC 461
FAS	472	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
FAS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
FAS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6	L	Prerequisite(s): Barrett Honors student
FAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
FAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
FAS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
FAS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-7		
FAS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		
FAS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
FAS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEL	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	503	Academic Professional Development	Becoming and working as a academic, including how to write a vita, choose a thesis topic, or find dissertation data.	N	REC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	505	Applied Regression Analysis	Multiple linear regression topics relevant to social science data analysis. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 505
FAS	507	Categorical Data Analysis	Logistic regression and related topics relevant to categorical data analysis in social sciences. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 507

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FAS	508	Structural Equation Analysis for the Social Sciences	Theory and application of structural equation modeling. Path analysis and latent variable models such as CFA, multiple group analysis and models for longitudinal data. Projects involve conducting analyses and writing results.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 508
FAS	509	Event History Analysis	Proportional hazards models and other methods for analyzing longitudinal data and establishing hazard rates of events for exploratory variables.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 509
FAS	512	Secondary Data Analysis	Works with existing data to produce a publishable article.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 512
FAS	531	Theoretical Issues in Family Sciences	Historical and current approaches to theory development, evaluation, and application in family studies.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	539	Research Issues in Family Interaction	Critical review of current and past research in the area of family dynamics. Emphasizes interactional processes within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	570	Introduction to Marriage and Family Therapy	Introduces major marriage and family therapy orientations. Reviews history, theory, application, and outcome research for each orientation.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	571	Assessment in Marriage and Family Therapy	Assessment and outcome evaluation of couples and families involved in marital and family therapy.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	572	Advanced Techniques in Marriage and Family Therapy	In-depth review of assumptions and advanced techniques associated with contemporary marriage and family therapy approaches.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	573	Dysfunctional Families	Critical review of current theory and empirical evidence connecting marital and family interaction patterns with aberrant behavior.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	574	Family Theory for Marriage and Family Therapy	Examines the theoretical orientations within the family therapy field, including the evolution, premises, and assumptions of each.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	575	Applied Issues in Couples - Therapy	Examines issues unique to therapeutic work with couples, including lifespan transition, multicultural issues, divorce, parenting, and remarriage. Seminar. Enroll requirements: Pre-requisites: Admission into MAS-MFT program.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	576	Applied Issues in Human Development for MFT: Psychopathology	Recognition and diagnosis of maladaptive behavior according to DSM criteria across human development.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	577	Applied Issues in Children and Adolescents in Marriage and Family Therapy	Examines developmental factors that lead to disorders in children and adolescents, with an emphasis on a systemic framework.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	578	Applied Issues in Sexuality for Marriage and Family Therapy	Examines the major methods used to assess and treat sexual issues and the treatment of sexual disorders.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	579	Applied Research in Marriage and Family Therapy	Critical examination of research concepts, quantitative and qualitative research designs, and applicability in clinical settings.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	581	Professional Issues and Ethics	Examines legal and ethical concerns of marriage and family therapists, emphasizing licensing standards and the Code of Ethics.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	586	Capstone I	Professional exploration and goal specification for non-thesis capstone project.	N	PRA	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): 3 hours in any CDE; FAS or SOC 500-level course with C or better; Credit is allowed for only FAS 586 or SOC 586
FAS	587	Capstone II	Develops professional expertise and area of focused interest.	N	RSC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): FAS 586 or SOC 586. Credit is allowed for only FAS 587 or SOC 587

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FAS	588	Capstone III	Applies developed expertise and knowledge to professional goal.	N	PRA	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): CDE 501 or SOC 501; CDE 531 or SOC 585; FAS 500 or SOC 500; FAS 587 or SOC 587; 12 additional graduate-level hours in CDE, FAS, and/or SOC; Credit is allowed for only FAS 588 or SOC 588
FAS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
FAS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	123	ASU Financial Literacy	A practical approach to financial challenges faced by ASU students. Emphasizes financial choices likely to be encountered while at ASU, as well as issues to be encountered immediately upon graduation. Topics include credit cards, student loans, credit scores, saving, investing, insurance, transportation, housing, taxes, goal setting and budgeting.	N	LEC	N	YGB	W.P. Carey School of Business	Department of Finance	1		Credit is allowed for only FIN 123 or 191(ASU Financial Literacy)
FIN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-3		
FIN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
FIN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
FIN	300	Fundamentals of Finance	Theory and problems in financial management of business enterprises.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s) with C or better: ACC 231, 232 or 261; ECN 212; ECN 221, ECN 231, IEE 380 or STP 280; MAT 211, 266 or 271; Non-Business min. 2.5 GPA and min. 56 hours; Pre- or corequisite: ACC 241, 242 or 271; Credit for only FIN 300, 302 or 303
FIN	302	Managerial Finance	Theories and techniques used for business decisions in working capital management, capital budgeting, financial control, and long-term financing.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisites: W.P. Carey Finance major; with C or better: ACC 231, 232 or 261; ECN 211 or 213; ECN 212 or 214; ECN 221 or 231; MAT 211 or 271; Pre- or corequisite: ACC 241, 242 or 271 with C or better if completed. Credit allowed for only FIN 302 or 303
FIN	303	Honors Finance	Covers basic principles of finance, practical tools for financial decision making, and evaluation methods employed by the firm.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisites: W.P. Carey Honors student; with C or better: ACC 231, 232 or 261; ECN 211 or 213; ECN 212 or 214; ECN 221 or 231; MAT 211 or 271; Pre- or corequisite: ACC 241, 242 or 271 with C or better if completed. Credit allowed for only FIN 302 or 303
FIN	331	Financial Markets and Institutions	Analyzes financial markets and intermediaries. Theory of financial intermediation, interest rate theory, money and capital market instruments, and government regulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey BS major or Business minor; with C or better: ACC 231 or 232 or 261; ECN 211 or 213; ECN 212 or 214; ECN 221 or 231; MAT 211 or 271; Pre- or corequisite(s): ACC 241 or 242 or 271 with C or better if completed
FIN	361	Advanced Managerial Finance	Builds on FIN 302. Advanced material on capital budgeting, cost of capital, CAPM, asset valuation, capital structure, and financial policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: W.P. Carey Finance BS student; FIN 302 with C or better
FIN	380	Personal Financial Management	Dynamic analysis of personal financial planning, including time value of money, stock and bond investment, and retirement and estate planning.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: Minimum 2.00 GPA; Minimum 56 hours OR Non-degree student with minimum 2.00 GPA OR Graduate student; Not for Finance major credit

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
FIN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey BS non-Finance major; FIN 300 (or 302 or 303) with C or better
FIN	421	Security Analysis and Portfolio Management	Security analysis theory and practice. Selection and management of financial asset portfolios. Securities markets and portfolio risk-return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey Finance BS major; ACC 340 with C or better; FIN 303 or 361 with C or better; FIN 331 with C or better
FIN	427	Derivative Financial Securities	Study of stock options, index options, convertible securities, financial futures, warrants, subscription rights, and arbitrage pricing theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: W.P. Carey Finance BS student; FIN 421 with C or better
FIN	431	Management of Financial Institutions	Asset/liability and capital management in financial institutions. Influence of market factors and regulatory agencies. Emphasizes commercial banks.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey Finance BS major; ACC 340; FIN 303 or 361 with C or better; FIN 331 with C or better
FIN	456	International Financial Management	Exchange rate determination, financial markets, managing multinational corporations, capital budgeting, and hedging currency risk exposure from an international perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3	G	Prerequisite(s): W.P. Carey Finance BS major; ACC 340 with C or better; FIN 303 or 361 with C or better; FIN 331 with C or better, OR Honors student in Finance: FIN 303 and 331 with C or better
FIN	461	Financial Cases and Modeling	Case-oriented capstone course in managerial finance. Contemporary issues of liquidity management, capital budgeting, capital structure, and financial strategy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3	L	Prerequisite(s) with C or better: ACC 340; FIN 303 (or FIN 361), 331; minimum 87 hours; BS Finance major. Pre- or corequisite(s): FIN 421 with C or better if completed
FIN	471	Investment Portfolio Management	Under faculty supervision, students manage over \$500,000 of the ASU Foundation's assets over the course of the year. Must take for a total of 3 hours.	N	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-3		Pre-requisite: FIN 303 or 361 with C or better
FIN	472	Investment Banking Industry Scholars	Provides conceptual basis for performing analysis, providing advice and making decisions in elite financial services firms. Must take for a total of 3 hours.	N	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-3		Prerequisite(s): application and selection process; Credit is allowed for only FIN 472 or FIN 494 (Investment Banking Industry Scholars)
FIN	481	Honors Seminar in Finance	Honors course covering topics that include theory and applications concerning managerial finance, investments, and financial institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey Finance BS major with Honors status; ACC 340 with C or better; FIN 303 or 361 with C or better; FIN 331 with C or better
FIN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P. Carey BS student; FIN 300, FIN 302 or 303 with C or better
FIN	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	W.P. Carey School of Business	Department of Finance	1-6		Prerequisite(s): Barrett Honors student
FIN	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	W.P. Carey School of Business	Department of Finance	1-6	L	Prerequisite(s): Barrett Honors student
FIN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Finance BS student; ACC 315 or ACC 303 or ACC 340, FIN 331, and FIN 303 or FIN 361 all with C or better
FIN	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-6		Prerequisite(s): Barrett Honors student
FIN	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-7		Pre-requisites: W.P. Carey Finance students with professional status; FIN 331 and 361 with C or better; ACC 315 or 340 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FIN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Finance	1-3		Pre-requisites: W.P. Carey Finance students with professional status
FIN	502	Finance: The Art of Managing Resources to Create Value	Develops analytical techniques and financial theories used to make optimal decisions in a corporate setting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2-4		Prerequisite(s): ACC 502 with C or better; ECN 501 with C or better
FIN	520	Valuation Techniques	Improves the understanding of valuation concepts and how to apply them. Shows how to value assets using free cash flow and economic value-added methods.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	525	Investment Strategies	Presents the fundamental principles of risk and return, portfolio diversification, asset allocation, efficient markets, active portfolio management, portfolio evaluation. Reviews selected alternative investment strategies such as hedge fund investments.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	530	Derivatives	Intermediate- to advanced-level course in derivative assets such as options, forward and futures contracts, swaps and financial engineering.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	540	Advanced Financial Management	Offers a comprehensive exploration of the revolutionary developments occurring in the world's financial markets.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	545	Advanced Corporate Finance	Studies major decision-making areas and selected topics in corporate finance. Attempts to develop decision-making ability in these areas using both lectures and cases.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W. P. Carey degree-seeking graduate student; Credit is allowed for only FIN 545 or 591 (Advanced Corporate Finance)
FIN	550	Fixed Income	Intermediate- to advanced-level course in fixed income instruments and associated relative valuation of the securities.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	555	Entrepreneurial Finance	Provides an overview of the economics and institutions involved in entrepreneurial finance. Focuses on the financing of new ventures. Consists primarily of case analysis, supplemented with in-class exercises and lecture material.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W. P. Carey degree-seeking graduate student
FIN	560	International Finance	Examines the financial issues of an international investment decision. Main topics include foreign exchange market, investment alternatives in the international capital markets, and the management of foreign exchange risk.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	565	Risk Management in Banks and Financial Institutions	Provides a risk management view of financial institutions (also known as financial intermediaries). Traditionally, banking courses have focused on an overview of the financial services industry, sector by sector, concentrating on balance sheet presentations and overlooking management decision making and risk management. In contrast, this course emphasizes a risk management approach.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W. P. Carey degree-seeking graduate student
FIN	575	Finance Capstone	Provides a culminating experience as a step in completing the degree. Applies finance principles related to the investment, risk management and financing policies of the firm to develop decision-making ability in these areas. Emphasizes analysis of finance problems through selected readings and case studies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W. P. Carey degree-seeking graduate student; Credit is allowed for only FIN 575 or 591 (Finance Capstone)
FIN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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FIN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: FIN 502 with C or better
FIN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	781	Theory of Finance	Fundamental tools of financial economics; asset pricing, arbitrage, option pricing, capital structure, dividend policy, asymmetric information, and transaction-cost economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	782	Theory of Finance II	Fundamentals of corporate finance, contract theory, agency problems, and game theory applications in Finance.	N	SEM	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: W. P. Carey degree-seeking Graduate student
FIN	783	Empirical Asset Pricing	Asset pricing models in finance; efficient market hypothesis, empirical factor models, option pricing basics.	N	SEM	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: W. P. Carey degree-seeking Graduate student
FIN	785	Financial Economics of Capital Markets	Asset pricing theory, equilibrium asset pricing models, and the equity premium puzzle; incomplete and imperfect markets.	N	SEM	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: W. P. Carey degree-seeking Graduate student
FIN	786	Corporate Finance	Issues in corporate finance covering topics that impinge on corporate finance, financial contracting, intermediation; empirical corporate finance; microstructure.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: W. P. Carey degree-seeking graduate student
FIN	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Finance	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FIS	101	SFIS: The ASU Experience	Welcomes freshman students enrolled in the Innovation in Society major at ASU. Introduces the array of resources available to them as ASU students, stimulates them to reflect on their choice of major, and provides an opportunity to hear about the career trajectories and interests of faculty and alumni from the School for the Future of Innovation in Society. Capped at sections of 20 students to promote discussion and a sense of community.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	1		

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FIS	111	Welcome to the Future	Explores the ways in which the future inspires, shapes and motivates the present. Illustrates how possible futures are used by people and institutions to advance agendas, shape conversations and sell products. Examines how science, technology and other forces are mobilized to create change. Empowers students to play a role in shaping our collective future.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		
FIS	201	Innovation in Society	In the modern age, governments, multinational corporations and civil society movements have rallied around the idea that innovation is necessary for the maintenance of health, prosperity and the good life in general. Examines the vast implications of this promise, the reasons why it is so powerful and explanations for why it falls short. Also examines what innovation is, who funds it and why some innovations succeed while others fail. Links innovation with society to see how change happens differently in different places and how diverse populations are impacted.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		
FIS	305	Ways of Knowing	Students research, beginning with the concept of research itself and its various purposes, highlighting knowledge and how it is created in different disciplinary approaches. Exposes historical and philosophical underpinnings of how research is conceptualized, presented and implemented, including what constitutes information, knowledge and evidence. Introduces material that is in a traditional research design and methodology course; however, the emphasis uniquely focuses on knowledge creation, innovation, the nature of disciplinary knowledge and its impact on society. Explores the epistemological differences in problem identification and approaches to inquiry in the disciplinary perspectives of engineering, the sciences and in the social sciences.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): minimum 45 hours
FIS	307	Navigating Futures	Foresight methods and their potentials as entry-points into public discussions about near- and mid-range technoscientific developments. Four elements constitute the organizing axis of the course: (1) the history of foresight exercises in government agencies and business organizations; (2) the methods of four forms of foresight exercises (technology foresight, science and technology studies, anticipatory governance and scenario development); (3) a comparative assessment of these dominant forms; and (4) a group-based application exercise using one of the foresight methods.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): minimum 45 hours
FIS	308	Politics, Markets and Innovation	Studies the roles that governments, markets and other factors play in promoting, disseminating and regulating science-based technological innovation. Includes examining the theoretical literature on factors that structure markets and shape diffusion, as well as case studies that illustrate the processes and mechanisms that govern innovations in society. In addition to studying the role of governments, firms and universities, also considers the role of publics as consumers who adopt innovations but also as citizens who may be skeptical of them. Includes case studies in agriculture, health care, biotechnology and digital rights.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): minimum 45 hours
FIS	331	Technology and the Modern World	Explores how technological systems are developed and embedded in the modern world with an eye to playing a role in creating better futures. Examines how machines and techniques can shape institutions, relationships and values. Challenges students to envision futures that they want and work to develop strategies for moving us (and our systems) toward those futures. Analyzes technologies past, present and imagined, and describes the ways in which technologies shape our world and the ways in which we shape those technologies. Through repeated practice in class students play a productive role in and even facilitate conversations that tease out the relationships between values and technological systems.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): minimum 45 hours
FIS	332	Risk and the Future	Examines the evolving global risk landscape that is resulting from rapidly increasing global connectivity, tight coupling and massive complexity. Develops an understanding of how innovation in society is changing the risk landscape and considers how innovation in approaches to risk can help navigate this emerging landscape. Topics include technological risk, sociopolitical risk, catastrophic risk, existential risk, converging technologies, perception and uncertainty, anticipation, precaution, uncertainty and risk innovation.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): minimum 45 hours

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FIS	333	Governing Emerging Technologies	Examines the variety of ways in which societies make collective decisions or govern science and technology. Focuses on a particular category of science and technology: the set of emerging technologies like nanotechnology, artificial intelligence and robotics, genetic modification and synthetic biology, cognitive science and neurotechnology, geoengineering, and others that pose particular problems of high stakes, high uncertainty and ambiguous novelty. Closely allied with the research agenda of numerous faculty in the School for the Future of Innovation in Society, especially those in the Center for Nanotechnology in Society, the Risk Innovation Lab, and others; exposes students to inquiry and skills directly from the research front. Students perform numerous research tasks.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): minimum 45 hours
FIS	334	Science, Technology and Inequality	Conceptual and theoretical frameworks; provides empirical case studies that contribute to understandings of science and technology as they are used in society. The applications of science and technology in society need to be understood as instrumental to the creation and maintenance of inequality within and between societies. Science and technology does not merely cause or alleviate inequality, but are more profoundly implicated in social relations regarding distribution and access to the benefits of different technologies as well as exposure to risks from science and technology projects in society. The more pervasive and obdurate sources of social distribution are enshrined and entrenched in these scientific and technological systems.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only FIS 334 or JUS 334
FIS	335	Designing Knowledge	Provides a foundational understanding of how social organizations make and use knowledge. From research laboratories to biotechnology companies to statistical agencies, many organizations are specifically designed to be knowledge enterprises, enterprises whose primary purpose is to produce knowledge. All organizations in modern societies also operate knowledge systems; systems whose purpose is to create, validate, circulate, communicate and apply knowledge in the making of decisions. Examines how these forms of organization work and contribute to modern societies.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): minimum 45 hours
FIS	336	Science and Technology Policy	Science and technology are powerful forces in the modern world. They have been hailed as a way to address everything from world hunger to old age. This does not, however, happen automatically, nor does it always work out the way one presumes. Governments make numerous decisions that affect the direction and application of science and technology, and government policies are affected by a myriad of social, political, and cultural factors. This class will explore the variety of ways in which governments make these policies, how the policies shape the development of science and technology and their applications, and how policy may be shaped to create better futures. Governments around the world have coalesced around the idea that science and technology are necessary for the promotion of the good life. We will examine how they put this idea into action by looking at five interrelated topics: Food, Security/Military, Health, Economy, and Sustainability.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		
FIS	337	Innovation and Global Development	International development, the role of technology and innovation, and the current era of globalization. Focuses primarily on socioeconomic development. The globalization of the world economy, with the end of the Cold War, and the advent of global information and communications technologies, has had significant implications for development around the globe. While wealth is rising in many countries and among certain social classes, there is still overwhelming poverty, lack of access to clean water, adequate nutrition, and health services for the majority of people in the world. This is not a new situation; however the advent of the recent era of globalization, which includes both political and technological changes, is a variable that influences development in complex ways.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): minimum 45 hours
FIS	371	Innovation for Impact: Impact Journey	Builds on the ideas, concepts and experiences engaged in earlier course work. Innovation allows for amazing possibilities, and within each one of us is the potential to create, apply, research and scale innovation to realize impact goals. Grounded in a use-inspired framework with a focus on transforming society, engages innovation for impact with a particular focus on what constitutes and how one achieves sustainable and scalable outcomes.	N	SEM	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): minimum 45 hours
FIS	372	Innovation for Impact: Inquiry Journey	Builds on the ideas, concepts and experiences engaged in earlier course work. Grounded in a use-inspired framework with a focus on transforming society, engages innovation for impact with a particular focus on meaning making, grounded claims, and what it means to gather, analyze, construct and advance meaningful assertions and storied truths that advance productive claims about the potential of an innovation to realize impact goals.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): minimum 45 hours

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FIS	373	Innovation for Impact: Innovation Journey	Builds on the ideas, concepts and experiences engaged in earlier course work. Grounded in a use-inspired framework with a focus on transforming society, engages innovation for impact with a focus on imagining, designing, developing and optimizing a particular innovation such that it is likely to realize impact goals. Beyond product-centric perspectives that locate change within the innovation, this journey emphasizes an ecological perspective that positions innovation as a shared accomplishment distributed across the designed innovation, engaged participants, prepared facilitators and a responsive ecosystem.	N	SEM	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): minimum 45 hours
FIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-4		
FIS	431	Technology, Security and Insecurity in Global Politics	Focuses on the international political aspects of technological change; examines the impact of technological innovation and political change on the international political system. The overall goal is to create an awareness of and ability to analyze and synthesize world events, the particular role of technology, and consider the myriad ways that globalization and technology as a main driver could be changing the international system of nation-states. Technological innovation often takes place within a political context, including international politics, as nation-states and other entities develop technologies within the context of competition and power. There are several issues that run throughout the course as major themes. One is the role of technology in political and social change, and the impact of the latter on the former.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): minimum 45 hours
FIS	480	Innovation in Society Studio	Facilitates experiential learning and allows students to work with clients in the field of technology, innovation and sustainability. Through team projects with identified stakeholders, students engage, plan, design, implement and assess projects while learning interpersonal skills and managing client relationships. Students gain real-world experience and develop skills in project management, including planning, implementing and evaluating a complete project cycle. Allows students to manage both client-based projects and team relationships to complete projects. Students carry out project-based research, conduct interviews and meetings, make site visits, develop work plans and scope of works, negotiate clear deliverables with clients, implement projects and give public presentations. Presentations are grounded in the idea of conducting effective science communication.	N	SEM	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): FIS 305
FIS	481	Innovation for Impact: Application Journey	As a culminating experience, course brings together the previous experiences and emerging expertise to investigate, innovate and cultivate an impact innovation to achieve impact goals. Starting with building a grounded appreciation for a particular impact outcome, participants then design an innovation to realize a better future state, grounding this work in lessons with respect to logic models, design fictions, agile startups, and rapid prototyping. Some participants simply test a component and produce a reflective analysis, while others expand credit requirements and iterate to achieve transformative outcomes.	N	SEM	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): FIS 371; FIS 372; FIS 373
FIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		
FIS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-6		Prerequisite(s): Barrett Honors student
FIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	1-4		
FIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-7		
FMP	201	Film: The Creative Process I	History, elements, and techniques of theatrical film: cinematography, directing, acting, scriptwriting, producing, and criticism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	
FMP	220	Film and Media Post-Production I	Required 45-hour lab designed to teach students how to use the Avid Media Composer editing program and supporting software with an emphasis on editing techniques and workflow. Part of the Avid Learning Partner program, taught by a Certified Avid Instructor. Satisfies the Media Composer 100-level certification as part of Avid's official curriculum. Upon completion of this course, students take an exam to become an Avid Certified User.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Film and Media Production student
FMP	222	Education in Film	Critically examines how teachers, students, administrators and educational issues are dramatized and represented in popular media. Explores professional teacher preparation, socio-cultural contexts of education systems and learning, and the use of cinema as social critique.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L	Prerequisite(s): ENG 101 (or ENG 102) with C or better. Credit is allowed for only FMP 222 or FMP 294 (Education in Film)

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FMP	225	Introduction to Visual Effects	Introductory look into the theory and practice of creating visual effects for film, television and games. Focuses on principles of 2D visual effects as derived and modernized from traditional special effects practices as seen in pre-digital film making. Students view, discuss and critique effects from films in the 20th and 21st centuries and engage in the creation of visual effects shots in a variety of styles employing a number of standard techniques. Covers the use of Adobe Photoshop and After Effects; however, considers some use of 3D applications in the second half of the semester. At the heart of good visual effects is a critical eye and attention to detail that is gained through critique of professional and student works on a weekly basis.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Credit is allowed for only FMP 225 or FMP 394 (Introduction to Visual Effects)
FMP	240	Introduction to Animation for Film	Introduces history, theory, technique and practices of 2D and 3D animation. Covers types of animation and how to create projects for a broad variety of end uses (e.g., motion graphics, TV/film, Web, games). Students create short projects that serve as exercises to study animation techniques as well as more in-depth projects of student design.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Credit is allowed for only FMP 240 or FMP 294 (Introduction to Animation)
FMP	250	Sex and Violence in Film and TV: Ethics Survey	Sex and violence portrayals in media; examines societal evolution, technological development, market imperatives, production codes, and industry realities and practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		
FMP	255	Media Authorship	Surveys the manipulation, editing, compression, encoding and search engine optimization of digital sound and video media.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	CS	Credit is allowed for only FMP 255 or 294 (Media Authorship)
FMP	261	Introduction to Screenwriting	Basic skills of screenwriting including exercises in conflict and resolution, plot points, and theories of three-act structure and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: ENG 101, 105 or 107 with C or better
FMP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
FMP	300	Focus on Film	Specialized study of prominent film artists, techniques, and genres. Emphasizes the creative process.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: ENG102, 105 or 108 with C or better
FMP	318	Directing for Film and Media I	In-depth analysis of directing theory, textual analysis, visualization, shot composition and spatial connection, staging, rehearsal techniques, and camera movement.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Film (Film and Media Production) major; FMP 320 with C or better
FMP	320	Film and Media Post-Production II	In-depth analysis of editing theory, storytelling, nonlinear editing techniques and equipment, basics of visual and audio effects and color grading using the Avid Media Composer editing program and supporting software with an emphasis on storytelling and aesthetics. Part of the Avid Learning Partner program, taught by a Certified Avid Instructor. Satisfies the Media Composer 200-level certification as part of Avid's official curriculum. Upon completion of this course, students take an exam to become an Avid Certified Professional.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s) with C or better: FMP 220; FMP 300 (Film Production Part 1 or Film Production: Film & Media Part 1 or THE 400); BA Film (Film & Media Production) major
FMP	325	Guerilla VFX	Offers the opportunity to work with a broad variety of projects with assets ranging from excellent quality to those that are more difficult to work with. In addition to work with pre-prepared assets, students also get the opportunity to create their own effects sequences from scratch (including capturing footage). Students learn best practices for capturing all needed elements on the day of the shoot as well as planning the sequence before recording. Covers work in both 2D and 3D visual effects including: matte painting (2D and 3D), set extensions and additions, blue/green screen compositing, and 3D animation for the addition of elements into a shot. The first section of the class consists of short individual assignments aimed at teaching basic core VFX skills, finishing with the production of a class-produced VFX short film. Class member assignments are based off of individual skill and interest.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): FMP 225 with C or better; Credit is allowed for only FMP 325 or FMP 294 (Guerilla VFX)
FMP	330	Professional and Technical Writing for Film/TV Industry	Professional (noncreative) writing skills that prepare students for a career in the entertainment industry.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 220 with C or better; Minimum 56 hours; Credit is allowed for only FMP 330 or 494 (Prof & Tech Writing for Film, Media & TV Industry)
FMP	345	Cinematography I	Cinematographer's role, photographic and visual theory, framing, shot composition, cameras and equipment, crew management, basic lighting for film and video.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: FMP 220 and FMP 300 OR FMP 394 (Non-Linear Editing for Film and Media)
FMP	361	Intermediate Screenwriting	Explores the basic components of feature screenwriting: story creation, story structure, character development, conflict, pace, tone, dialogue. Each of these skills will be revisited in more detail, culminating in a series of writing exercises (10-20 pages each), verbal pitch exercises and other focused exercises designed to develop the student's unique writing voice.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): FMP 261 with C or better; Credit is allowed for only FMP 361 or FMP 394 (Intermediate Screenwriting) or FMS 394 (Intermediate Screenwriting)

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FMP	365	Developing a Series	Acquaints students with the development process for episodic series (network, cable, Web, on-demand). Also explores the many facets of the television industry (creative, financial, cultural, historical) and surveys the advances in television content along with an analysis of the cultural impact of television on society.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Digital Culture (Film) or Film major or Film & Media Production minor or Film & Media Production concentration; FMP 261 with B or better; Credit is allowed for only FMP 365 or FMP 394 (Developing a TV Series)
FMP	380	Film Production Crew	Provides a practical, on-set experience for all Film (Filmmaking Practices) majors.	N	PRA	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		Pre-requisites: BA Film (Filmmaking Practices) major; 2.50 ASU cumulative GPA; FMP 300 with C or better; Credit is allowed for only FMP 380 or 494 (Film Production Crew)
FMP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
FMP	398	Capstone Development	Provides the opportunity for all Film and Media Production majors to conceive, develop and complete the intellectual property that will form the basis of their required final capstone projects for FMP in the School of Theatre and Film at Arizona State University.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisites:
FMP	417	Business and Legal Practices in Entertainment	Examines standard business and legal elements of the film and media entertainment industry, including historical, theoretical and ethical frameworks for understanding current practices.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): minimum 45 hours
FMP	420	Film and Media Post-Production III	In-depth analysis of editing theory, storytelling, nonlinear editing techniques and software, advanced Sound Design and Color Grading using the Avid Media Composer editing program and supporting software with an emphasis on storytelling and aesthetics. Students receive critiques of their work after each project to determine the development of their proficiency of craft and creativity. Integrated lecture/lab.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Film (Film and Media Production) major; FMP 220 with C or better; FMP 300 with C or better; FMP 320 with C or better
FMP	465	Series Writers Workshop	Offers selected students the opportunity to develop and refine material for a proposed episodic series through collaborative workshops and writing sessions that are equivalent to the development processes utilized in various industry paradigms (network, cable, Internet/on-demand).	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: FMP 365 or 394 (Developing a TV Series) with C or better; Digital Culture (Film) or Film major or Film & Media Prod. minor or BIS (Film & Media Prod.); minimum junior standing. Credit for only FMP 465 or 494 (Television Writing Workshop)
FMP	475	Producing Series	Function and responsibilities of episodic series producers and production executives for television-based platforms (network, cable, internet/on-demand). Explores a close examination of the business of television, specifically budget, license fees, distribution, and union obligations. Other topics include the structure of studios and networks, producing and marketing series for traditional and new media platforms, and general entertainment business practices.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Film (Film & Media Production) or Film (Filmmaking Practices) major; minimum junior standing. Credit is allowed for only FMP 475 or FMP 494 (Producing Television)
FMP	480	Film Production Capstone I	Preparation for final project: screenplay, budget, shooting schedule, production lists and reports for preproduction of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Film & Media Production student; FMP 318 with C or better; THE 220 with C or better
FMP	481	Film Production Capstone II	Final project shooting and postproduction: shooting, editing picture, sound, effects and music; audience screening of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Film & Media Production student; FMP 480 with C or better
FMP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
FMP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): Barrett Honors student
FMP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Prerequisite(s): Barrett Honors student
FMP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Pre-requisites: Film and Media Production student or Filmmaking Practices student or Film and Media Production minor

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FMP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-7		
FMP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		Pre-requisites: Film & Media Production or Filmmaking Practices student
FMP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FMP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FMP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Pre-requisite: Fine Arts Graduate student
FMS	100	Introduction to Film	Introduces the narrative structure, visual style, and cultural elements of film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	
FMS	110	Introduction to New Media	Explores the cultural effects of new media technologies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	
FMS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-3		
FMS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
FMS	200	Film History	Introduces the technological, aesthetic, social, and economic aspects of international film history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & H	
FMS	202	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	Credit is allowed for only FMS 202 or REL 202
FMS	209	Screenwriting Fundamentals	Studies the creativity and the technique of screenwriting for the conventional narrative film and for TV; student writing exercises culminate in a script for micro cinema.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		
FMS	270	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	Credit is allowed for only FMS 270or TCL 270
FMS	287	Topics in Film, Media, and Religion	Explores specialized topics in the study of film, media and religion. Analyzes how religious values, identities and practices related to various cultural traditions are constructed, communicated and presented through films and media.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU & G	Credit is allowed for only FMS 287 or REL 287
FMS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
FMS	300	Television and Cultural Studies	Applies cultural studies theory and method to the study of American television history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better
FMS	302	U.S. Media Now	Examines the business of contemporary U.S. film, television, and new media and its relationship to artistic vision and production through research and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: FMS 100, ENG 101 and 102
FMS	309	Intermediate Screenwriting	Utilizing the elements of storytelling, students develop and write a treatment and the first act of a screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies conc; ENG 102(or 105 or 108) with C or better; FMS 100 with C or better; FMP 261 (or FMS 209 or THP 261) with C or better
FMS	312	Film, Media, and Politics Today	Examines how entertainment technologies inform political innovation and campaigning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		
FMS	313	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better

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FMS	340	Contemporary American Film and Popular Culture	Analyzes American films, television programs, and music as popular cultural documents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	345	Asian Pacific Americans and Film	In-depth examination of the representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C & H	Pre-requisite: APA 200, APA 210, or FMS 100, or minimum 30 hours. Credit is allowed for only APA 345 or FMS 345
FMS	351	Emerging Digital Media	Analyzes modern cultural and digital technologies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105 or 108 with C or better
FMS	352	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	C	
FMS	354	Critical Studies in Animation	Provides critical and practical tools for analyzing mainstream, experimental, and hybrid animation aesthetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: FMS 100
FMS	370	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Credit is allowed for only FMS 370 or TCL 370
FMS	374	American Visions: Innovators in Popular Media	In-depth examination of the career of an innovator in media, whether a producer, director, or scriptwriter, through his/her status as a unique storyteller of the American experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105, or 108 with C or better; Minimum 45 hours
FMS	376	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or REL 376
FMS	377	Baseball, Film, and American Dreams	Critical viewing and analysis of both narrative and documentary baseball film. Genre typically explores American values and national culture, and changes in our concepts of gender roles, race, aging, social class.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: FMS 100, ENG 101 and 102
FMS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
FMS	409	Advanced Screenwriting	Utilizing the elements of storytelling, students outline, develop, and write a feature-length screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies concentration; ENG 102, 105 or 108 with C or better; FMS 100 with C or better; FMS 309 with C or better
FMS	411	Screenwriting Adaptation Studies	Explores the many issues related to narrative adaptation across movies and other media such as television, various Internet phenomena and gaming.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s) with C or better: ENG 102, 105 or 108; FMS 200; Film and Media Studies major, minor or BIS Film and Media Studies concentration; Credit is allowed for only FMS 411 or 494 (Screenwriting Adaptation Studies)
FMS	426	Films of India	Examines classic, Bollywood and diasporic films of India from 1950 to the present.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ARS 444, ARS 544, FMS 426, ARS 494 (South Asian Cinema) or ARS 494 (Films of India)
FMS	427	Identity and World Film	Examines how films around the world represent gender, race, ethnicity, and sexual orientation through the lens of genres and their variations and how genres reinforce or critique stereotypes.	N	PRA	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Minimum 55 hours; One 200-level course in literature, art history, history, or film and media studies with a grade of B- or better; Credit is allowed for only ARS 440, FMS 427, ENG 465, ARS, ENG or FMS 494 (Identity and World Film)
FMS	430	Artists in Film: Artists' Biopics	Examines artists' "biopics," biographical films about artists, chronologically from the subgenre's first appearance in 1936 to recent films. Explores relationships between film and history and between film and myths of creativity; major directors' attraction to artists' biopics; stereotypes of artists (e.g., genius, deviant); and how notions of creativity are inflected by gender, race and national identity. Assignments include weekly readings and film viewings and one short paper; optional documentaries and films are also available.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): a least one course at the 200 level or above in ARS, ENG, FMS, HST with B or better; Credit is allowed for only ARS 443, 494 (Artists Biopics) or FMS 430

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
FMS	440	Los Angeles: Movies and Culture	Explores film treatment of the historical culture of Los Angeles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies concentration; ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	441	Global Cinema	Examines how film represents three important dimensions of globalization: its relationship to national culture, terrorism, and immigration.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & G	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	442	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200; ENG 200-level literature course, or SLC 202 or FMS 100 and FMS 200; Credit is allowed for only ENG 447, FMS 442 or SLC 450
FMS	445	The Holocaust in German-Mediated Memory	Examines representations of the Holocaust from across different media (literature, film, architecture, memoir, photography) and from across multiple generations of German engagement with this period in history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 or ENG 201 or ENG 202 or ENG 204 or FMS 100 or FMS 200 or JST 210 or JST 230 or SLC 202 with C or better; Credit is allowed for only FMS/GER/JST/SLC 445 or GER 494 (Holocaust & German Media or Holocaust & German Mediated Memory)
FMS	446	Weimar-Era German Film	Examines early film production in Germany during the period of the Weimar Republic.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only FMS 446 or GER 446 or SLC 446 or GER 494 (Weimar German Cinema) or GER 494 (Studies in German Film)
FMS	450	Technology, Culture, and Media	Studies the socio-political relationships among technology, culture, and media.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	460	Masculinity and Film	Examines the representation of masculinity and the male body in film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	461	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440
FMS	464	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Credit is allowed for only FMS 464, ENG 458 or TCL 464
FMS	465	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 465
FMS	466	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	C	Credit is allowed for only FMS or TCL 466
FMS	468	Crime and Violence in American Film	Addresses three primary aspects of crime and violence in film: representation, societal attitudes, effects on audience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies concentration; ENG 102, 105 or 108 with C or better; FMS 100 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
FMS	470	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 470
FMS	471	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	
FMS	482	Entertainment Industries	Uses historical methodologies to critique emerging trends in the business of new media storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites; BA Film and Media Studies major or minor or BIS Film and Media Studies concentration; ENG 102 (or ENG 105 or 108) with C or better; FMS 100 with C or better
FMS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
FMS	486	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
FMS	490	Capstone Seminar	Capstone seminar.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: BA Film and Media Studies major; minimum 56 hours; ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-6		Prerequisite(s): Barrett Honors student
FMS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of English	1-6	L	Prerequisite(s): Barrett Honors student
FMS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
FMS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-7		
FMS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-3		
FMS	502	Hollywood Film Historiography (Online)	This course is offered online only. Explores historiographic and critical scholarship on Hollywood as an industrial, cultural, and aesthetic enterprise.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	503	Media Industries	Examines the business of contemporary U.S. media practices including film, television, Web-based media, music, video games, mobile phones, and other interactive media. Explores the changing economic structures of these media industries and their relationship to artistic vision and production.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	504	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	REC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Master of Liberal Studies student or MAS in American Media and Popular Culture student. Credit is allowed for only MLS or FMS 504
FMS	507	Crime and Violence in American Film (Online)	This course is available online only. Focuses on historiographic and critical scholarship on three aspects of crime and violence in American film: (1) regulation and censorship; (2) representation and society; and (3) theories about the effects on audiences of viewing crime and violence in films.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	508	Race and Gender in American Film	Investigates the diverse ways in which race and gender are represented in American film history and culture. In a broader context, also analyzes how the meaning of race and gender, and their intersectionality, has shifted and changed across time and space, and how cinema has contributed to these shifts. Gives attention to the relationships among visual style, narrative structure, generic convention and identity. Students become more literate about the power of film to reflect and refract ideologies of race and gender, and to analyze how these identities impact the experiences of individuals and groups in our society.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only FMS 508 or FMS 598 (Race and Gender in American Film)

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FMS	511	Fundamentals of Cinema & Television Narrative Online	Studies the creativity and the technique of screenwriting for the conventional narrative film and for television. Student writing exercises culminate in a script for micro-cinema. Seminar. Pre-requisite: online student in MAS American Media and Popular Culture	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	512	Intermediate Cinema and Television Narrative (online)	Focuses on the feature-length screenplay; students complete the first act and treatment of an original feature.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	520	Cultural History of US Television: Theory & Method	Engages both the theory and methods of cultural studies as implemented in the television studies and U.S. television history (from the 1940s to the present).	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
FMS	522	Los Angeles: Movies and Culture	Focuses on historiographic and critical scholarship of industry, genre and representation in post-war, self-reflexive Hollywood cinema.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FMS	523	Film Authorship	Explores the notion of authorship in film, television, and digital media by engaging with a number of critical methodologies such as auteurism, structuralism, post-structuralism, feminism.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	527	Identity and World Film	Examines how films around the world represent gender, race, ethnicity, and sexual orientation through the lens of genres and their variations and how genres reinforce or critiques stereotypes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 540, FMS 527 or (ARS 494, ENG 465, FMS 494 or ARS 598 Identity and World Film)
FMS	543	Artists in Film: Artists' Biopics	Examines artists' "biopics," biographical films about artists, chronologically from the subgenre's first appearance in 1936 to recent films. Explores relationships between film and history and between film and myths of creativity; major directors' attraction to artists' biopics; stereotypes of artists (genius, deviant, etc.); and how notions of creativity are infected by gender, race and national identity. Assignments include weekly readings and film viewings and one short paper; optional documentaries and films are also available.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ARS 443 or ARS 543 or FMS 430 or FMS 543 or ARS 598 (Artists in Film: Biopics)
FMS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FMS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FMS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
FOR	105	Physical Evidence and the Crime Scene	First course in a two-semester series of laboratory and lecture courses focusing on introducing non-scientists to forensic science. Explores the investigative and laboratory technologies behind common forensic techniques utilized in crime scene documentation and reconstruction, the identification and value of physical evidence, documentation and collection of evidence, comparative analysis, and the latest technologies in mobile device forensics.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	
FOR	106	Biology Behind the Crime Scene	Second of two courses offering the non-scientist an introduction to the forensic sciences. Focuses on the biology and chemistry in analytical techniques used in the crime lab such as quantitative DNA analysis, toxicology and controlled substance analysis. Also covers topics related to death investigation, as well as plant and pollen identification as they relate to forensic science and criminal investigations.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	
FOR	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
FOR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
FOR	210	Sociology of Murder	Sociological perspectives on various forms of murder and types of murderers. Also considers forms of punishment for murder.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SB	Credit is allowed for only FOR 210 or SOC 210
FOR	286	Principles of Forensic Science	Introduces and surveys the practices and procedures used by forensic scientists in the modern crime laboratory. Students apply lecture topics to forensic-themed laboratory activities.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisite(s): BIO 181, 182; CHM 113, 116
FOR	290	Historical Perspectives of Forensic Science	Explores the history and evolution of forensic science and its use in criminal investigations. Topics include: the "discovery" of DNA, the societal impact of forensic science, increased use of forensic science in criminal investigations, and a timeline of technological advances that has helped propel forensic science into popular culture.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Credit is allowed for only FOR 290 or FOR 294 (Historical Perspectives of Forensic Science)

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FOR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
FOR	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	PRA	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		
FOR	350	Computer Forensics	Concepts of computer forensics, forensic analysis techniques, computer forensic tools and software for forensic investigators, network forensics, data forensics, mobile device forensics, malware forensics, cyber crimes and fraud, computer security incident response.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: ACO 100 with C or better
FOR	375	Analytical Chemistry for Life Sciences	Presents an analysis of chemicals, including the theoretical and practical considerations regarding the separation, detection and quantitative determination of chemicals. Illustrates the application of different analytical procedures using some of the common chemicals of concern in the forensics and environmental fields.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 234 and 238 with C or better; Credit is allowed for only FOR or LSC 375
FOR	376	Analytical Chemistry for Life Sciences Lab	Provides hands-on experience with sample extraction, sample clean-up, and instrumental analysis of common chemicals. Largely focuses on the application of analytical chemistry methods to the fields of forensics and the life sciences. Mainly uses the solvent and solid-phase analyte extraction methods; gas chromatography-mass spectrometry, FTIR and NMR, generally determines analyte identification.	N	LAB	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	2		Prerequisite(s): CHM 234 with C or better; CHM 238 with C or better; Corequisite(s): FOR 375 or LSC 375; Credit is allowed for only FOR 376 or LSC 376
FOR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
FOR	400	Comparative Forensics	Familiarizes students with the comparative methods used in the forensic analysis of fingerprint, questioned document and firearms evidence. Discusses the theory and principles of individualization as assessed in forensic casework. Exposes the operation and theory of the scientific instruments used when performing comparative analysis. Reinforces learning objectives through case studies, practical exercises, outside projects and guest lectures.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181; BIO 182; CHM 113; CHM 116; Pre- or corequisite(s): BIO 305 or FOR 286; Credit is allowed for only FOR 394 (Comparative Forensics) or FOR 400
FOR	401	Forensic Toxicology	Focuses on toxicology as it pertains to forensic science. Topics include: the history of toxicology; the pharmacodynamics and pharmacokinetics of drugs and alcohol in the human body; as well as the legal applications of toxicology. Also discusses ethics, quality control and quality assurance, and courtroom testimony (as they relate to forensic toxicology). May address other topics such as environmental toxicology, poisons, and current topics related to forensic toxicology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181; BIO 182; CHM 113; CHM 116; Pre- or corequisite(s): BCH 371; BIO 305 or FOR 286; Credit is allowed for only FOR 394 (Forensic Toxicology) or FOR 401
FOR	402	Forensic Biology	Focuses on molecular genetics and biology pertaining to forensic science. Course subject matter includes: the history of forensic biology, serological techniques, DNA and DNA analyses, topics in molecular genetics, and forensic biology in the crime lab. Also discusses ethics, quality control and quality assurance, and courtroom testimony (as they relate to forensic biology). Addresses other topics such as current court cases and topics related to forensic biology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181; BIO 182; CHM 113; CHM 116; Pre- or corequisite(s): BIO 305 or FOR 286; LSC 347; LSC 348; Credit is allowed for only FOR 402 or FOR 394 (Forensic Biology)
FOR	406	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L or HU	Prerequisite(s): ENG 101 or 105 or 107 with C or better. Credit is allowed for only FOR 406 or IAS 406 or PHI 406
FOR	410	Professional Practices in Forensic Science	Focuses on professional practices as they relate to the forensic scientist or forensics professional working in a modern crime laboratory (public or private). Topics include quality assurance programs and practices; ethics and analytical bias; the audit and accreditation processes; and the relationship with forensic science and the courtroom, to include courtroom testimony procedures. Includes oral mock court scenarios, as well as enhancing writing skills appropriate to the forensic sciences.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Prerequisite(s) with C or better: BIO 305 or FOR 286; ENG 102 or 105 or 108
FOR	420	Modern Practices in Forensic Science	In-depth treatment of the practices and procedures used by forensic scientists in the modern crime laboratory. Students apply lecture topics to forensic-themed laboratory activities.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181; BIO 182; BIO 305 or FOR 286; CHM 113; CHM 116; Pre- or corequisite(s): BCH 371; BCH 372; LSC 347; LSC 348
FOR	447	Molecular Genetics Laboratory	Investigative lab involving DNA isolation, PCR, gel electrophoresis, enzyme digestion and ligation, transformation, and hybridization analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): minimum 45 hours; Credit is allowed for only FOR 447 or LSC 447
FOR	454	History of Genocide	Examines the individuals and institutions responsible for the most infamous episodes of state-sanctioned violence in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	G & H	Prerequisite(s): minimum 45 hours. Credit is allowed for only FOR 454 or HST 454

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FOR	456	Studies in Forensic Linguistics	Focuses on the three main aspects of that branch of applied linguistics, namely language and the law, court cases where language is the central dispute, and linguistic evidence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better; minimum 45 hours; Credit is allowed for only ENG 456 or FOR 456 or PAX 456 or ENG/FOR 494 (Studies in Forensic Linguistics)
FOR	475	Principles of Toxicology	Presents the fundamental principles of toxicology and its application to both human and environmental situations. Starts with the means of defining and quantifying toxic effects through dose response curves (e.g. LD50, EC50, LOEL, NOEL). Then focuses on absorption pathways for toxicants as well as the degradation metabolism pathways for toxicants. Finally focuses on the mechanism of toxic action for common poisons and environmental pollutants. Emphasizes toxicants that students are likely to encounter in forensics and environmental fields.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: BCH 361 (or BCH 371 or LSC 394: Modern Concepts in Biochemistry) and BIO 353. Credit is allowed for only FOR or LSC 475
FOR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): minimum 45 hours
FOR	485	Forensic Science Capstone	Culmination course integrating all components of Forensic Science major courses demonstrating knowledge and competency in the field of forensic science. Includes Forensic Science Assessment Test (FSAT) preparation and FSAT completion.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 305 or FOR 286; FOR 410; 6 additional hours of upper-division FOR coursework; senior standing
FOR	486	Peer Mentoring in the Forensic Sciences	Advanced students learn and apply mentoring skills in teaching labs.	N	SEM	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): minimum 45 hours
FOR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		
FOR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	
FOR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
FOR	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		
FOR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7	L	
FOR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
FRE	101	Elementary French	Intensive aural/oral drill in class and lab; basic grammar supplemented by simple prose readings.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in FRE 101 if credit with C or better earned in FRE 101, 102, 201, 202, 305 (or FRE 205), 311, 312, 321, 322, 411 or 412
FRE	102	Elementary French	Intensive aural/oral drill in class and lab; basic grammar supplemented by simple prose readings.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Prerequisite(s): FRE 101. Students may not enroll in FRE 102 if credit with C or better earned in FRE 102, 111, 201, 202, 305 (or FRE 205), 311, 312, 321, 322, 411 or 412
FRE	110	Intensive French I	Proficiency-based course that provides an intensive introduction to the French language and culture. Introduces the language and culture through a variety of topics from everyday life. Focuses on the development on all four communicative skills. Class time is spent mainly on communicative activities based on active listening and speaking practice of everyday French as used in different social situations, with much use of various print, video and Web-based media.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Credit is allowed for only FRE 101 or FRE 102 or FRE 110 or FRE 111
FRE	111	Fundamentals of French	Primarily for students with two years of high school French who need review to enter second year study.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Students may not enroll in FRE 111 if credit with C or better earned in FRE 101, 102, 201, 202, 305 (or FRE 205), 311, 312, 321, 322, 411 or 412

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
FRE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
FRE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	201	Intermediate French I	Grammar review, with emphasis on development of skills of speaking, reading, writing, and listening comprehension.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in FRE 201 if credit with C or better earned in FRE 202, 305 (or FRE 205), 311, 312, 321, 322, 411 or 412
FRE	202	Intermediate French II	Continuation of grammar review with emphasis on development of skills in speaking, reading, writing, and listening comprehension.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in FRE 202 if credit with C or better earned in FRE 305 (or FRE 205), 311, 312, 321, 322, 411 or 412
FRE	210	Intensive French II	Second semester of an intensive, proficiency-oriented language course designed to develop functional proficiency in French in a dynamic communicative environment. Class time is spent mainly on a variety of communicative activities based on active listening and speaking practice of everyday French as used in different social situations, with much use of various print, video and Web-based media.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Prerequisite(s): FRE 102, 110, or 111 with C or better; Credit is allowed for only FRE 201 or FRE 202 or FRE 210
FRE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	305	Readings in French Literature	Survey of francophone literature designed to teach reading with facility and comprehension. Vocabulary building, familiarity with literary terms, their meaning and use, and introduction to textual analysis of literary genres are major elements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): FRE 202 or FRE 210 with C or better; Students may not enroll in FRE 305 if credit earned in FRE 321 or FRE 322
FRE	311	Oral and Written Expression I	Practices interpersonal and interpretive writing and speaking, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): FRE 202 or FRE 210 with C or better
FRE	312	Oral and Written Expression II	Practices presentational writing and speaking, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): FRE 202 or 210 with C or better
FRE	315	French Phonetics	Practice and theory of French pronunciation. Emphasizes standard French, although an overview of regional varieties is offered.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: FRE 311
FRE	319	Business French	Introduces the structure, vocabulary, and practices of the French business world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: FRE 312
FRE	321	French Literature	Representative masterpieces and significant movements of French literature of the Middle Ages through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & H	Pre-requisites: FRE 305; FRE 312
FRE	322	French Literature	Literature of the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: FRE 305; FRE 312
FRE	325	French Language and Culture Through Film	Reviews French vocabulary and grammar through French films, with emphasis on listening comprehension and oral and written production.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s) with C or better: FRE 311, 312
FRE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	411	Advanced Spoken French	Improvement of spoken French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: FRE 311; 6 hours of 300-level French
FRE	412	Advanced Written French	Improvement of composition skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: FRE 312; 6 hours of 300-level French
FRE	415	French Civilization I	Political, intellectual, social, economic, and artistic development of France from its origins to the end of the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: 6 hours of upper-division French
FRE	416	French Civilization II	Political, intellectual, social, economic, and artistic development of France from the 18th century to present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	pre-requisites: 6 hours of upper-division French
FRE	421	Structure of French	Phonology, morphology, syntax, semantics, and varieties of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): FRE 311, 312; SLC 201
FRE	422	Applied French Linguistics	Applies linguistic theory and second-language acquisition theory to teaching of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 213 or SLC 201; FRE 311 or FRE 312
FRE	423	French Syntax	Analyzes French syntactic structure by contemporary theoretical models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 213 or FRE 421 or SLC 201
FRE	441	French Literature of the 17th Century	From 1600 to 1660.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 321; 6 hours of 300-level French courses
FRE	442	French Literature of the 17th Century	From 1660 to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H	Pre-requisites: FRE 321; 6 hours of 300-level French courses
FRE	445	French Literature of the 18th Century	Contributions of the philosophers and the development of the novel and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: FRE 321; 6 hours of 300-level French courses

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FRE	451	French Poetry of the 19th Century	From Romanticism to Parnassian poetry to Symbolism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	452	French Novel of the 19th Century	From Constant, Hugo, Balzac, Stendhal, and Sand to Flaubert and Zola, with emphasis on major literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	453	Theater of the 19th Century	From Romantic drama to the Symbolist Theater. Representative plays of Hugo, Musset, Vigny, Dumas, Becque, Rostand, Feydeau, and Mirbeau.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	461	Modern Narrative	Representative authors from Gide to the new Nouveau Roman.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	462	Modern Poetry	Representative authors from Mallarme to Bonnefoy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	471	The Literature of Francophone Africa and the Caribbean	Selected prose, poetry, and drama of black authors from Africa and the Caribbean.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	472	Franco-Canadian Civilization	Study of the civilization of Quebec in particular through its history, language, literature, music, and customs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): 6 hours of 300-level French courses
FRE	480	Translation Theory and Practice	Theoretical and practical approaches to the fundamentals of meaning-based translation.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: FRE 412
FRE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
FRE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
FRE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
FRE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
FRE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	510	Introduction to Textual Analysis	Introduces various oral and written techniques aimed at explicating literary texts. Required of all French graduate students focusing on literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FRE 494 (Introduction Textual Analysis) or 510
FRE	521	History of the French Language	Principal phonological, morphological, and semantic developments of French from Latin to present, with emphasis on Old and Middle French. Some familiarity with Latin is recommended.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	550	French for Reading Knowledge	Teaches non-speakers of foreign language, or those with only basic notions of the language, how to read in a foreign language at an advanced level. Consists of a concise overview of grammar as well as reading comprehension practice for students who plan to take the Graduate Foreign Language Exam or others who would merely like to learn to read in a foreign language. Focuses only on reading and not on listening, speaking or writing as in a traditional language course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only FRE 494 (French for Reading Knowledge) or FRE 550 or FRE 598 (French for Reading Knowledge)
FRE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
FRE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	790	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	100	Introduction to Engineering	Introduces the engineering design process; working in engineering teams; the profession of engineering; engineering models, written and oral technical communication skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	2		
FSE	104	EPICS Gold Feasibility and Planning	First of a sequence of three one-credit service-learning courses in which EPICS GOLD groups are formed from students potentially representing all engineering, computer science and construction disciplines as well as other ASU majors, including sustainability, business, liberal arts, sciences and others. Groups of 4-5 students work together to assess the feasibility and sustainability of their proposed plans for long-term projects that solve problems and benefit clients and often, the larger community. Project work centers on the engineering, technology, computing, sustainability, business and other needs of a not-for-profit community partner; interdisciplinary group interaction is an integral element for the project success.	N	LEC	N	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): Fulton Schools of Engineering student. Credit is allowed for only FSE 104 or 194 (EPICS Gold I)
FSE	104	EPICS Gold Feasibility and Planning	First of a sequence of three one-credit service-learning courses in which EPICS GOLD groups are formed from students potentially representing all engineering, computer science and construction disciplines as well as other ASU majors, including sustainability, business, liberal arts, sciences and others. Groups of 4-5 students work together to assess the feasibility and sustainability of their proposed plans for long-term projects that solve problems and benefit clients and often, the larger community. Project work centers on the engineering, technology, computing, sustainability, business and other needs of a not-for-profit community partner; interdisciplinary group interaction is an integral element for the project success.	N	LEC	N	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): Fulton Schools of Engineering student. Credit is allowed for only FSE 104 or 194 (EPICS Gold I)
FSE	150	Perspectives in Grand Challenges for Engineering	Explores social dimensions of developing engineering solutions to meet local and global challenges. Introduces National Academy of Engineering (NAE) Grand Challenges for engineering and Grand Challenge Scholars Program.	N	LEC	N	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3	SB	Prerequisite(s): admission to the Engineering Grand Challenge Scholars Program. Credit is allowed for only FSE 150 or FSE 194, Perspectives on Grand Challenges for EngineeringPrerequisite(s): admission to the Engineering Grand Challenge Scholars Program. Credit is allowed for only FSE 150 or FSE 194, Perspectives on Grand Challenges for Engineering
FSE	181	Technological, Social, and Sustainable Systems	Introduces the importance and role of technological, social, and sustainable systems in the modern world. Provides a framework for the theory and practice of sustainable engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3	HU	Credit is allowed for only SOS 181, FSE 181, or CEE 181
FSE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		

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FSE	201	Engineering Undergraduate Teaching Assistant	Theory and rationale of active learning and teaching strategies that stimulate intellectual development. Leadership, teaching, teamwork and communication skills needed to facilitate effective undergraduate learning in engineering. Implementation of these skills in a classroom setting.	N	PRA	Y	YGB	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): Ira a Fulton School of Engineering major; minimum sophomore standing
FSE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		Prerequisite(s): Barrett Honors student
FSE	301	Entrepreneurship and Value Creation	In-depth application of entrepreneurial concepts including opportunity recognition, value creation and new business management. Identifies the needs of a market and problem solves to meet those needs through innovation. Covers common mistakes made in the new venture process and how to work to avoid these mistakes.	N	LEC	N	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3		Prerequisite(s): Business undergrad; ACC 241 or 242 w/C or better OR Engineering junior OR non-bus junior; min 2.50 cum ASU GPA; MGT 290 w/C or better; Pre- or coreq(s): MGT 340 w/C or better if completed; Credit is allowed for only FSE 301 or MGT 360
FSE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Prerequisite(s): Fulton Engineering undergraduate student
FSE	399	Cooperative Work Experience	Work periods with industrial firms or government agencies alternated with full-time course work. Not open to students from other colleges.	N	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		Prerequisite(s): Fulton Engineering undergraduate student
FSE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		Prerequisite(s): Barrett Honors student
FSE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Prerequisite(s): Barrett Honors student
FSE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		Prerequisite(s): Barrett Honors student
FSE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
FSE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
FSE	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	501	Technology Entrepreneurship	Fundamental principles and concepts of technology entrepreneurship.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
FSE	502	Strategic Enterprise Innovation	Strategies, techniques, and practices of process, product, and management innovation across the enterprise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3		Pre-requisite: School of Engineering Graduate student
FSE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	590	Reading and Conf	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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FSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	594	Conf and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Prerequisite(s): Fulton Engineering graduate student
FSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	600	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
FSE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FSH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
FSH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-4		
GAP	10	Academic Skills I for International Pathways	Non-credit course designed for international ASU-USA Pathways students from any discipline who want to develop both their general English language competence and the academic skills which they need in order to succeed in their for-credit studies. The curriculum has been organized around tasks that students need to master in order to perform and interact appropriately in an international English-medium higher education setting.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	11	Academic Skills II for International Pathways	Non-credit course designed for international ASU-USA Pathways students from any discipline who want to continue to develop both their general English language competence and the academic skills which they need in order to succeed in their for-credit studies. The curriculum has been organized around tasks that students need to master in order to perform and interact appropriately in an American higher education setting.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	12	Academic Skills III for International Pathways	Non-credit course designed for international ASU-USA Pathways students from any discipline who want to refine both their general English language competence and the academic skills which they need in order to succeed in their for-credit studies. The curriculum has been organized around tasks that students need to master in order to perform and interact appropriately in an American higher education setting.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	20	Academic Foundations for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course develops oral linguistic fluency and accuracy along with listening comprehension skills needed for academic success. In addition, this course creates cultural awareness in the American university setting.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	30	Communication Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills and cultural awareness needed to comprehend and practice theories of communication skills in public, small group and interpersonal settings. Also supports, linguistically and culturally, students' study of speech communication processes such as problem solving, decision making and information sharing.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	31	Math Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills needed to comprehend and apply math terminology in various math contexts through in-class problem-solving activities and presentations.	N	LEL	N	GNA	Office of the Provost	Global Launch	1		
GAP	32	Computer Information Systems Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills needed to understand and apply concepts and terminology related to the role of computers in business and society and use of word processing, spreadsheets, database, presentation and application software. In addition, the course supports the students' linguistic ability to discuss computers in terms of ethics and social issues as well as technology and business.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		

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GAP	33	Global Management Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills, communication skills and cultural awareness needed to comprehend and apply basic concepts related to management in a global environment including global politics, legal systems and sociocultural environments.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	41	History Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills and cultural awareness needed to comprehend global history by exploring topics such as: changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare and women around the world.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	42	Sociology Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills needed to understand and apply concepts and terminology related to the fundamentals of sociology. Also supports, linguistically and culturally, students' study of social organization, interaction and social change.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	44	Biology Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills and cultural awareness needed to comprehend and apply basic principles and concepts of biology including the method of scientific inquiry and behavior of matter and energy in biological systems.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	80	Math for Business Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills and cultural awareness needed to comprehend and practice topics in math for business analysis.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	90	Macroeconomics Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills, higher-level thinking skills and cultural awareness needed to comprehend and analyze the structure and functioning of the American economy as well as the basic economic institution and factors that determine national income and employment levels.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GBL	10	Business English Communications I	This course is designed to introduce students to the challenges of the degree bearing MGM/MAGAM programs at Thunderbird. Each class focuses on a different language communication fundamental (reading, writing, listening, speaking, and cultural adaptation) and overlaps content themes in order to prepare the student with the necessary business vocabulary, the communication skills, and the expectations required for success in a post graduate situation.	N	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	NC Thunderbird School of Global Management	0		
GBL	11	Business English Communications II	This course is a continuation of GBL 10 in that it further develops the students to meeting the challenges of the degree bearing MGM/MAGAM programs at Thunderbird. Students may enter into GBL 11 directly with a TOEFL score of 95 Internet-Based test or better. Each class continues to improve upon one or more of the different language communication fundamentals (reading, writing, listening, speaking, and cultural adaptation) and overlaps content themes in order to prepare the student with the necessary business vocabulary, the communication skills, and the expectations required for success in a post graduate situation.	N	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	NC Thunderbird School of Global Management	0		
GBL	20	Language Foundations	Entry-level course explores the grammatical, syntactic and cultural underpinnings of the English language for international students studying English as a foreign language.	N	LEC	N	GNA	Office of the Provost	Global Launch	0		
GBL	22	Special Programs Training		N	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	24	Special Programs Field-Based Learning		N	LEC	N	GNA	Office of the Provost	Global Launch	3		
GBL	25	Special Programs English for Specific Purposes		Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	26	Special Programs Project Work		N	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	27	Special Programs Current Issues and Topics		Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	28	Academic Culture	Multidisciplinary approach to American academic culture. Designed for international students who will be matriculating into an American university and explores such themes as study skills, using academic resources and participating fully in academic life.	N	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	40	Basic 1 Listening/Speaking	On completing the Basic 1 Listening/Speaking course, a student will be able to (1) follow directions and comprehend main ideas and supporting details of short, simple passages and conversations spoken slowly; and (2) speak informally to express basic needs, habits and descriptions in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		

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GBL	41	Basic 1 Reading/Writing	On completing the Basic 1 Reading/Writing course, a student will be able to (1) recognize main ideas and find supporting details in selected reading passages of a few pages; and (2) produce a guided writing with a personal point of view, demonstrating level-appropriate control of grammar, word forms, and punctuation.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	42	Basic 1 Structure	This course covers helping verbs, pronouns, adjectives, count/non-count nouns, and tenses (present, present progressive and simple past).	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	43	Basic 1 Communication	International students studying English as a foreign language study the fundamentals of English communication.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	50	Basic 2 Listening/Speaking	On completing the Basic 2 Listening/Speaking course, a student will be able to follow instructions, directions, and comprehend the main ideas and supporting details of 1-3 minute announcements and conversations with controlled speech and delivery; and (2) speak informally in basic social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	51	Basic 2 Reading/Writing	On completing the Basic 2 Reading/Writing course, a student will be able to (1) recognize main ideas, find supporting details, and recognize the organizational pattern in short and page-length reading passages; and (2) produce a composition, based on a model, with a personal point of view, demonstrating level-appropriate control of grammar, word form, and punctuation.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	52	Basic 2 Structure	Learn grammar for everyday writing and speaking--present, progressive and future tenses, irregular verbs in the past tense, modal verbs, pronouns, order of adjectives, and comparisons.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	53	Basic 2 Communication	Learn to communicate effectively at the basic level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	60	Intermediate 1 Listening/Speaking	On completing this course, a student will be able to (1) comprehend the main ideas and supporting details of 1-5 minute listening passages, conversations, instructions, and directions with controlled speech and delivery; and (2) speak informally in common social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	61	Intermediate 1 Reading/Writing	On completing this course, a student will be able to (1) recognize the main ideas and find supporting details in selected reading passages of a few pages; and (2) produce an organized composition, with a personal or an objective point of view, demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	62	Intermediate 1 Structure	Improve grammar for everyday writing and conversation, present perfect and present perfect continuous and future tenses, noun clauses and grammar to cover frequency, duration, possibility and necessity.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	63	Intermediate 1 Communication	International students studying English as a foreign language continue to build on the fundamentals of English communication, including working on vocabulary expansion, pronunciation, idiom decoding, fluency and verbal accuracy.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	64	Intermediate 1 Business: Introduction	International students studying English as a foreign language, learn the fundamental vocabulary, concepts and cultural customs of business in an American context.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	65	Intermediate English for Social Sciences	In this communicative, content-driven course, international students studying English as a foreign language learn how to speak, write and critically analyze the vocabulary, concepts and context for American social sciences. Designed for students at an intermediate level of English proficiency.	Y	LEL	Y	GNA	Office of the Provost	Global Launch	3		
GBL	66	Intermediate English for STEM	In this communicative, content-driven course, international students studying English as a foreign language learn how to speak, write and critically analyze the vocabulary, concepts and context for STEM studies. Designed for students at an intermediate level of English proficiency.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	70	Intermediate 2 Listening/Speaking	On completing this course, a student will be able to (1) comprehend the main ideas and supporting details of 5-10 minute general topic listening passages with modified speech and delivery; and (2) speak formally and informally on a variety of general topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	71	Intermediate 2 Reading/Writing	On completing this course, a student will be able to recognize the main ideas and supporting details and distinguish between fact and opinion in a reading passage of several pages; and (2) produce a composition, based on a writing task, with an objective point of view demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	72	Intermediate 2 Structure	Focus on an overview of all the tenses. This course also covers passive voice and sequence of tenses with adverbial clauses.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		

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GBL	73	Intermediate 2 Communication	Learn to communicate effectively at the intermediate level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	74	Intermediate 2: Business Management	International students studying English as a foreign language discover key concepts and ideas related to business management. Students have the opportunity to speak, read and write about, as well as listen to, accessible levels of business management materials, including work and motivation, company structure and recruitment.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	75	Intermediate American Culture Studies Special Topic		Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	76	Intermediate Bridge to ASU		Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	80	Advanced 1 Listening/Speaking	On completing the Advanced 1 Listening/Speaking course, a student will be able comprehend the main ideas and supporting details of brief academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	81	Advanced 1 Reading/Writing	On completing the Advanced 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details and determine logical inferences in selected general reading passages of several pages; and (2) produce a composition, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	82	Advanced 1 Structure	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	85	English for Humanities and Design Studies	In this communicative, content-driven course, international students studying English as a Foreign Language continue to build their learning of ways to speak, write and critically analyze the vocabulary, concepts and context for humanities and design studies. Designed for students at an advanced level of English proficiency.	Y	LEL	Y	GNA	Office of the Provost	Global Launch	3		
GBL	90	Advanced 2 Core Listening/Speaking	On completing this course, a student will be able to (1) comprehend the main ideas and supporting details of complex but abbreviated academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	91	Advanced 2 Core Reading/Writing	On completing this course, a student will be able to (1) recognize the main ideas and supporting details, and determine logical inferences in authentic and selected academic and general reading passages of several passages; and (2) produce a well-developed essay, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	92	Advanced 2 Structure	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	92	Advanced 2 Structure	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	93	Advanced Communication Special Topic	Learn to communicate effectively at the advanced level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	94	Business English Special Topic	Learn to communicate effectively in a variety of business situations and develop English skills necessary for success in today's business world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	95	Advanced American Culture Studies	Learn about American culture and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	96	Academic English Studies Special Topic	Learn the Academic English necessary for success at an American university or college.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	98	Professional English Special Topic	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GCU	102	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
GCU	102	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	102	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
GCU	113	United States and Arizona Social Studies	Introduction to the United States and Arizona from the integrated social science perspectives of history, geography, and government.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & H	Credit is allowed for only GCU 113, HST 113, or GCU 194, US & AZ for Aspiring Elmtree Ed

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GCU	114	World Social Studies	Introduction to the world from the integrated social science perspectives of history, geography, and government.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G & H	Credit is allowed for only HST or GCU 114
GCU	121	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SB & G	
GCU	121	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	SB & G	
GCU	121	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	4	SB & G	
GCU	171	The Thread of Energy	Follows the thread of energy through every aspect of our lives. Discusses the technical, social, legal, and policy contexts of all energy resources, including present and unconventional fossil fuels, nuclear power, and renewable resources. Addresses energy use throughout history, the influence of energy on quality of life, the role it plays in political strategies and environmental quality, how it shapes our neighborhoods and cities, its contribution to our personal comfort and national security, and how its importance is reflected in the worlds of business and the humanities. Its dual role is as a stand-alone introduction to energy, and as a first step to more advanced studies of energy in the natural, technical, and social sciences.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	Credit is allowed for only GCU or SOS 171
GCU	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GCU	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
GCU	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
GCU	241	The Global Economy in Transition	Production, distribution, and consumption of various types of commodities of the world and relationships to the activities of humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	Pre-requisite: Minimum 15 hours
GCU	253	Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and diffusion and division of the world into cultural areas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	253	Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and diffusion and division of the world into cultural areas.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
GCU	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
GCU	322	Geography of U.S. and Canada	Spatial distribution of relevant physical, economic, and cultural phenomena in the United States and Canada.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & C	
GCU	323	Geography of Latin America	Spatial distribution of relevant physical, economic, and cultural phenomena in South, Middle, and Caribbean America. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as numerous analytical essays and an in-depth research paper, in addition to regular tests and quizzes, are required.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	Pre-requisite: Minimum 45 hours
GCU	325	Geography of Europe	Broad and systematic overview of Europe, emphasizing physical, economic, and cultural phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	326	Geography of Asia	Spatial distribution of relevant physical, economic, and cultural phenomena in Asia, excluding the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	328	Geography of Middle East and North Africa	Spatial distribution of relevant physical, economic, and cultural phenomena in the Middle East and North Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	332	Geography of Australia and Oceania	Spatial distribution of relevant physical, economic, and cultural phenomena in Australia, New Zealand, and Pacific Islands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	344	Geography of Hispanic Americans	Examines the homelands, migrations, settlements, landscapes, roles, and selected cultural traditions of Hispanic Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & C	
GCU	350	The Geography of World Crises	Contemporary world crises viewed from a perspective of geographic concepts and techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	351	Population Geography	Demographic patterns; spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	Pre-requisites: MAT 117,119, 142, 170 or 210 with C or better; Credit is allowed for only GCU 351 or SBS 351
GCU	356	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356
GCU	357	Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU	357	Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
GCU	359	Cities of the World I	Historical evolution of urban patterns and structures in the Middle East, India, Southeast Asia, China, Japan, and Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G & H	
GCU	360	Cities of the World II	Historical evolution of urban patterns and structures in Latin America, North America, Sub-Saharan Africa, and Australasia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	361	Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU	361	Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
GCU	364	Energy in the Global Arena	Production, transportation, and consumption of energy, emphasizing the electric power industry and its environmental problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	373	Introduction to Geographic Information Science	Introduces theoretical and computer-based aspects of Geographic Information Systems, involving data analysis and map generation.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	4	SG	Pre-requisite: PSY 230 or SBS 304
GCU	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
GCU	414	Teaching Geography Standards	Introduces Arizona Geography Standards for K-12 educators, emphasizing exciting curricula and illustrated with best practices by master teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GCU	421	Geography of Arizona and Southwestern United States	Geography of the Southwest with an emphasis on Arizona. Divided into physical geography, history, people, and economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & C	
GCU	424	Geography of Mexico and Middle America	Central America and Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	425	Geography of the Mexican American Borderland	Geography of a binational and bicultural region. Examines settlement, boundary issues, ethnic subregions, population change, industrial development, and urban growth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	(L or SB) & G	
GCU	426	Geography of Russia and Surroundings	Examines the geography of Russia and other post-Soviet states.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	432	Geography of China	Examines the physical, economic, cultural, social, demographic, agricultural, political, historical, and environmental aspects of the geography of China.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	433	Geography of Southeast Asia	Examines the biophysical and social features of Southeast Asian nations and peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GCU	441	Economic Geography	Spatial distribution of primary, secondary, and tertiary economic and production activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU	442	Geographical Analysis of Transportation	Networks, modes, economics, and flows at the urban, national, and international scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU	474	Public Land Policy	Geographic aspects of federal public lands, policy, management, and issues. Emphasizes western wilderness and resource development problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

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GCU	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12	G	Pre-requisite: Junior standing; Credit is allowed for only GCU 485 or GPH 485 or LAP 485 or POR 485 or PUP 485 or 585
GCU	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
GCU	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Prerequisite(s): Barrett Honors student
GCU	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
GCU	496	Geographic Research Methods	Scientific techniques used in geographic research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	Pre-requisites: GPH 111, GCU 102, GCU 121 and GIS 205 with C or better
GCU	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
GCU	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GCU	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GCU	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
GCU	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	514	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GCU 514 or SOS 514
GCU	515	Human Migration	Economic, political, social, and geographic factors underlying population movements. Migration selectivity, streams and counter-streams, labor migration, and migration decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	529	Contemporary Geographic Thought	Comparative evaluation of current philosophy concerning the nature and trends of geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	542	Geographical Analysis of Transportation	Examines the geographical aspects of transportation systems. Looks at the geography of networks; transport costs and rates; different modes of transport, trade, economic development, and technology. Studies the movement of freight and passengers at the individual, urban, national, and international scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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GCU	585	Geographic Research Design and Proposal Writing	Prepares students to undertake creative geographic research culminating in the generation of new knowledge. Serves as a foundation for the student in achieving the objective of a productive and successful degree. To accomplish this, instruction stresses a research framework, ethical practice, and the generation of an original research proposal. Specific learning objectives are: to produce an area of specialization statement, literature review, problem statement, description of methods and final proposal; to develop the skills needed to conceive and plan a research project; to communicate ideas effectively in written and oral form; to develop and articulate informed opinions about research designs; to learn about academic publishing format and process; and to understand and engage in ethical research practices.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: Graduate student
GCU	586	International Field Studies	Organized field study in specified international locations.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only GCU 485 or 586 or GPH 485 or 585 or LAP 485 or 585 or POR 485 or PUP 485 or 585
GCU	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	596	History of Geographic Thought	Historical development of geographic thought from pre-Greek days to the early 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	671	Introduction to Geographic Teaching	Intensive course in geographic education, scientific method in research on geographic education, research trends, resources for teaching, best practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	672	Physical Geography for Teachers	Transfer of matter and energy exhibited in the Earth's climate, hydrology, soils, biogeography, and landforms; case studies; virtual field trips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
GCU	673	Human Geography for Teachers	Analyzes cultural, economic, urban, historical, transportation, population, political, and development geography; case studies; virtual field trips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	674	Geographic Techniques for Teachers	Introduces geographic techniques, including GPS, GIS, remote sensing, cartography, qualitative, and field methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	675	World Geography for Teachers	Systematic overview of geographic knowledge about different world regions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	676	North American Geography for Teachers	Systematic overview of geographic knowledge about different North American regions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	677	Geography Across the Curriculum	Intensive course on intergrating reading, writing, and mathematics standards with geography content; selected case studies; best practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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GCU	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	101	Elementary German	Reading, writing, speaking, and understanding of basic German, with emphasis on pronunciation and grammar.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Credit is allowed for only GER 101 or 111
GER	102	Elementary German	Reading, writing, speaking, and understanding of basic German, with emphasis on pronunciation and grammar.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: GER 101 with C or better; Credit is allowed for only GER 102 or 111
GER	110	Intensive German I	Students learn to read, listen, write and speak German. Develops ability to communicate in German using a variety of tools. Uses German to ask and answer questions; name and describe persons, things, places and events; deals with certain situations; narrates orally and in writing; writes letters and postcards; fills out forms; and comprehends some texts. Expands knowledge of the cultures of the German-speaking countries. Students contribute to the class discussions what they might already know.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Credit is allowed for only GER 101 or GER 102 or GER 110 or GER 111
GER	111	Fundamentals of German	Primarily for students with two years of high school German who need review to enter second-year study.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Pre-requisites: GER 101 with C or better; Credit is allowed for only GER 102 or 111
GER	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Maximum 25 hours
GER	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	201	Intermediate German	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: GER 102 or 111 with C or better
GER	202	Intermediate German	See GER 201	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: GER 201 with C or better
GER	210	Intensive German II	Helps develop reading, writing, listening and speaking skills and strategies with activities both inside and outside of class. Guides student further into learning about the cultures of the German-speaking countries.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Prerequisite(s): GER 102 or 111 with B or better OR GER 110 with C or better; Credit is allowed for only GER 201 or GER 202 or GER 210
GER	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	310	Advanced German Grammar and Composition I	Intensive, contextualized advanced German grammar and intensive practice in writing, emphasizing covered style and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 202 with C or better
GER	311	German Conversation	Expansion of idiom through oral practice dealing with contemporary articles, essays and stories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: GER 202 with C or better
GER	312	Readings in German Culture	Provides strategies for building reading proficiency in German through longer cultural texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 310 with C or better
GER	313	Advanced German Grammar and Composition II	Intensive, contextualized advanced German grammar and intensive practice in writing, emphasizing covered style and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 310 with C or better
GER	315	Germanic Mythology	Religious and spiritual beliefs and practices of the ancient Germanic peoples as reflected in their culture, including the pantheon of their gods, as well as the reception of these beliefs through and including contemporary times.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisites: ENG 102, 105, or ENG 108 with C or better; Credit is allowed for only GER 315 or 394 (Germanic Mythology)
GER	319	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 310 with C or better
GER	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	412	Advanced German	Improvement of writing and speaking ability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 313 with C or better
GER	415	German Civilization	Aspects of political, social, and cultural life of the German-speaking world from the beginning through 1600.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Pre-requisite: A 300-level German course
GER	416	German Civilization	From 1600 through 1945.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Pre-requisite: A 300-level German course
GER	421	German Literature Survey, 800-1800	From the beginning to Classicism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): 6 hours of 300-level German courses with C or better
GER	422	German Literature Survey, 1800-Today	From Romanticism to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better; 6 hours of 300-level German courses with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
GER	431	German Humor	Popular and literary texts (collections of jokes, pranks and comedies) in the print and visual media provide a basis of comparison for students to reflect critically on the function of humor in German culture from the sixteenth century until the present. Exposes the different types and functions of German humor and understands both the historical and the contemporary theoretical debate on the study of (German) humor. Taught almost exclusively in German, with reading and writing assignments done in the target language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: Two 300-level GER courses with C or better; Credit is allowed for only GER 431 or 494 (German Humor and Comedy)
GER	441	Fairy Tales	Foundational fairy tale texts collected by the Brothers Grimm and written by Hans Christian Andersen and their modern permutations reflect basic human desires, fears and aspirations as well as the values of the period in which they are written. These stories and their variants in popular culture across the globe permit students to reflect critically on the functions of fairy tales in both past and present civilizations. Students perceive the ways in which ancient tales can be utilized for various purposes and understand the contemporary theoretical debate on the study of fairy tales and their role in popular culture. Course taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ENG 102, 105 or 108 with C or better; one other ENG or GER upper-division course with C or better. Credit is allowed for only GER 441, GER 494 Fairy Tales, or SLC 441
GER	445	The Holocaust in German-Mediated Memory	Examines representations of the Holocaust from across different media (literature, film, architecture, memoir, photography) and from across multiple generations of German engagement with this period in history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or ENG 201 or ENG 202 or ENG 204 or FMS 100 or FMS 200 or JST 210 or JST 230 or SLC 202 with C or better; Credit is allowed for only FMS/GER/JST/SLC 445 or GER 494 (Holocaust & German Media or Holocaust & German Mediated Memory)
GER	446	Weimar-Era German Film	Examines early film production in Germany during the period of the Weimar Republic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only FMS 446 or GER 446 or SLC 446 or GER 494 (Weimar German Cinema) or GER 494 (Studies in German Film)
GER	447	German Modernism	Examines examples of modernism in literature, art and film from German-speaking Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only GER 447 or SLC 447 or GER 494 (German Modernism)
GER	453	German Literary Masterpieces on Film	Film and literature in their correlation to each other and to cultural, political, and social trends in German-speaking countries. Special arrangements for graduate students and those without a knowledge of German.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	
GER	455	Multi-Kulti: Multiculturalism Through Film	Examines how ethnic identities are perceived, constructed and marketed as well as how they perceive themselves and the "others." Critically engages with such concepts as migration, assimilation, citizenship, hybridity and authenticity. Focuses on exemplary films, including comparisons with minority experiences in other countries. Through film and other material on the topic, will learn to contextualize recruitment of guest workers, xenophobia and racism, citizenship law, immigration and national identity, the institutions of multiculturalism, religion, the private sphere, multilingualism, popular culture and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GER 455 or SLC 455 or GER 494 (Multi-Kulti: Multiculturalism in Central Europe) or SLC 494 (Multi-Kulti: Multiculturalism in Central Europe)
GER	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
GER	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
GER	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
GER	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GER	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	521	History of German Language	Linguistic development of German from the earliest records to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	550	German for Reading Knowledge	Teaches non-speakers of foreign language, or those with only basic notions of the language, how to read in a foreign language at an advanced level. Consists of a concise overview of grammar as well as reading comprehension practice for students who plan to take the Graduate Foreign Language Exam or others who would merely like to learn to read in a foreign language. Focuses only on reading and not on listening, speaking, or writing as in a traditional language course.	N	LEC	Y	GNA	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only GER 494 (German for Reading Knowledge), GER 598 (German for Reading Knowledge), or GER 550
GER	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GIS	201	Spatial Thinking	Introduces spatial thinking, a cross-disciplinary foundation for geographic information science (the science of dealing with spatial/geographical data; their manipulation, interpretation and use in problem solving); geospatial technologies (the specific technologies underpinning geographic information science); and spatial analysis (the science of solving spatial problems).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GIS	205	Geographic Information Technologies	Introduces modern geographic information technologies, including cartography, GIS, remote sensing, global positioning systems, and statistical analyses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	CS	
GIS	211	Geographic Information Science I	History and basic aspects of GIS including map and data file structure, conversions, and synthesis with a computerized environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	CS	
GIS	220	Mathematical Principles in GIS	Covers the basic math principles needed to excel in GIS and spatial analysis.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: MAT 265 (or MAT 270) with C or better

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GIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GIS	311	Geographic Information Science II	GIS as a basis for microcomputer spatial analysis and synthesis. Includes digitizing, database organization, spatial retrieval, and graphics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	CS	Prerequisite(s): GIS 211 with C or better
GIS	321	Programming Principles in GIS	Basic principles of programming for GIS in python covering data processing, analysis, and application development.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: CSE 110
GIS	322	Spatial Data Structures and Algorithms	Fundamental data structures and algorithms for the integration, management, processing and analysis of geographically referenced data.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: GIS 321
GIS	341	Introduction to Cartography and Georepresentation	Study and creation of maps. Fundamental mapping principles (projection, scale, generalization, symbolization) and computer-based cartographic production.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	CS	Prerequisite(s): minimum 45 hours
GIS	351	Air Photo Interpretation	Subset, remote sensing, includes photography, films, aerial geometry, image components, stereoscopy, photogrammetry, ground truthing; interpret physical, cultural, economic, intelligence information.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): minimum 45 hours
GIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GIS	412	Spatial Decision Support Systems	Theoretical and technical requirements for implementing spatial decision support tools.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): CSE 110 with C or better; GIS 311 with C or better
GIS	431	Spatial Databases	Covers data modeling concepts, the relational data model for the storage and retrieval of spatial and nonspatial information. The data retrieval emphasizes the industry-standard query language SQL and Spatial Query Languages.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: GIS 311; GIS 322
GIS	441	Geographics: Interactive and Animated Cartography and Geovisualization	Advanced cartography, stressing influence and application of the computer on geographic representation. Emphasizes creation of maps for the Internet.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	CS	Prerequisite(s): GIS 321
GIS	461	Optimization Fundamentals for Spatial Analysis	Covers the fundamentals of optimization for spatial analysis. Reviews elements of calculus, matrices, and basic linear algebra. Introduces linear programming, integer programming and branch and bound, and heuristics. Provides the basics for use and application of GIScience and spatial analysis methods. Objectives include: reviewing basics of math, calculus and linear algebra; introducing optimization approaches, including linear programming, integer programming and heuristics; and applying these methods to structured problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: MAT 270 (or 271 or 272) with C or better; Credit is allowed for only GIS 461, 561, PUP 481, 581, GCU 494 (Optimization Fundamentals) or 598 (Optimization Fundamentals)
GIS	462	Location Analysis and Modeling	Provides a technical overview of location theory in the context of GIScience, focusing on analysis and modeling issues. Relies upon applications associated with emergency service planning, natural resource management, retail site selection, among others, to make connections among models, spatial information, and interpretation of findings. Explores utilization and implementation considerations using GIS. Objectives include: exposing a range of location analysis and modeling approaches; applying approaches in combination with GIS and optimization software; and carrying out an application-oriented study relying on acquired skills.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): GIS 211 or 461. Credit is allowed for only GIS 462 or GIS 562 or PUP 482 or PUP 582 or PUP 598 (Location Modeling)
GIS	470	Statistics for Geographers	Statistical techniques applied to the analysis of spatial distributions and relationships. Introduces models and theory in geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	CS	Prerequisite(s) with C or better: MAT 117 (or MAT 119, 142, 170, 210, 211, 251, 265 or 270)
GIS	471	Geographic Information Analysis	Basics of spatial data analysis. Topics include point pattern analysis, spatial autocorrelation, spatial regression, and kriging.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: GIS 470
GIS	472	Spatial Regression Analysis	Students gain insight into the scope of spatial regression methods, apply them in an empirical setting, and properly interpret the results of spatial regression analysis.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: GIS 471; Credit is allowed for only GIS 472 or GPH 598 (Spatial Regression)
GIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		

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GIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GIS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GIS	501	GeoDesign in Practice	Covers the basic topics of GeoDesign in practice including data, analysis, geocoding, mapping and projected implementation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): GIS 601 and 602 (or PUP 576)
GIS	505	GeoDesign Principles	Systematic exploration and evaluation of alternative complex human-environmental systems using spatially and temporally explicit theories, data and methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): GIS 601 and 602, or PUP 576; Credit is allowed for only GIS 505 or PUP 505
GIS	512	Spatial Decision Support	Designs and implements a spatial decision support system and analyzes and understands the theoretical underpinnings that form these systems.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only GIS 412 or GIS 512
GIS	515	GIS Workshop	GIS as a tool to address large, multifaceted problems.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GIS 515 or PUP 576
GIS	521	Geographic Information Science III	In-depth look at programming within GIS. Focuses on programming and methodology, utilizing specific software, and basic scientific computing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	531	Spatial Databases	Advanced data modeling concepts, the relational data model for the storage and retrieval of spatial and non-spatial information. Data retrieval emphasizes the industry-standard query language SQL and spatial query languages. Covers research topics for graduate students.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only GIS 431 or GIS 531
GIS	561	Optimization Fundamentals for Spatial Analysis	Covers the fundamentals of optimization for spatial analysis. Reviews elements of calculus, matrices and basic linear algebra. Introduces linear programming, integer programming and branch and bound, and heuristics. Provides the basics for use and application of GIScience and spatial analysis methods. Objectives include: (1) review basics of math, calculus and linear algebra; (2) introduce optimization approaches, including linear programming, integer programming and heuristics; and (3) apply these methods to structured problems.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only GCU 494 (Optimization Fundamentals) or GCU 598 (Optimization Fundamentals) or GIS 461 or GIS 561 or PUP 481 or PUP 581
GIS	562	Location Analysis and Modeling	Provides a technical overview of location theory in the context of GIScience, focusing on analysis and modeling issues. Relies upon applications associated with emergency service planning, natural resource management, retail site selection, among others to make connections among models, spatial information and interpretation of findings. Explores utilization and implementation considerations using GIS. Objectives include: (1) exposure to a range of location analysis and modeling approaches; (2) ability to apply approaches in combination with GIS and optimization software; and (3) capability of carrying out an application-oriented study relying on acquired skills.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GIS 561; Credit is allowed for only GIS 462, 562, PUP 482, 582, or 598 (Location Modeling)
GIS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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GIS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GIS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	598	Special Topics	Typical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	601	Introduction to Geographic Information Systems	Introduces GIS theory and practice for professionals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): MAS Geographic Information Systems major
GIS	602	Intermediate GIS	Introduces visualization, spatial analysis and open source tools.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): MAS Geographic Information Systems major
GIS	603	Spatial Statistics and Modeling	Introduces spatial statistics and modeling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): MAS Geographic Information Systems major
GIS	604	Implementation in the Corporate and Public Sectors	GIS use in the corporate and public sectors including proposal development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): MAS Geographic Information Systems major
GIS	605	GIS Project Planning and Implementation	Moving from project proposal to implementation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): MAS Geographic Information Systems major
GIS	606	GIS Project Presentation	Development of technical reports and presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): MAS Geographic Information Systems major
GIS	610	Programming the GIS Environment	Programming fundamentals for desktop GIS and custom applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): MAS Geographic Information Systems major
GIS	630	GIS Technologies	Uses technology for GIS data collection and management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: graduate MAS-GIS major
GIS	640	GIS for Business	Uses of GIS in business practice including site suitability, demographic data and business analyst.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): MAS Geographic Information Systems major
GIS	650	GIS for the Internet	Programming GIS for the Internet and mobile applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): MAS Geographic Information Systems major
GIS	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GIS	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GIS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	135	Graphic Communications	Technologies and processes involved in the design, image generation, transmission, and industrial production of graphic information.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		
GIT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-3		
GIT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		
GIT	210	Creative Thinking and Design Visualization	Fundamental methods, concepts, and techniques of creative thinking, design visualization, and problem solving, including communication and societal influences.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		
GIT	211	Introduction to Video Game Art	2D and 3D art assets for video games. Areas covered: classic pixel art, seamless texturing and tiling, sprite animation, 3D virtual studio, box modeling.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Credit is allowed for only GIT 211 or 294 (Intro to 2D-3D Video Game Art)
GIT	215	Introduction to Web Authoring	Graphic user interface planning and evaluation using industry-standard languages: graphics, color layout and file format considerations.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		
GIT	230	Digital Illustration in Publishing	Raster and vector illustration in publishing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		
GIT	237	Web Content Design	User-centered design principles for visual content on the World Wide Web with emphasis on usability, page architecture, search engine optimization, coding, scripting and interactivity.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 215; GIT 230 or Prerequisite(s): BAS in Graphic Information Technology or BAS in Internet and Web Development student
GIT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		
GIT	295	Introduction to Technical Imaging	Explores imaging technologies utilized in industry. Covers basic imaging concepts, chip technologies, optics, motion analysis, high-speed video, thermal imaging, and science relating to light and latent imaging.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: Undergraduate student; Credit is allowed for only GIT 295 or 294 (Introduction to Technical Imaging)
GIT	303	Digital Publishing	Web and print publication design and production using industry-standard composition software, proofing, and output devices.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: GIT 230 or BAS student in Graphic Information Technology or Internet/Web Development.
GIT	310	Web Foundations	7.5-week course covers fundamental methods, concepts and techniques of semantic and validated Web development as well as aesthetic Web design. Includes Photoshop, HTML5 and CSS technologies.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): minimum junior standing; Credit is allowed for only GIT 215 or GIT 237 or GIT 310 or GIT 394 (Web Foundations)
GIT	312	3-D Computer Graphics Modeling and Representation	3-D modeling applications: modeling for video games, mapping techniques, texturing, box modeling, geometric representation, strategies and assemblies.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3	CS	Pre-requisites: GIT 211 or GIT 294 (Intro to 2D-3D Video Game Art)
GIT	314	Multimedia Design, Planning and Storyboards	The creative process of generating ideas, conceptualizing projects, planning, designing, story boarding, and presenting interactive multimedia products.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisites: GIT 210, GIT 215 and GIT 230 OR CST 200 and IFT 301 OR BAS student in Graphic Information Technology or Internet/Web Development
GIT	315	Digital Video Techniques	Covers video production, including planning, pre-production, production, post-production and online video technologies and how video is an integral part of the graphic information industry. Concentrates on commercial and client-driven video production.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 230; Credit is allowed for only GIT 315 or GIT 294 (Intro to Video Content)
GIT	333	Printing Technology	Theory and application of sheet and web press technology for offset-lithography, flexography, screen process, and digital printing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite: GIT 303

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
GIT	334	Image Editing and Manipulation	Theory and application of advanced image editing and raster techniques for reproduction and dissemination.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 230 or Graphic Information Technology or Internet/Web Development BAS major
GIT	335	Computer Systems Technology	Computer technology: hardware, software, storage, networking, Internet, telecommunications, and information systems. Requires independent research.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisites: Minimum 45 hours; Not for credit for the BS/GIT degree
GIT	340	Information Design and Usability	Design and technology solutions for increasing Website usability and methods of organizing information to improve the user experience.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): junior standing; Credit is allowed for only GIT 340 or GIT 494 (Information Design and Usability)
GIT	384	Commercial Photography	Digital image capture, and output in a commercial studio emphasizing publishing workflow.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisites: GIT 230 or BAS student in Graphic Information Technology or Internet/Web Development
GIT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		
GIT	402	New Media Internet Technologies	Project-based exploration of new media Internet technologies from a graphic technology prospective. Emphasizes how, why, and when new media can be used to enhance a Web site and the user's experience.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 237 (or GIT 337) OR BAS student in Graphic Information Technology or Internet/Web Development. Credit is allowed for only GIT 402, 502 or 494 (New Media Internet Technologies)
GIT	411	Computer Animation	3-D computer animation methods: rigging for video games, principles of animation, loops, skinning, blending , advanced modeling and motion.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: GIT 312
GIT	413	Professional Portfolio Design and Presentation	Digital media portfolio design and production: planning, audience analysis, media selection, authoring, media formats, production, copyright considerations, marketing, and delivery. Requires capstone group project.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): Graphics Information Technology major; senior standing; GIT 303
GIT	414	Web Site Design and Internet/Web Technologies	Web site design, authoring, standards, protocols, tools, and development techniques for commercial client-sided Web-based graphic information systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 237 or Applied Science (Graphic Information Technology) BAS or Applied Science (Internet & Web Development) BAS major; Credit is allowed for only GIT 414 or GIT 515 or GIT 598 (Website Design and Internet/Web)
GIT	415	Advanced Digital Video Techniques	Covers advanced video creation and editing techniques including motion graphics, green screen technology, audio sweetening and creative video editing. Course culminates with a completed video production that is commercial in nature.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 315; Credit is allowed for only GIT 415 or GIT 394 (Advanced Video Techniques)
GIT	417	Advanced Web Markup and Scripting	Industry-standard programming languages and techniques to create interactive graphic information Web sites and applications.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 237 or Applied Science (Graphic Information Technology) BAS or Applied Science (Internet & Web Development) BAS major; Credit is allowed for only GIT 417 or GIT 519 or GIT 598 (Advanced Internet Programming)
GIT	418	Multimedia Authoring, Scripting and Production	Production of multimedia projects using industry-standard authoring applications: client considerations and project documentation; user interface design, interactivity, media, and databases.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 417; Credit is allowed for only GIT 418 or GIT 598 (Multimedia Authoring, Scripting and Production)
GIT	432	Graphic Industry Business Practices	Business practices related to the graphics industry; business models, cost analysis, marketing and management approaches.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre- or corequisite(s): senior standing or Graphics Information Technology major; Credit is allowed for only GIT 432 or GIT 598 (Graphic Industry Business Practices)

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GIT	435	Website and E-Commerce Strategies	Internet Web site management, security, marketing, and e-commerce business models.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 414; Credit is allowed for only GIT 435 or GIT 598 (Website & E-Commerce Strategy)
GIT	437	Color Reproduction Systems	Scientific analysis for the engineering of color reproduction systems and color models used in the graphics industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 334; Credit is allowed for only GIT 437 or GIT 573 or GIT 598 (Color Reproduction Systems)
GIT	450	Digital Workflow in Graphic Industries	Digital production system analysis for content creation, automation output of graphic information to print and Web, including networking and job tracking.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 303; GIT 237 (or GIT 337) OR Graphic Information Technology BAS or Internet & Web Development BAS major; Credit is allowed for only GIT 450 or GIT 598 (Digital Workflow in Graphic Industries)
GIT	480	Senior Project	Capstone project experience refining skills in communication, research and information retrieval, critical analysis and criticism, and demonstrating technical competence in each student's area of study.	N	LEC	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): minimum 90 hours; Pre- or corequisite(s): GIT 413 or Applied Science (Graphic Information Technology) BAS major or Applied Science (Internet & Web Development) BAS major
GIT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-12		
GIT	490	Advanced Commercial Photography	Studio-based class focusing on set design, advanced photographic techniques, raw workflow, marketing, business, and digital rights management.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: GIT 384
GIT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-6		Prerequisite(s): Barrett Honors student
GIT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-6	L	Prerequisite(s): Barrett Honors student
GIT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		
GIT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-7	L	
GIT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-3		
GIT	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	502	New Media Internet Technologies	Project-based exploration of new media Internet technologies from a graphic information technology prospective. Emphasizes how, why and when new media can be used to enhance a Web site and the user's experience while maintaining branding cohesively across all technologies.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only GIT 402, 502 or 598 (New Media Internet Technologies)
GIT	515	Website Design and Technologies	Standards, tools and techniques for creating websites, with emphasis on designing for multiple devices and systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only GIT 414 or GIT 515 or GIT 598 (Website Design and Internet/Web)

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GIT	519	Advanced Scripting for the Web	Uses industry-standard markup and scripting languages to develop interactive websites and applications.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only GIT 417 or GIT 519 or GIT 598 (Advanced Internet Programming)
GIT	537	Current Issues in Cross Media Production	Directed group study of selected current issues relating to cross-media production for the graphic information industries. Requires graduate group leadership.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): graduate student in Technology (Graphic Info Tech)
GIT	538	Personnel Development for the Graphics Industry	Employee training and development specific to production and management in the graphics industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): graduate student in Technology (Graphic Info Tech)
GIT	540	Cross-Media Design Solutions	Universal design theory, creative problem solving, and case study applications for print, Web, and new media products of the graphics industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): graduate student in Technology (Graphic Info Tech)
GIT	542	Usability and User Experience	Design and technology solutions focusing on how information is organized graphically to communicate and how website usability is employed to improve human interaction with inline information.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): graduate student in Technology (Graphic Info Tech); Credit is allowed for only GIT 494 (Information Design and Usability) or GIT 542
GIT	573	Color Metrology	In-depth study and analysis of systems used to manage color reproduction in the graphic arts industry and information technology.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GIT 437 or GIT 573 or GIT 598 (Color Reproduction Systems)
GIT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Graphic Information Technology	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	101	Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	
GLG	101	Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	
GLG	102	Introduction to Geology II (Historical)	Basic principles of applied geology and the use of these principles in the interpretation of geologic history. Both GLG 102 and 104 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SG & H	
GLG	103	Introduction to Geology I-Laboratory	3 hours lab, some field trips. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SQ	
GLG	103	Introduction to Geology I-Laboratory	3 hours lab, some field trips. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	

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GLG	104	Introduction to Geology II- Laboratory	Lab techniques involving map interpretation, cross sections, and fossils. Both GLG 102 and 104 must be taken to secure SG general Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SG	Co-requisite: GLG 102
GLG	108	Water Planet	Overview of the processes that control water supply to natural ecosystems and human civilizations. Part I introduces the basic science that helps us understand the water planet, including the hydrologic cycle, glaciers and ice; rivers, oceans, and natural hazards associated with water such as flooding, landsliding and tsunamis. Part II covers some of the management and resource allocation topics that face humanity today, including droughts, groundwater contamination, impacts on fisheries, conflicts over water, patterns of water use, and effects of global climate change on future water supplies. Uses water issues facing Arizona and California as examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4	SQ	Credit is allowed for only GLG 108 or SOS 182
GLG	108	Water Planet	Overview of the processes that control water supply to natural ecosystems and human civilizations. Part I introduces the basic science that helps us understand the water planet, including the hydrologic cycle, glaciers and ice; rivers, oceans, and natural hazards associated with water such as flooding, landsliding and tsunamis. Part II covers some of the management and resource allocation topics that face humanity today, including droughts, groundwater contamination, impacts on fisheries, conflicts over water, patterns of water use, and effects of global climate change on future water supplies. Uses water issues facing Arizona and California as examples.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	Credit is allowed for only GLG 108 or SOS 182
GLG	110	Dangerous World	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SG & G	
GLG	110	Dangerous World	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SG & G	
GLG	111	Dangerous World Laboratory	Basic geological processes and concepts. Emphasizes geology-related environmental problems concerning Arizona. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SG	
GLG	111	Dangerous World Laboratory	Basic geological processes and concepts. Emphasizes geology-related environmental problems concerning Arizona. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SG	
GLG	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GLG	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	301	Earth Science in Arizona and the Southwest	Place-based application of geology and allied Earth system sciences to explore and interpret the landscapes, rocks, geologic history, climate, resources, and natural hazards of Arizona and the Southwest. Integrates case studies of the interactions of Southwest cultures and societies (past and present) with Earth systems, and inquiry into the future sustainability of Southwestern communities and lifeways.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): ENG 101, 105 or 107 with C or better; GLG 101, GLG 102, GLG 110, GPH 111 or SES 121; MAT 117 or higher. Credit is allowed for only GLG 301, GLG 394 (Earth Sci in AZ & SW) or SOS 372
GLG	304	Minerals, Energy, and Society	Studies the science and technology of the minerals and energy industries, how these industries interact with society, and how these interactions may change in the future.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: ENG 101 (or 105 or 107) with C or better; GLG 101 (or 102 or 110) or GPH 111 or SES 121 or Junior standing; Credit is allowed for only GLG 304, 394 (Minerals, Energy & Society) or SOS 373

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GLG	305	Dynamic Earth	Emphasizes the link between Earth's interior and surface, focusing on Earth systems and cycles, such as observation and modeling of the geometry and motions of Earth's rigid outer shell, the tectonic plates, and how they are coupled to the geologic record, the nature of Earth's internal structure, and convective motions within the planet. Specific topics include: (1) essentials of Earth's dynamic interior (models for physical and chemical evolution); (2) essentials of lithosphere evolution (cooling of oceanic plates, the age of the Earth, and continent formation); (3) multi-scale tectonics (plate tectonics, continental deformation, mountain building, tectonic context of metamorphism); (4) essentials of volcanism in a tectonic context; (5) geodynamic context of plate boundaries; and (6) chemical cycles (role of the solid crust and mantle for transporting, storing, and cycling water and minerals). Provides an essential global context for studies of Earth and Environmental Science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): BIO 100 or CHM 101 (or higher) or PHY 101 (or higher) with C or better; GLG 101 or SES 121 with C or better; MAT 170 or 210 or 251 with C or better
GLG	310	Structural Geology	Geologic structures and the mechanical processes involved in their formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): GLG 101 or SES 121 with C or better; MAT 170, 171, 210, 251, 265, or 270 with C or better
GLG	321	Mineralogy	Crystal chemistry, crystallography, mineral identification, origin and occurrence of minerals, systematic mineralogy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		Prerequisite(s): CHM 113 (or both CHM 111 and 117 or 114) with C or better; MAT 170, 210, 265 or 270 with C or better
GLG	325	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s) with C or better: BIO 100 (or BIO 182 or 282 or GLG 101 or SES 121); CHM 101 (or CHM 113 or 114). Credit is allowed for only BIO 325 or CHM 385 or GLG 325
GLG	327	Earth's Critical Zone	The Earth's near surface environment (the "critical zone") supports most life and is the dynamic interface between the solid Earth and its fluid envelopes where much of the geologic record is produced. We now know that we face rapid climate change and the consequences of changes in land use, water resources, and ecosystems. Critical to planning a response to, or mitigation of, environmental change is understanding how the Earth surface works. Focuses on how changes to the environment manifest themselves in the critical zone—in the form and function of the Earth's surface (landforms, water resources, soils, ecosystems). Offers a quantitative introduction to the form and function of the processes impacting the Earth's critical zone to build an understanding of the interactions of physical, chemical and biotic processes in shaping the surface and determining fluid, solute and sediment fluxes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisites with C or better: GLG 101 & 103 or SES 121 & 123; MAT 170 or 171 or 210 or 251 or 265 or 270; PHY 101 or 111 or 121 or 150 or CHM 101 or 107 or 113 or 114 or BIO 100 or 181 or 182 or 281 or 282. Credit is allowed for only GLG 327 or SOS 374
GLG	362	Geomorphology	Land forms and processes that create and modify them. Lab and field study of physiographic features.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: GLG 101 or SES 121 with C or better; MAT 266 or 271 with C or better
GLG	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	400	Earth and Space Exploration Colloquium	Presentation of recent research by faculty and guests. Written assignments required. 1 semester hour required for Geological Sciences majors; may be repeated for a total of 2 semester hours.	N	LEC	Y	YGB	Liberal Arts and Sciences	School of Earth and Space Exploration	1		
GLG	404	Fundamentals of Planetary Geology	Surveys planetary topics, including impacts, tectonics, and volcanism on planetary objects, and use of spacecraft data, including geological mapping.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): GLG 101 (or GLG 102) or SES 121 (or SES 122) with C or better
GLG	406	Geology of Mars	Geological evolution of Mars through analyses of spacecraft data, theoretical modeling, and study of terrestrial analogs; emphasizes current work. Possible field trips to examine Arizona geology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		
GLG	410	Computers in Geology	Geological computer skills including data processing, visualization, presentation, numerical analysis, software and hardware applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	CS	Pre-requisites: GLG 101 or SES 121 with C or better
GLG	418	Geophysics	Solid earth geophysics; geomagnetism, gravity, seismology, heat flow. Emphasizes crust and upper mantle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: MAT 272 or 267 with C or better; PHY 131 and 132 or PHY 151 with C or better
GLG	419	Geodynamics	Emphasizes application of continuum principles to geological problems, including lithospheric stresses, heat transfer, fluid mechanics, and rock rheology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite(s): MAT 267 or MAT 272 with C or better; PHY 131 and 132 (or PHY 151) with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
GLG	420	Volcanology	Distribution of past and present volcanism, types of volcanic activity, mechanism of eruption, form and structure of volcanoes, and geochemistry of volcanic activity.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite: Engineering, Math or Science major; Minimum Junior standing
GLG	422	Planetary Volcanology	Studies the effects of planetary environments and magma compositions on styles of volcanism and the nature of volcanic products on the terrestrial planets and outer planet satellites. Overview of volcanism on specific planetary objects, analysis of spacecraft image data, basic mathematical volcanic modeling, and reviews of key papers.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): AST 111 or AST 112 or GLG 101 or 102 or 110 or GPH 111 or SES 121; MAT 170 or MAT 171 or 210 or 251 or 265 or MAT 270 with C or better. Credit is allowed for only GLG 422 or GLG 494 (Planetary Volcanology)
GLG	424	Petrology	Origin of igneous and metamorphic rocks. Optical mineralogy, hand specimen identification, and thin-section analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): GLG 321 with C or better
GLG	430	Paleontology	Introduces concepts and analytical techniques in biogeology, paleobiology, paleoecology, and paleoenvironmental reconstruction from the fossil record.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: GLG 102 (or SES 122) with C or better; GLG 104 (or SES 124)
GLG	435	Sedimentology	Origin, transport, deposition, and diagenesis of sediments and sedimentary rocks. Physical analysis, hand specimen examination, and interpretation of rocks and sediments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s) with C or better; GLG 102 (or SES 122), 321
GLG	441	Ore Deposits	Origin, occurrence, structure, and mineralogy of ore deposits.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites with C or better; GLG 101 (or SES 121); GLG 310 (or 321)
GLG	451	Field Geology I	Geological mapping techniques using topographic maps and aerial photos. Intensive field-based instruction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	L	Pre-requisites: GLG 310 with C or better; Pre/Co-requisite: GLG 321
GLG	452	Field Geology II	Geological mapping techniques using topographic maps and aerial photos. Intensive field-based instruction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	L	Pre-requisites: GLG 310 with C or better; GLG 321 with C or better; GLG 451 with C or better
GLG	455	Advanced Field Geology	Geologic mapping in igneous, sedimentary, and metamorphic terrains of the Basin and Range province of Arizona.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		Pre-requisite: GLG 310 with C or better; Pre/Co-requisite: GLG 451 with C or better if completed
GLG	460	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite with C or better; AST 112 (or BIO 182 or BIO 282 or GLG 102 or SES 122), one 300-level course in AST or BIO or CHM or GLG or MIC or PHY or SES. Credit is allowed for only AST 460 or GLG 460 or MIC 475
GLG	461	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and minerals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		
GLG	464	Solving Environmental Problems	Capstone course intended primarily for seniors in the Earth and Environmental Studies degree program. Hybrid self-study design project workshop guided by faculty, in which student teams research and develop plans for a viable solution to a real environmental problem in the American Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): Earth and Environmental Sciences BA seniors; GLG 305, 325 or 327 with C or better
GLG	470	Hydrogeology	Geology of groundwater occurrence, aquifer and well hydraulics, water chemistry and quality, contaminant transport, remediation. Emphasizes quantitative methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		
GLG	471	Hydrology	Descriptive and quantitative hydrology; hydrologic cycle, models, and systems. Rain-runoff models. Hydrologic design. Concepts, properties, and basic equations of groundwater flow. Emphasizes quantitative methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): CEE 341 or MEE 340 or GLG 362 with C or better; Credit is allowed for only CEE 440 or CEE 545 or CEE 598 (Hydrology) or GLG 471 or GLG 490 (Hydrology)
GLG	481	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite: CHM 341, CHM 346 or GLG 321 with C or better. Credit is allowed for only CHM or GLG 481
GLG	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		

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GLG	485	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: CHM 341, CHM 346, or GLG 321 with C or better; Credit is allowed for only GLG 485 or CHM 485
GLG	489	Field Geochemistry	Explores basic field measurements and sampling techniques for environmental systems, with a focus on carbon cycling in the Colorado River. Surveys a variety of geochemical principles, including: equilibrium aqueous speciation, acid-base chemistry, solution-mineral equilibrium systems, oxidation-reduction reactions, organic and environmental geochemistry and biogeochemical cycles. Applies chemical principles and analytical techniques to answer questions about environmental systems and processes.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3	L	Prerequisite(s): CHM 302 or GLG 321 or GLG 481 with C or better; Credit is allowed for only CHM 489 or GLG 489 or GLG 490 (Field Geochemistry)
GLG	490	Topics in Geology	Special topics in a range of fields in geology.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
GLG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Prerequisite(s): Barrett Honors student
GLG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	495	Undergraduate Thesis	Guided research culminating in the completion and presentation of an undergraduate thesis based on supervised research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		
GLG	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
GLG	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		
GLG	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	500	Earth & Space Exploration Colloquium	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	581	Isotope Geochemistry	Geochemistry and cosmochemistry of stable and radioactive isotopes; geochronology; isotope equilibria.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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GLG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GPE	10	English Verbal Skills for International Scholars	Helps international graduate students (prospective ITAs) as well as other graduate students or visiting scholars at ASU improve their spoken English (pronunciation and fluency). Helps familiarize students with American classroom culture and helps them become effective classroom teachers. Each student receives an individual pronunciation assessment to help him or her focus on areas needing improvement. There is direct instruction and practice of pronunciation (e.g., sound, stress, rhythm, intonation). By participating in and leading class discussions, by working in small groups or pairs and by preparing for videotaped presentations, students improve English fluency.	N	LEC	Y	YGB	Office of the Provost	Global Launch	3		
GPE	11	International Scholar Teacher Training	Familiarizes international graduate students (prospective ITAs) at ASU with American classroom culture and helps them become effective classroom teachers. Exposes various methods of teaching commonly used in the American university classroom.	N	LEL	N	YGB	Office of the Provost	Global Launch	3		
GPE	90	Business Presentation Skills	Develops ability to verbally persuade, inform and motivate an audience. Covers integral key competencies such as: identifying audience, researching and organizing information, preparing and delivering effective visuals, and communicating concisely in English. Coupled with activities which include impromptu business-themed presentations, evaluations by the professor and feedback from peers.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		

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GPE	91	Academic and Business Writing Skills	Develops the skills needed to write clearly and effectively, in both academic and business settings, through the exploration of efficient techniques and writing processes for targeting specific audiences with impactful content.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		
GPE	92	Critical Thinking Through Case Studies and Reading Strategies	Teaches international students reading and critical thinking strategies required for a master's-level program. Teaches how to read and understand dense textbooks, articles and magazines in a timely fashion and identify the important information.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		
GPE	93	American Business and Cross-Cultural Communication	Improves international students' ability to compare and contrast aspects of American business culture with other cultures in order to understand similarities and differences.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		
GPE	94	Business Listening and Conversation	Improves the student's ability to effectively communicate orally at a master's level. Covers speaking and listening strategies and skills necessary to participate in discussions related to business topics. Students learn to control the input they receive and produce coherent and appropriate responses.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		
GPH	111	Introduction to Physical Geography	Spatial and functional relationships among climates, landforms, soils, water, and plants.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	SQ	Credit is allowed for only GPH 111 or 411
GPH	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GPH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	210	Society and Environment	Examines the interaction among social processes, key environmental issues, and nature's role as a resource at global and regional scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	G	
GPH	211	Landform Processes	Laboratory science class on earth-surface processes, with exercises emphasizing how erosion, transportation, and deposition modifies landforms.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	SQ	
GPH	212	Introduction to Meteorology	Fundamentals of weather and climate, including basic atmospheric processes and elements. Students whose curricula require a lab course must also register for GPH 214. Both GPH 212 and 214 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SQ	
GPH	213	Introduction to Climatology	Fundamentals of meteorological/climatological analysis, including terminology and symbology. Recommended for meteorology/climatology program students. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SG	
GPH	214	Introduction to Meteorology Laboratory	Introduces basic meteorological/climatological data and measurements. Suggested concurrent enrollment in GPH 212. Both GPH 212 and 214 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1	SQ	
GPH	215	Introduction to Climatology Laboratory	Fundamentals of meteorological/climatological map analysis and interpretation. Recommended for meteorology/climatology program students. May be taken concurrently with GPH 213. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1	SG	
GPH	267	Extreme Weather	Introductory survey of extreme weather and climate processes and the often disastrous consequences at the intersection of human operations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
GPH	275	Geography of Cyberspace	Focuses on the relationship between geography and human's use of (and creation of) Internet and communications technologies to interact with each other over space and time. Studies the cyberspaces that they produce and their impacts on the information society. Topics include cyberpunk and space in popular culture; computer spaces, virtual worlds, and gaming; mapping cyberspace; bots, crawlers, and viruses; cyberspace law; cyberspace as social media; historical cyberspaces; the Digital Divide; geographies of e-commerce; mobile cyberspaces; cyber-place; and code/space.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GPH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	314	Global Change	Response of Earth's natural systems (atmosphere, hydrosphere, lithosphere, biosphere) to past environmental change, and effects of potential future changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	HU & G	Pre-requisite: Minimum 45 hours
GPH	381	Geography of Natural Resources	Nature and distribution of natural resources and the problems and principles associated with their use.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	G	
GPH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		

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GPH	405	Energy and Environment	Sources, regulatory and technical controls, distribution, and consequences of the supply and human use of energy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Minimum 75 hours; Credit is allowed for only GPH 405 or 505
GPH	409	Synoptic Meteorology I	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisites: MAT 270 with C or better; Pre/Co-requisite: PHY 121
GPH	410	Synoptic Meteorology II	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisite: GPH 409 with C or better
GPH	412	Physical Meteorology	Physical processes in the earth-atmosphere system on regional and global scales; concepts and analysis of energy, momentum, and mass balances.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GPH 111, MAT 270, PHY 121 and PHY 122 with C or better. Credit is allowed for only GPH 412 or GPH 591 (Physical Meteorology)
GPH	413	Meteorological Instruments and Measurement	Design and operation of ground-base and aerological weather measurement systems. Collection, reduction, storage, retrieval, and analysis of data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GPH 213 with C or better
GPH	414	Climate Change	Surveys three climate research areas: paleoclimatology, theories (e.g., greenhouse warming), numerical modeling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	G	Prerequisite(s): GPH 111 (or GPH 213 or 314)
GPH	418	Landforms of the Western United States	Studies landforms and geomorphic processes in the western United States, including lecture, topographical maps, aerial photographs, satellite imagery, and field trips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	
GPH	422	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: BIO 181, GPH 111 or PLB 200 with C or better; Credit is allowed for only GPH or PLB 422
GPH	433	Alpine and Arctic Environments	Regional study of advantages and limitations of the natural environment upon present and future problems involving resource distribution, human activities, and regional and interregional adjustments.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	G	Credit is allowed for only GPH 433 or 598 (Alpine & Arctic Environments)
GPH	474	Dynamic Meteorology I	Large-scale atmospheric motion, kinematics, Newton's laws, wind equation, baroclinics, vorticity, and the midlatitude depression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: MAT 271, PHY 131, PHY 132 with C or better
GPH	475	Dynamic Meteorology II	Topics in climate dynamics. General circulation, numerical modeling, teleconnection phenomena, and surface-atmosphere interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite: GPH 474 with C or better
GPH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12	G	Pre-requisite: Junior standing; Credit is allowed for only GCU 485 or GPH 485 or LAP 485 or POR 485 or PUP 485 or 585
GPH	491	Geographic Field Methods	Field techniques, including use of aerial photos, large-scale maps, and fractional code system of mapping; urban and rural field analysis to be done off campus.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GPH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
GPH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Prerequisite(s): Barrett Honors student
GPH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
GPH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GPH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
GPH	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	511	Fluvial Processes	Geographical aspects of processes of river erosion, transportation, sedimentation: emphasizing spatial characteristics of forces, resistance, landforms, sediment; includes computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	535	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP or GPH 535
GPH	569	Digital Analysis of Remotely Sensed Data	Focuses on the digital image processing of remotely sensed data for earth resource analysis and applications. Provides the skills and knowledge to apply digital remote sensing techniques for biophysical and environmental planning and problems. Through laboratory work, students have opportunities to practice concepts and techniques learned in the lecture part. Requires a reasonable background in college algebra and basic statistics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only GPH 394 (Digital Analysis of Remotely Sensed Data), 569 or 598 (Digital Analysis of Remotely Sensed Data)
GPH	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	585	International Field Studies	Organized field study in specified international locations.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only GCU 485 or 586 or GPH 485 or 585 or LAP 485 or 585 or POR 485 or PUP 485 or 585
GPH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	596	Advanced Spatial Statistics	Multivariate and advanced statistical techniques including Box-Jenkins modeling and spectral analysis. Requires project papers and presentations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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GPH	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	101	Designing Life	Helps students develop strategies to successfully navigate their education experience. Focuses on critical and reflective thinking.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
GRA	111	Graphic Design History I	Surveys development of visual communication from its origins to the 20th century. Investigates significant technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	
GRA	112	Graphic Design History II	Surveys contemporary and 20th-century graphic design. Investigates relationships among graphic design and related disciplines, technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: GRA 111 with C or better
GRA	121	Principles for Graphic Design I	Graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Environmental Design or Graphic Design major. Corequisite(s): GRA 111
GRA	122	Principles for Graphic Design II	Continued exploration of graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): GRA 121 with C or better, Environmental Design or Graphic Design major. Corequisite(s): GRA 112

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GRA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
GRA	220	Design Drawing I	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for graphic design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 122 with C or better; Passed Milestone; Co-requisites: GRA 221; GRA 222
GRA	221	Letterform	Drawing of letterforms with focus on proportion and structure. Introduces letterform nomenclature and classifications. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 222
GRA	222	Visual Communication I	Theoretical and applied studies in shape, drawing, and color. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 221
GRA	223	Typography	Theoretical exercises in spatial and textural qualities of type. Problems in tension, activation, and balance. Exercises in simple typographical applications. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 220 and GRA 221 with C or better; Co-requisite: GRA 224
GRA	224	Visual Communication II	Transition from theoretical to applied problems. Emphasizes refinement of visual skills. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 220 and GRA 222 with C or better; Co-requisite: GRA 223
GRA	225	Communication/Interaction Design Theory	Theory related to the design of communication artifacts and interaction within various media environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
GRA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
GRA	321	Technology for Design I	Explores the process of technology in design. Projects interface with GRA 361.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Graphic Design student; Co-requisite: GRA 361
GRA	322	Technology for Design II	Emphasizes advanced technology in design problems. Projects interface with GRA 362.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: GRA 321 with C or better; Co-requisite: GRA 362
GRA	345	Design Rhetoric	Develops critical thinking and expression of ideas in concise and persuasive written and spoken form.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	L	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; Architecture, Digital Culture (Design), Design Studies, Environmental Design, Graphic Design, Industrial Design, Interior Design, Landscape Architecture major
GRA	361	Visual Communication III	Explores methodologies of strategic communication, development of visual systems, and information design ideation processes leading to applied projects in print and digital media.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Graphic Design student; GRA 223 & 224 with C or better; Co-requisite: GRA 321
GRA	362	Visual Communication IV	Comprehensive studio projects with emphasis on production processes leading to multidisciplinary applied projects in print, 3-D space, and digital media.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Graphic Design student; GRA 361 with C or better; Co-requisite: GRA 322
GRA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
GRA	401	Creative Environment	Explores and investigates theories of the psychology of space, psychology of people in space, and the psychology of objects as it pertains to creativity and the creative environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
GRA	421	Exhibit Design	Familiarization with the processes associated with the design of exhibits, especially visual communication in 3-D.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 422; GRA 461
GRA	422	Motion Graphics and Interaction Design	Discusses and explores theory related to the design of motion graphics and interaction through lectures and studio projects.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 322 with C or better; Co-requisites: GRA 421; GRA 461
GRA	423	Advanced Interaction Design	Advanced discussion and exploration of theory related to the design of interaction.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: GRA 422
GRA	424	Advanced Media	Advanced exploration of digital media for communication.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: GRA 422 with C or better

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GRA	440	Finding Purpose	Career orientation in the creative professions, including value clarification, decision making, lifestyle planning, goal setting, and expression of individual talents.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
GRA	461	Visual Communication V	Comprehensive studio projects with emphasis on design processes, including research, writing, critical thinking, practice, presentation, and analysis.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 421; GRA 422
GRA	462	Visual Communication VI	Comprehensive studio projects pursued in cooperation with a public organization or private enterprise. All projects culminate in an exhibit.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Graphic Design student; GRA 461 with C or better; Co-requisites: GRA 423; GRA 424
GRA	464	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 464 or MGT 464 or SOS 474
GRA	465	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 465 or IND 465 or MGT 465 or SOS 475
GRA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisite: GRA 461
GRA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
GRA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
GRA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
GRA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
GRA	501	Creative Environment and Collaborative Leadership	Explores and investigates creativity and group collaboration leadership as it applies to the creative process.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): graduate Herberger Institute for Design and the Arts major
GRA	521	Advanced Visual Communication Design Studio I	Students translate data, stories and references that they collect in their research into masterful visual narratives. This studio is an inquisitive environment for exploring ways to frame information and weave stories with graphic design. Students acquire new knowledge as individuals and as a group. Emphasizes studio-based research, conceptual development and articulation of process, voice and a high level of design execution.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): Master of Visual Communication Design major. Credit is allowed for only GRA 521 or GRA 590 (Advanced Visual Communication Design Studio I)
GRA	522	Advanced Visual Communication Design Studio II	Encourages students to develop a framework for understanding the role of design systems, tools and objects as cultural artifacts and their reflection on social diversity. In particular, students focus on the cultural experience of collaborative consumption as it is fostered through visual communication design.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): GRA 521. Credit is allowed for only GRA 522 or GRA 590 (Advanced Visual Communication Design Studio II)
GRA	526	Visiting Designers	Series of workshops (three per semester) in which students work closely with professionals and scholars in design and related disciplines.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student
GRA	561	Methods in Visual Communication I	Introduces methodology in visual communication.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student
GRA	562	Methods in Visual Communication II	Advanced theories and methodologies in visual communication. Emphasizes visual search as the synthesis of theory and practice.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: DSC 561 with C or better
GRA	563	Thesis Document Design	Emphasizes the construction of the final thesis document as a visual communication object and/or medium.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Master of Science in Design student
GRA	581	Internship in Teaching Design	Develop assignments, conduct critiques, structure dialogue, make presentations, and assist in the instruction of studio and lecture courses.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Master of Science in Design student

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GRA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	621	Advanced Visual Communication Design Studio III	Structured around the Design School traveling-studio model, this studio challenges students to work together to identify new design opportunities. For approximately one week during the semester, students travel to an off-campus location to examine a local condition there for which new design solutions are needed. Students return to ASU and continue working on the project for the semester.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): GRA 522
GRA	622	Advanced Visual Communication Design Studio IV	As a culmination of study at the master level, the student is responsible for the development of an individually determined, semester-long project in response to defined objectives, periodic commentary by committee, and formal review. Students meet regularly with a faculty member to discuss assignments. Final faculty review and project book containing a written as well as graphic theoretical component are the forms of final presentation for this contribution to the field of visual communication design.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): GRA 621
GRA	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
GRA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
GRD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate Education	Graduate Education	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate Education	Graduate Education	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GRD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	N	LEC	Y	Z1	Graduate Education	Graduate Education	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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GRD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	GNA	Graduate Education	Graduate Education	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRK	101	Elementary Ancient Greek	Ancient Greek grammar and vocabulary with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
GRK	140	Greek and Latin Roots in Bioscientific Terminology	Introduces students to the ancient Greek and Latin root words most commonly used in biological, medical, and other scientific terminology, and gives practice identifying them in context. The knowledge of these root words enables students to memorize with greater ease and increased retention the bioscientific terminology they encounter in other coursework as well as in their medical or scientific profession.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
GRK	142	Ancient Greek Civilization	Ancient Greek civilization and culture. Studies (in roughly equal parts) the art, archaeology, literature, culture and history of ancient Greece from prehistoric times until after the conquests of Alexander the Great (the Hellenistic Age).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H	Credit is allowed for only GRK 142, GRK 194 (Ancient Greek Civilization) or SLC 142
GRK	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GRK	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	201	Intermediate Ancient Greek	Continuation of GRK 101. Ancient Greek syntax and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		Pre-requisites: GRK 101 with C or better
GRK	221	Survey of Ancient Greek Literature	Introductory survey of ancient Greek literature. Familiarizes students with the important literary genres, texts, and authors of the ancient Greeks from Homer to the Hellenistic period. All readings in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only GRK 221, SLC 221 or 294 (Ancient Greek Literature in Translation)
GRK	223	Introduction to Greek and Roman Mythology	Familiarizes students with the characters and events of ancient Greek and Roman myths through their literary manifestations, and moves beyond mere narrative to consider the possible interpretations and functions of these myths, thus revealing the central concerns of ancient society and giving insights into the working of our own society and its literary and artistic traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only GRK 223, LAT 223, SLC 223, GRK 294 (Greek and Roman Mythology)
GRK	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	301	Ancient Greek Literature I	Readings in ancient Greek prose; advanced grammar. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: GRK 201 with C or better
GRK	302	Ancient Greek Literature II	Continuation of GRK 301. Readings in ancient Greek poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: GRK 301 with C or better
GRK	344	Classics and Comics	Explores the connections between the classical tradition of Ancient Greek and Roman literature and the modern American superhero comic book tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GRK 344 or LAT 344 or SLC 344 or GRK/LAT/SLC 394 (Classics and Comics) or SLC 494 (Classics and Comics)
GRK	347	Ancient Greece I: Bronze Age through the Peloponnesian War	Traces Greek History from its prehistoric beginnings through the Peloponnesian War (431-404 B.C.), with a special focus on the Archaic (ca. 800-480 B.C.) and Early Classical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only GRK 347 or HST 347 or SLC 345
GRK	360	Greece and Rome at War	Familiarizes students with the major battles, leaders and tactics of Classical Greece and Rome. Supplements lectures with student participation including study of original sources, group presentations, and gaming battle simulations. This multifaceted approach gives a greater sense of the evolution of the leaders, armies and tactical systems of the Greeks and Romans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 360, HST 397, LAT 360, SLC 360 or SLC 394 (Greece and Rome at War)
GRK	362	Ancient Greek Religion	Surveys ancient Greek religion, including its gods, ritual practices and festivals. Analyzes the development of the religion over time, and how both ancient and modern figures interpreted its meaning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; Credit is allowed for only GRK 362, REL 360, SLC 362 or SLC 394 (Ancient Greek Religion)
GRK	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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GRK	444	Heroes, Ancient and Modern	Explores the heroic literature of the ancient Greeks and Romans, then traces the classical tradition and reception of the classical hero in medieval and modern texts. Incorporates history, art history and material culture from the relevant societies to supplement study of the texts involved.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 444, LAT 444, SLC 444 or SLC 494 (Heroes: Ancient and Modern)
GRK	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
GRK	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
GRK	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GTD	501	Global Technology and Development	Major theories of economic, political, and social development, with particular emphasis on the impact of current technologies and globalization.	N	LEC	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	503	Technology and the International Political System	Historical development of international political system, with emphasis on role of technology.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	504	Technology and Development in Zones of Conflict	Examines the special context of technology and development in zones of conflict that face wars among other nations, civil strife and dramatic political change.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	505	Research Design in Technology and Development	Emphasizes techniques of primary data collection, effective uses of secondary sources, for qualitative and quantitative applications.	N	LEC	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	506	Quantitative Analysis in Technology and Development	Uses correlation and regression-based multivariate statistical approaches in development studies.	N	LEC	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	507	Technology and Development in The Middle East	Examines historical and current patterns of political and socioeconomic development in the Middle East, including the role of technological development and current events.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GTD 507 or GTD 598 (Political Development in the Middle East)
GTD	508	Technology and Development in Latin America	Examines historical and current patterns of political and socioeconomic development in Latin America, including the role of technological development and current events.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GTD 508 or GTD 598 (Technology and Development in Latin America)
GTD	509	Technology and Development in North Africa	Examines historical and current patterns of political and socioeconomic development in North Africa, including the role of technological development and current events.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GTD 509 or GTD 598 (Technology and Development in North Africa)
GTD	510	Technology and Development in Sub-Saharan Africa	Examines historical and current patterns of political and socioeconomic development in Sub-Saharan Africa, including the role of technological development and current events.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GTD 510 or GTD 598 (Technology and Development in Sub-Saharan Africa)

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GTD	511	Development Policy and Practices	Since the Bretton Woods Agreements in 1944, enormous energy has been devoted to generating the right tools for global development policy. Yet, little attention is given to the relationship between these tools, the practice of development and actual outcomes. At best, it is understood as a "gap" between the theory of development policy and practices. There is no reflection on what the good development policy looks like or what collective learning we have thus far. Informs students on the complexity of policy making and its relationship to development practices through time. Creates an intellectual space to discuss the practices of global development; uses case studies to enhance students' creativity and skill needed in managing and negotiating critical development challenges. Approaches development policy (models, strategies and project design) primarily as a tool to legitimize power relation rather than to orient practice for desired development outcomes.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	100	Introduction to the Science of Health Care Delivery	Introduces the science of health care delivery in the United States. Presents basic concepts in health services, health care organizations, and the delivery of safe, accessible, high-quality health care. Solidifies concepts through the use of assignments, exams and discussions.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		
HCD	101	Introduction to Public Health	Introduces public health in the United States. Familiarize students with the broad discipline of public health and how it influences community and individual health status. Discusses the role of various agencies in public health, methods of measurement and evaluation, major public health issues in the United States, and factors that contribute to individual and community health. Solidifies concepts through the use of in-class discussion, group work and individual analysis.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Credit is allowed for only HCD 101 or PBH 100
HCD	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-3		
HCD	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-4		
HCD	201	Economics for Health Majors	Introduces economics and demonstrates the relevance of economic principles to the study of health care delivery systems and public health. Combines elements of a traditional introductory economics curriculum with broad coverage of the history of economics, and specific application to current issues in health care delivery and public health policy. Prepares the student for further study of health economics.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Credit is allowed for only HCD 201 or PBH 201
HCD	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-4		
HCD	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	PRA	N	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-6		Prerequisite(s): Barrett Honors student

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HCD	300	Biostatistics	Biostatistics and its use in health and health services research. Familiarize students with statistical concepts and methods to analyze and interpret data and conceptually addresses statistical theory. Introduces SPSS software to analyze large data sets.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3	CS	Prerequisite(s): completion of General Studies MA requirement with C or better; minimum 45 hours. Credit is allowed for only HCD 300 or PBH 300
HCD	302	Health Care Management	Broad concepts and skills of management; application of these techniques to health care organizations. Students appreciate the variability of management styles and personalities and begin to develop their own style. Solidifies concepts through the use of case studies and asynchronous discussion boards.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): ECN 212 or HCD 201 or PBH 201
HCD	303	Global Health Care Systems	Examines health care delivery systems internationally and explores contemporary issues affecting the institutions that provide health care and the people who seek health services. Covers the historical development of international health care systems, the organization and financing of systems of care, and the policy process and priority setting. Also covers current efforts at health care reform. Provides students with the necessary professional skills to be effective participants in efforts to evaluate and improve the delivery of health care nationally and internationally.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3	G	Prerequisite(s): minimum 30 hours
HCD	304	Health Care Finance	Influence and effect of health care financing from an institutional and individual perspective. Examines current issues in health care financing including the Affordable Care Act, payment models, Medicaid expansion, accountable care organizations, the role of health insurance and efforts to contain health care costs.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 302
HCD	305	Public and Community Health	Provides a broad survey of national, state and local community health sciences and services including cultural and ethnic issues. Examines the concepts of health and wellness and introduces health education as a foundation for population-based health care.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): Medical Studies major or HCD 101 or PBH 100
HCD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-4		
HCD	400	Interpreting the Scientific Literature	Emphasizes clinical relevance and application of searching and interpreting the literature, using case studies as examples. Applies these skills through in-class activities and through written report at the conclusion of the course. These tools ultimately assist the student with critical thinking and application of concepts to clinical scenarios. Class is held in a computer lab to facilitate class engagement.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 100; HCD 300; MAT 210, 251, 265, or 270
HCD	401	Leadership and Professionalism	Leadership, leadership theory and inter-professionalism in practice. Applies didactic content to case studies and activities designed to promote critical thinking and effective teamwork. Solidifies concepts through the use of assignments, exams and discussions.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only HCD 401 or MED 450
HCD	402	Health Economics	Emphasizes clinical relevance and application of searching and interpreting the literature, using case studies as examples. Applies these skills through in-class activities and through written report at the conclusion of the course. These tools ultimately assist the student with critical thinking and application of concepts to clinical scenarios. Class is held in a computer lab to facilitate class engagement.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): ECN 211 or ECN 212 or PBH 201; minimum 45 hours
HCD	403	Process Engineering	Core concepts in process engineering, specifically related to systems improvement and patient safety. The Institute of Medicine (IOM) advocates for integrating process engineering within health care to optimize health care outcomes. The IOM addresses multiple dimensions of health, including efficiency, effectiveness, safety, equity, patient-centeredness and access. These domains provide the framework from which faculty approach course content.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): CHS 100; HCD 300; PSY 230, STP 226, STP 231, or SOC 390; minimum 45 hours
HCD	404	Advanced Concepts in the Science of Health Care Delivery	Applies the themes of science, systems and leadership across the continuum of health and health care. Application and discussion of core competencies to facilitate critical thinking.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): CHS 100; HCD 401; HSC 330
HCD	405	Health Technology	Develops essential skills in identifying, analyzing and evaluating information technology applications in health care. Examples include electronic health records, computerized prescriber order entry, and computerized clinical decision support. Discusses the use of health technology in a variety of care settings, including outpatient and inpatient, and facilitate access to health care in resource-poor communities through the use of efficient technology.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 100 or HCD 101 or MED 100; HCD 300 and HSC 330
HCD	422	Health Disparities and Access to Health	Racial and ethnic health disparities in the United States. Explores disparities in healthcare seen at the provider and system level and their effects on health in the community. Also considers the historical context of racial and ethnic health disparities and the demographic and conceptual issues surrounding health disparities research. Reflects on the effects of behavior, socioeconomic status and group-specific disparities on community health status.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 101 (or PBH 100) or BS Medical Studies major. Credit is allowed for only HCD 422 or PBH 422

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HCD	444	Science of Health Care Delivery Internship	Applies the themes of science, systems and leadership across the continuum of health and health care. Application and discussion of core competencies to facilitate critical thinking.	N	RSC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 300, PSY 230, STP 226, STP 231, or SOC 390; HCD 401; KIN 290
HCD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		Prerequisite(s): minimum 2.00 GPA; senior standing
HCD	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-6		Prerequisite(s): Barrett Honors student
HCD	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-6	L	Prerequisite(s): Barrett Honors student
HCD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-4		
HCD	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-6		Prerequisite(s): Barrett Honors student
HCD	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-7	L	
HCD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-3		
HCD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	501	Health Behavior and Statistical Tools in Health Environments	Provides an understanding of the statistical tools and principles of research design and methods in health behavior research in health environments. Encompasses an overview of quantitative, qualitative and mixed designs and focuses on the interpretation and communication of health behavior research through published reports and presentations. Incorporates research approaches and methodologies utilized in an array of content areas. Helps students gain a strong conceptual understanding and application of the statistical tools and research methods used to answer research questions of interest to health and health behavior researchers; it does not focus on mathematical treatments of underlying assumptions and formulae and related statistical problems sets or exercises.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	4		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	502	Health Care Systems and Design	Introduces direct health care delivery structures and processes within and across health care settings, and their impact on the patient, family and community experience of the health care system and services. Examines the interaction among people, resources, delivery systems and built environments using perspectives, tools and strategies from multiple disciplines to evaluate strengths, gaps and opportunities for system improvements.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	510	Interdisciplinary Approaches to Promotion of Healthy Lifestyles	Focuses on application of interventions to promote healthy lifestyles. Includes the theoretical and empirical foundations for clinical evidence for the implementation of healthy lifestyle interventions.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	511	Health Economics, Policy, and Payment Models	Economics provides a framework to understand and predict human decision making under scarcity, uncertainty and imperfect information. Examines concepts central to health care economics and their application to important decisions made by patients, families, practitioners, administrators and policy makers. Uses an individual family's scenario through a progressive case study to evaluate how incentives and information affect the health and health care of each family member. Each meeting integrates basic economic principles, existing facts and knowledge from economic research, and individual perspectives and experience regarding how these concepts apply to health care policy.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only BMD 511 or HCD 511
HCD	520	Interdisciplinary Perspectives on Health Disparities and System Access	Presents minority health and health disparities concepts and practices from an applied and action-oriented perspective for clinicians and administrators in order to transform systems of inequality and increase access and quality of care for ethnic minorities and other vulnerable populations.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	521	Law and Health Promotion	Analyzes case studies which illustrate the impact of policy and law on health promotion strategies and health outcomes. Includes discussions of the theoretical foundations supporting legal, ethical and economic decision making related to health promotion and real-world examples of the impact of current policies.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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HCD	531	The Health Care System	Health care delivery in the United States, including its composition, function and historical organization. The broad discipline of health services systems, health care organizations, and the delivery of safe, accessible, high-quality health care. Discusses the health care system from the perspective of various patient populations, including the aging patient population. Examines the influence of health care reform on health care delivery and costs. Solidifies concepts through the use of in-class case studies and discussions.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	532	Health Care Management	Explores all aspects of managing health care organizations to provide high-value care (better outcomes at lower costs), including human resources, credentialing, finance, supply management, project management. In addition, students appreciate the variability of management styles and personalities and begin to develop their own styles. Solidifies concepts through the use of case studies from health care and other industries.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	540	Seminar in Science of Health Care Delivery	Provides an introduction to the science of health care delivery, an exciting field that focuses on how to achieve the quality care that providers want to deliver and patients expect to receive. Too often quality care is compromised by inadequately designed systems of care. Provides an overview of the health care delivery system and then introduces the major components of the field.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	550	Capstone: Applied Project	Discusses the results from student capstone projects, done in teams, and these projects related to broad topics explored during the prior coursework in the program. Capstone projects are identified early in the master's program in conjunction with and overseen by the degree leaders and the industry partners, and often a health care organization or health agency. These projects are worked on through the year with final written and verbal reports due in the last half of the semester.	Y	RSC	Y	GNA	College of Health Solutions	School for the Science of Health Care Delivery	2		Prerequisite(s) with C or better: HCD 502, 540
HCD	560	Systems Metabolic Physiology	Studies vertebrate energy metabolism in the context of systems physiology. With a particular focus on mammals and especially humans, discusses macronutrient storage, mobilization and utilization at the whole organism level. Presents theory and practice of several methodologies used to measure metabolic turnover, including indirect calorimetry, mass balance, isotopic tracers and doubly labeled water. Topics include metabolic rate and fuel selection during rest, locomotion and environmental stress such as energy scarcity or oversupply.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): minimum 3.00 GPA; degree- or nondegree-seeking graduate student
HCD	561	Cellular Energetics and Metabolism	Focuses on the thermodynamics and kinetics of energetic processes at the cellular level. Discusses the metabolism of macronutrients by cells, principally skeletal muscle, cardiac muscle, adipose and liver. Presents membrane transport, energy storage and mobilization, non-oxidative/oxidative pathways of ATP synthesis and energy dissipation processes. Develops and uses concepts of metabolic control, energetic efficiency, metabolic scope and signaling to explore classic and current biomedical literature. Particularly emphasizes mitochondrial metabolism, including the chemiosmotic theory, proton leak, superoxide (free radical) production, interactions between the glycolytic and oxidative pathways, and the central role mitochondria play in health, disease and mortality. Describes the theory and practice of several methodologies central to the study of energy metabolism.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): minimum 3.00 GPA; degree- or nondegree-seeking graduate student
HCD	562	Emerging Bioethical Issues in Translational Biomedical Research	Discusses ethics and policy issues related to translational biomedical sciences research. Emphasizes research involving human subjects. Topics include: genomics and biospecimen research, especially related to biobanks, including confidentiality issues, genetic testing, ownership of genetic information, community advisory boards and return of results questions; regulation of research and proposals including human research oversight by the Institutional Review Board (IRB); relationship between medical research and medical treatment; and communication with patients, within and between institutions and with the general public.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): minimum 3.00 GPA; degree- or nondegree-seeking graduate student
HCD	563	The Metabolic Syndrome	Provides a comprehensive understanding of the metabolic syndrome from an environmental, genetic and molecular perspective. Also discusses the treatment of this complex disease including lifestyle changes, pharmacological interventions and surgical procedures. Evidenced-based course where research guides class lectures and discussions.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	564	Translational Biomedical Sciences Seminar and Data Club	Combined seminar and data club related to translational biomedical sciences.	N	SEM	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): minimum 3.00 GPA; degree- or nondegree-seeking graduate student
HCD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		

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HCD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-15		
HCD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Health Solutions	School for the Science of Health Care Delivery	1		
HCD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-4		
HCD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	School for the Science of Health Care Delivery	1		
HCD	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	GRD	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		

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HCD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-15		
HCD	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	School for the Science of Health Care Delivery	1		
HCD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School for the Science of Health Care Delivery	1-15		
HCI	311	Introduction to Health Care Innovation: Foundational Concepts	Organized around the Seven Pillars of Innovation: innovation process, leadership structure, outcomes, evidence-based practice, finance, policy, and technology and communication. Provides basic definitions and principles of innovation in addition to characteristics, skills and knowledge required for the innovator.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours
HCI	313	Philosophy of Science in Health Care: Understanding Paradigms of Health and Healing	Philosophy of science and its application to health and healing paradigms. Employs selected schools of thought and individual philosophers within philosophy of science to closely examine health and healing paradigms. Discusses concepts such as "life" and "death". Explores questions: What is science? What is health? Examines the way in which philosophy of science informs perceptions and definitions of health and healing in individuals and populations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): any PHI course with C or better; minimum 45 hours
HCI	412	Transforming Health Care: A Systems Perspective for Innovation	Basic elements of systems thinking as a framework for innovation in addressing current and future issues in health care. Focuses on what occurs at the intersection of disciplines as being fundamental to transforming health care. Stresses the importance of collaboration to the systems perspective, in addition to the value of individual worldviews.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 311 with C or better
HCI	421	Health Care Policy: The Innovator's View	Innovation perspective on policy decision making in the health care environment. This perspective views policy-making as a fluctuating, dynamic and evolving process as seen through a lens of innovation principles. Explores the relationship between politics and policy and discusses factors influencing policy development. Identifies methods to formulate and implement policy and presents models to evaluate, analyze and modify health care policy.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 311 with C or better
HCI	425	Facilitating Innovation to Achieve Outcomes	Principles of facilitation that promote and enable the implementation of innovation to achieve outcomes. This approach identifies facilitation as requiring input seeking, ongoing evaluation, and emergent correction of an existing plan of action. Discusses characteristics of effective teams, innovation leadership behaviors that impact change, and involvement of end-users. Compares and contrasts traditional project management processes with innovative facilitation techniques.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 311 with C or better
HCI	428	Technology: A Tool to Advance Innovation in Health Care	Analyzes the role of technology in achieving the Triple Aim: improved quality, improved patient experience, and decreased cost. Discovers tools that are defined as health information technology and those that support business services. Compares and contrasts tools of technology that hold the potential to advance innovation in health care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 311 with C or better
HCI	538	Innovation and the Individual	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	540	Understanding and Applying Principles of Evidence-Based Practice	Understanding how application of evidence-based practice principles assists healthcare professionals to provide the best care. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Admission to the Masters of Healthcare Innovation
HCI	542	Systems Thinking in a Complex Environment	Examines basic and advanced systems principles as they relate to national and international health and healing systems. Specific emphasis is given to systems thinking from a complexity science perspective and the implications for innovation.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Admission to Master of Healthcare Innovation degree
HCI	543	Approaches to Leading Health Care Innovation	Theory-based survey course introduces approaches to lead innovation in an organization. Many change initiatives are designed by those not completing the work, leaving workers isolated, restricted and powerless. Teaches health care leaders to value collaboration with and seeking input from those who will carry out the work. Analyzes approaches to planned change: positive deviance, appreciative inquiry and creation of a learning organization. Students construct a change plan using an appropriate approach to address a health care problem.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Innovation Leadership certificate program

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HCI	544	IT for Healthcare Innovation	Focuses on the information technology (IT) trends and their strategic application in healthcare. Students develop an IT strategy that addresses a specific healthcare area of concern. Students gain an understanding of the role of IT in healthcare innovation and develop skills in business process improvement, change management, strategy definition, value proposition, responding to feedback and managing resistance.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Admission to Master of Healthcare Innovation degree
HCI	545	Public Speaking for Innovation: Building Your Presence and Making the Case for Change	New ideas take a lot of explaining, and innovation often involves persuasion. Builds presence as a speaker and a leader--and gains expertise in public speaking for innovation. Public speaking for innovation is a combination of finding and building one's presence as a speaker and a leader--and translating that to an ability to explain and persuade, making the case for change. Students build their presence and gain the foundational knowledge necessary to successfully explain and persuade in innovation contexts.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	546	Communication, Technology, and Innovation	Overview of traditional, contemporary and innovative communication strategies in the 21st century.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Master of Healthcare Innovation major
HCI	548	Advanced Principles and Concepts of Innovation	Explores and analyzes the innovation in complex systems, focusing on developing specific skills for successful innovations.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	550	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy, emphasizing strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	552	Financing for Innovation	Provides an overview of healthcare economics; develops budgeting, planning, and management skills; and culminates in financial analysis skills necessary to facilitate management decision making or writing business plans or grant proposals.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	554	Outcomes Evaluation	Outcomes measurement, management, and evaluation for healthcare practitioners and/or leaders. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Admission to Master of Healthcare Innovation degree
HCI	561	Innovation Methods	Capstone project to learn the active skills of healthcare innovation using an adapted IDEO model.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre-requisites: Admission to Master of Healthcare Innovation degree
HCI	562	Capstone Innovation Project II	Introduces the process of conceptualizing an innovation and building a plan or proposal to move forward with the innovation in either an entrepreneurial or intrapreneurial context.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	563	Capstone: Final Innovation Project	Applies the concepts learned in MHI core courses and presents evidence of knowledge in innovation principles, applications and strategies for implementation and evaluation. Develops an innovation project in the form of a mindmap. Provides a comprehensive methodology for completing all aspects of an innovation opportunity. Student-directed demonstrations of the application of learned leadership skills and techniques for facilitating team and individual implementation.	N	SEM	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	5		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	570	Innovation Proposal: Culminating Experience for Health Care Innovation Certificate	Applies concepts learned and operationalizes skills acquired throughout the Health Care Innovation certificate. Students envision emerging paths toward an outcome by first presenting a problem they have identified within a health care organization, and creating collaborative relationships and developing strategies to initiate change in their chosen setting.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): HCI 538; HCI 542; HCI 554; HCI 561
HCI	571	Health Care Innovation Leadership Portfolio: Culminating Experience	Examines and applies personal leadership potential. Focuses on the effective development and facilitation of human networks to advance innovation in the health care space. Challenges students to appraise and analyze personal leadership strengths, challenges and opportunities. Explores strategies to evaluate students' current networks; develops the students' emergent professional networks. Gives focus to building relationships necessary to advance innovation in the health care space. Students develop and implement an action plan to advance their personal leadership growth and network utilization.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 538; HCI 543; HCI 545; NLM 562
HCI	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HCR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		
HCR	210	Clinical Health Care Ethics	Healthcare ethics emphasizing analysis and ethical decision making at clinical and health policy levels for healthcare professionals.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	HU	Pre-requisite: ENG 102,105 or 108
HCR	220	Introduction to Nursing and Health Care Systems	Introduces the social, political, and economic contexts in which the nursing profession and health care systems in the United States evolved.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	H	
HCR	230	Culture and Health	Cultures of diverse groups and health/illness. Cross-cultural communication, awareness of own cultural influences, indigenous and alternative healing practices.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	C & G	
HCR	240	Human Pathophysiology	Chemical, biologic, biochemical, and psychological processes used in study of structural and functional alterations in health with selected therapeutics.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s) with C or better: BIO 201 and 202; CHM 101 or higher; MIC 205 and 206
HCR	260	Health Care Industry and Regulation	Overview of the complex system of regulations that frame the oversight and monitoring of the U.S. health care industry. Provides a foundational understanding of federal and state regulations as well as private health care regulatory agencies' requirements as they relate to physicians and other health care professionals, hospitals and other health care institutions, and insurance companies.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
HCR	261	Health Care Compliance	Introduces health care compliance as an industry and a profession. Explores federally legislated mandates for formal compliance programs, program elements and organizational steps for program implementation in specific health care settings.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
HCR	262	Health Care Licensure, Professional Development and Practice	Introduces interprofessional practice, professional licensure, education and training, certification and scope of practice within the health care industry. Explores compliance standards and accreditation as they relate to the authority and scope of licensure boards, which are designed to safeguard the public health.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 261
HCR	263	Introduction to Medical Billing and Compliance	Introduces the complex process of medical coding and billing practices and related federal regulations and programs. Provides learners with a fundamental understanding of medical coding and billing processes including terminology, stakeholders and regulatory impact.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 260
HCR	264	Regulatory Essentials of Compliance Program Design I	Offers a comprehensive overview of the regulations that impact the health care delivery industry. These regulations include: protections against fraud and abuse, patient rights and privacy, protected health information (PHI) and electronic protected health information (ePHI), and occupational health and safety.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 261
HCR	265	Regulatory Essentials of Compliance Program Design II	Comprehensive study of the creation, management and evaluation of all aspects of a formal health care compliance program. Learners investigate and discuss roles of the compliance officer and compliance committee, risk analysis, recommendations for and implementation of corrective action.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 264
HCR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		
HCR	301	Research Methods for the Health Care Professional	Explores basic concepts of qualitative and quantitative research design utilizing methods of assessment, planning, implementation and evaluation.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): STP 226 or PSY 230 or SOC 390 or SWU 321 with C or better; TWC 347 or 362 with C or better
HCR	302	Social Determinants of Health	Addresses issues of social determinants and health disparities at the local, national and global levels.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): TWC 347 or 362; Corequisite(s): HCR 301
HCR	303	Assessing Needs, Assets and Capacity for Health Education	Assesses needs, assets and capacity for health education at the individual, family and community levels.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): CDE 232 with C or better; HCR 210 and 230 with C or better
HCR	320	Foundational Concepts for Health Care Coordination	Focuses on the foundational elements of health care coordination. Discusses the health care coordination process including assessment, implementation and evaluation.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 220 with C or better
HCR	321	Advanced Concepts for Health Care Coordination	Presents advanced concepts for health care coordination, including: interprofessional teamwork, medication reconciliation, patient/family engagement and other tools that facilitate best practices for health care coordination. Students also learn models for health care coordination, and concepts and practices to facilitate transitions of care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 320 with C or better
HCR	330	Fundamentals of Community Health	Provides a framework for understanding community health concepts.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): minimum 45 hours
HCR	331	Communication within Communities	Focuses on the integral nature of communication in health care, including the role communication plays in shaping individual, social and cultural beliefs and expectations about health. Provides skills for effective communication when working with individuals, groups and the media.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): minimum 45 hours

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HCR	335	Program Development and Management for Community Health	Incorporates models, research and resource management to plan, strategize and evaluate community programs that promote healthy lifestyle choices in various, as well as specific, geographic communities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): General Studies Literacy course; minimum 45 hours
HCR	336	Environmental Community Health	Examines the interdependent relationship between the health of the environment and the health of communities. Includes a focus on specific communities, as well as agencies and laws involved in the health of communities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 330 with C or better
HCR	340	Foundations of Integrative Health	Discusses the similarities and differences of the biomedical and integrative health care systems providing an overview of integrative health.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): ENG 102, 105, 108 or FYC MET
HCR	341	Biological, Manipulative, and Body-Based Therapies	Analyzes the principles and practices of select biological and body-based therapies and modalities and their use in the health care system.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): any BIO course or any CHM course
HCR	342	Mind-Body and Energy Therapies and Modalities	Analyzes the principles and practices of select mind-body and energy therapies and modalities and explains and distinguishes their use in the health care system.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): any BIO course or any CHM course
HCR	343	Historical and Cultural Foundations of Integrative Health Care	Distinguishes commonalities and differences between early healing traditions and investigates the utility for today's health care system.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 340 with C or better
HCR	350	Introduction to Clinical Research	Provides an introduction to the biomedical and clinical research field and associated operational processes. Examines clinical trial development phases, regulatory protections for human subjects, clinical research team specializations, research organizations, good clinical practice, institutional review board functions, and research funding mechanisms. Explores specialized career positions for nursing and allied health professionals.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Minimum 45 hours; Credit is allowed for only HCR 350 or 394 (Introduction to Clinical Research Management)
HCR	360	Data Security and Privacy in Health Care Compliance	Focuses on administrative practices that ensure the security of computerized systems and the protection of health information. Topics include communication and reporting, as well as specific regulations and authorities such as the Health Insurance Portability and Accountability Act (HIPAA) Privacy and Breach rules, and HIPAA Security and Meaningful Use Attestation.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 260; HCR 261
HCR	361	Risk Management in Health Care Compliance	Risk management practices as they relate to the oversight of operations and processes within the health care industry. Utilizes various tools to predict, analyze and mitigate practices that may lead to industry noncompliance.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 260; HCR 261
HCR	362	Monitoring and Auditing for Health Care Compliance	Ongoing health care compliance evaluation process critical to a successful compliance program. Provides the knowledge to utilize monitoring and auditing systems to ensure health care operations conform to established standards or comply with federal, state or local rules and regulations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 260; HCR 261
HCR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		
HCR	400	Evidence-Based Practice for the Health Care Professional	Methods of clinical and scientific inquiry. Focuses on the application of an evidence-based practice approach.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 301; TWC 347 or 362, OR Applied Science (Health Innovation) BAS major
HCR	402	Advocacy for Health and Health Education	Discusses and analyzes existing or proposed policies on health and strategies for influencing the policy-making process.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 303 with C or better
HCR	406	Health Literacy for Health Care Professionals	Prepares students to use best practices for health communication that promote consumer health literacy.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 210 or HSC 320; HCR 230 or HSC 210 OR Applied Science (Health Innovation) BAS major; Pre- or corequisite(s): HCR 301 with C or better if completed or Applied Science (Health Innovation) BAS major
HCR	420	Professional Role Development: Health Care Coordination	Professional role development including role transition, leadership and project management for health care coordination.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 320 with C or better; HCR 321 with C or better
HCR	422	Policy and Financial Principles in Health Care Coordination	In-depth look at the history of health care policy in the United States from World War II to the present focusing on how Medicare, Medicaid and the Affordable Care Act impact health care system and patient reimbursement. Also discusses elements of insurance, managed care and universal care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 320 with C or better
HCR	426	Health Care Coordination Capstone	Applies higher-level critical thinking, teamwork, effective communication, informatics and design process required to develop a "real-world" health care coordination solution that will be a catalyst for change by improving safe patient-centered transitions, lowering readmission rates, increasing patient safety, and/or decreasing the cost of care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 321 with C or better; HCR 400 with C or better; HCR 422 with C or better

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HCR	430	Foundation to Health Care Systems	Explores the impact of the current U.S. health care system on the health of individuals, families and communities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 330 with C or better
HCR	435	Leaders in Community Health	Prepares students to assume a leadership role in health promotion in communities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 330 with C or better; HCR 335 with C or better
HCR	439	Community Health Seminar	Provides the opportunity to explore the health status of communities and to develop strategies for community health improvement.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s) with C or better; HCR 330, 331, 335, 336. Pre- or corequisite(s): HCR 430, 435 with C or better if completed
HCR	440	Interprofessional Approaches to Integrative Health Care	Prepares learners to develop and lead interprofessional teams with a focus on roles and responsibilities of integrative health care providers and practitioners.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 340 with C or better
HCR	441	Legal and Ethical Issues Impacting Integrative Health Care	Examines current laws, government regulations, ethical principles and case studies to understand issues and consumers' use of integrative modalities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 340 with C or better
HCR	449	Integrative Health Care Capstone	Provides the opportunity to design a healing environment project that reflects the philosophy, mission and values of a health care organization in relation to underlying philosophy and beliefs of integrative health care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 340 and 341 and 342 and 343 and 400 and 440 all with C or better; Pre- or corequisite(s): HCR 441; TWC 443
HCR	460	Investigations and Disclosures in Health Care Compliance	Types of disclosures required by and investigations conducted by regulatory and accrediting agencies overseeing health care entities. Introduces oversight activities, enforcement and potential penalties incurred by health care entities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 362
HCR	461	Corrective and Preventive Action Plans	Use of corrective and preventive actions (CAPA) in meeting the challenges of a compliant health care services operation. Covers design and implementation of CAPA to respond to deviations or errors in the health care environment. Identifies problems, implements corrective actions, evaluates consequences and employs preventive measures.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 362; HCR 460
HCR	462	Specialty Topics in Health Care Compliance	Provides a comprehensive review of case studies and recent enforcement action involving litigation and enforcement of health care law, including review of landmark and contemporary cases brought by the United States Office of Inspector General, the Office of Civil Rights and state attorney generals. Applies knowledge and skills acquired from earlier coursework to real-world situations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): HCR 260; HCR 261
HCR	463	Capstone Project Health Care Compliance	Culminating course integrating all components of health care compliance core courses and demonstrating knowledge and competency in the field of health care compliance.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 460; HCR 461
HCR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
HCR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		
HCR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-7		
HCR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-3		
HCR	545	Foundations of Biospecimen Repository Administration	Examines the biospecimen repository industry from a business perspective. Students learn the scientific basis, collaborative nature, required personnel, timelines and processes that underlie the business environment of biospecimen repositories and their administration.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Biospecimen Repository Administration certificate program
HCR	546	Management of Biospecimen Repository Operations	Examines the biospecimen repository industry from an operational perspective. Students learn the process aspects of repository start-up through collection, maintenance and disbursement of specimens. Key elements include personnel training, planning, quality control, risk management, project management and safety implementation.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 545
HCR	547	Biospecimen Resource and Technology Management	Examines the biospecimen repository industry from a technology and resource perspective. Students learn the planning and selection of technology and resources for the support of the start-up and long-term maintenance of a biospecimen repository. Key elements include technology and resources assessment and choice, cost-benefit analysis, initial budget, long-term and short-term planning.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 545

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HCR	548	Regulation and Ethics in Biospecimen Repository Administration	Examines the biospecimen repository industry from an ethical and regulatory perspective. Students learn the ethical and consenting challenges of biospecimen collection, storage and disbursement. Examines relevant historical case histories to inform current policies and practices.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 545
HCR	549	Scientific Innovation and Biospecimen Repository Administration	Explores the driving effects of scientific innovation on biospecimen administration management. Students learn how scientific advancements increase the demand of high-quality biospecimens and high-quality data, referred to as next-generation biorepository research. Examines tracking pre-analytical variables, adequate preservation and storage methods, controlled biospecimen and data custodianship, governance with ethical and scientific oversight of operations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 545
HCR	551	Clinical Research Monitoring	Introduces clinical trial monitoring processes and procedures.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): MS Clinical Research Management, Nursing major
HCR	552	Medical Device Development and Regulation	Comprehensive examination of the regulatory framework for the design, development, approval/clearance and marketing of medical devices in the United States throughout the product lifecycle.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): MS Clinical Research Management or MS Regulatory Science and Health Safety major
HCR	553	Quality Assurance and Clinical Research	Explores basic quality assurance techniques, standards and applications in the clinical research arena.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Clinical Research Management major or certificate
HCR	554	International Regulatory Affairs	Principles of international regulatory affairs and requirements for marketing regulated products globally. Key regulations that relate to medical product safety, the origins of these regulations, and marketing applications in major foreign markets. Covers similarities and differences among global regulations and those in the United States.	N	LEL	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Nursing Regulatory Science & Health Safety student
HCR	555	Pharmaceutical Safety and Risk Management	Comprehensive examination of regulatory, legal, and scientific factors in pharmacovigilance and risk management and risk mitigation.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Regulatory Science and Health Safety Master of Science student
HCR	557	Clinical Research Design and Methods	Explores basic clinical trial biostatistical methods in concert with clinical trial design and methods.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): MS Clinical Research Management, Nursing or Clinical Research Management (Grad Certificate)
HCR	558	Technical Writing for the Regulatory Professional	Focuses on teaching and applying writing and presentation skills critical for regulatory professionals	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Clinical Research Management, Clinical Research Mgmt Cert, or Regulatory Science and Health Safety Master of Science student
HCR	559	Regulatory Science Internship	Internship in the field at a regulatory agency or in a regulated industry. Practicum.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-3		Pre-requisite: Regulatory Science and Health Safety Master of Science student
HCR	560	Regulatory Science Capstone	Culmination course integrating all components of regulatory core courses demonstrating knowledge and competency in the field of regulatory science.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-3		Pre-requisite: Regulatory Science and Health Safety Master of Science student
HCR	561	Responsible Conduct of Clinical Research	Introduces concepts and policies for the responsible conduct of research (RCOR), institutional review boards, and dissemination of findings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	562	Clinical Research Data Management and Technology Implementation	Orientation to database design and management, technology assessment methods, auditing procedures for continuous quality improvement (CQI), and cost-effectiveness analysis (CEA).	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	563	Fundamentals of Regulatory Affairs	Principles of clinical research management and regulatory affairs. Overview of national/international regulatory systems and agencies, and trends in conducting clinical research.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	564	Capstone Clinical Research Management Project	Culmination course integrating all components of CRM core courses demonstrating knowledge and competency in designing and managing clinical trials. Students must have documentation of unencumbered professional license in the state where the capstone project will be completed, if required.	N	REC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Clinical Research Management Master of Science or Clinical Research Management Certificate student
HCR	565	Clinical Research Operations	Development, implementation, and operations of FDA clinical research trials, including budgeting, contract negotiations, site evaluation, marketing, project management, and reporting.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	566	Capstone Clinical Research Management Project II	Culmination course integrating CRM degree coursework by demonstrating knowledge and competency in clinical research management planning, operations, and implementation processes.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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HCR	567	Research Management and Contemporary Research Topics	Management and leadership principles integrated with contemporary research topics will be introduced.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Clinical Research Management Masters student or Nursing Graduate student
HCR	568	Healthcare Project Management	Designed for graduate students and managers who desire to improve their effectiveness as project managers in the healthcare context.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Clinical Research Management, Clinical Research Mgmt Cert, or Regulatory Science and Health Safety Master of Science student
HCR	570	Introduction to International Health Systems, Professions, and Research	Introduces systems of international healthcare delivery, professions that provide healthcare delivery, and international research principles and practices.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	571	Cultural Diversity and Healthcare Delivery	In-depth exploration of culturally diverse aspects of population health, including culture-bound syndromes, folk practices, assessment approaches, and interactions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	572	International Healthcare Delivery Capstone	Culminating course integrating all International Health requirements that produce culturally responsive implementation and evaluation plan for the student's clinical practice. A portion of the course will be held in Mexico.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	574	The Institutional Review Board (IRB) and Human Research	Analyzes the value and functions of the Institutional Review Board (IRB), including the basis for the IRB's authority and the regulations that govern an IRB's activities. Topics include IRB operations and ethical issues. Explores the historical basis for regulating research.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 561
HCR	575	Contracting and Budgeting for Industry-Sponsored Clinical Trials	Examines best practices in contracting, negotiating and budgeting for industry-sponsored clinical trials.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Clinical Research Management MS major or certificate
HCR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	101	ASU & Herberger Institute Experience	Introduces all new first-time ASU students to the unique elements, culture, challenges and opportunities of their university and the Herberger Institute for Design and the Arts. Explains and defines success with integrity, ASU resources and involvement, the Importance of arts to society and the community, personality and learning style, and success in college and beyond.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Pre-requisites: Herberger Institute for Design and the Arts BA in the Arts or BA in Design Studies major; Credit is allowed for only HDA 101 or 194 (ASU Herberger Inst Experience)
HDA	111	Art and Society	Introduces the interplay between art and society, particularly how one influences the other.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		
HDA	125	Fashion Design I	Introduces designing a collection of marketable apparel for a targeted merchandise category. Includes instruction in using inspiration to synthesize garments in a collection, editing a collection for the most marketable ideas, sourcing, fabric selection, costing, and an introduction to pattern development and garment production.	N	LEL	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		
HDA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	210	Creativity and Innovation in Design and the Arts	Designed to get students thinking in a focused manner about creative practice and process. Many young designers and artists arrive at higher education in their discipline having taught themselves or having received a piecemeal education in the directed application of ideas. Aids students in knowing why and how they are creative. Covers types of creativity, how inspiration happens, how to take a project from idea to reality, how to work creatively in teams and how to fuse creative ideas with an understanding of environment to help realize work in socially useful ways.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Credit is allowed for only HDA 210 or 294 (Creativity & Innovation for Design and the Arts)
HDA	225	Fashion Design II	Expands upon fashion design fundamentals learned earlier to encompass additional aspects of the fashion industry, which includes fashion as business, and as a sociological and cultural phenomenon.	N	LEL	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): HDA 125 with C or better
HDA	252	Foundations of Arts Entrepreneurship	Develops entrepreneurial knowledge and skills supporting the self-actualization, self-efficacy, and market acumen of artists.	N	LEL	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): Herberger Institute student
HDA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	310	Socially Engaged Practice	Students gain a wide literacy in the community arts field through reading, discussion and technical practice. Examines theories and techniques of community-based project development. Pairs artists with communities to create art rooted in the needs, values, desires, triumphs and challenges of that community. Helps prepare the artist of the 21st century with skills to apply artistic practices in diverse contexts.	N	LEL	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisites: Minimum 42 hours; Credit is allowed for only HDA 310 or 494 (Public Practice: Engagement & Community)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HDA	311	Work and Careers in the Cultural and Creative Industries	Introduces fundamental questions in the study of work and careers in the cultural and creative industries, including an overview of historical changes in the relationship between the individual and his or her work environment; comparisons between different types of work arrangements (part-time, freelance, internships); and practical implications for contemporary workers.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): minimum 45 hours
HDA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	397	Capstone Development	Prepares students for a successful capstone project. Students develop a formal proposal and identify a mentor for the project.	N	LEL	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Prerequisite(s): The Arts BA major; minimum 56 hours
HDA	410	Seminar in Socially Engaged Practice	Discussion-based seminar revolves around readings aimed at describing and understanding the nature of society, culture and the circulation of ideas. Investigates art as a way of knowing, as a profound humanitarian gesture, as a form of disciplined research and a way of building community and confirming shared values. Explores specific strategies and approaches to socially engaged art practices through readings, visiting artist presentations and direct engagement with community-based projects. Illustrates and underscores how artists--creative practitioners of all sorts--are key to the giant collaborative projects we call culture, language and the entirety of cumulative artistic and scientific knowledge. Provides a solid bulwark for the recognition that we really are all in this together and are making it up as we go along.	N	SEM	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisites: HDA 310; Credit is allowed for only HDA 410, 494 (Seminar in Socially Engaged Practice), 510 or 598 (Seminar in Socially Engaged Practice)
HDA	420	Design and the Arts Business Administration	Design and the arts business seminar course that covers core business principles for design or arts businesses such as human resources, legal issues, accounting and finance. Asks with each of these areas how these disciplines uniquely work within design or arts settings. Investigates global business topics and discusses why ethics is integral to every design or arts business enterprise. Provides a broad understanding of design or arts business activities and practices, allowing more effective participation in business discussions in the future.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisites: Minimum 45 hours; Credit is allowed for only HDA 420 or 494 (Design & the Arts Bus Admin)
HDA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-6		Prerequisite(s): Barrett Honors student
HDA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-6		Prerequisite(s): Barrett Honors student
HDA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-7	L	
HDA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-3		
HDA	510	Seminar in Socially Engaged Practice	Discussion-based seminar revolves around readings aimed at describing and understanding the nature of society, culture and the circulation of ideas. Investigates art as a way of knowing, as a profound humanitarian gesture, as a form of disciplined research, and a way of building community and confirming shared values. Explores specific strategies and approaches to socially engaged art practices through readings, visiting artist presentations and direct engagement with community-based projects. Illustrates and underscores how artists--creative practitioners of all sorts--are key to the giant collaborative projects we call culture, language and the entirety of cumulative artistic and scientific knowledge. Provides a solid bulwark for the recognition that we really are all in this together and are making it up as we go along.	N	SEM	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HDA 410, 494 (Seminar in Socially Engaged Practice), 510 or 598 (Seminar in Socially Engaged Practice)
HDA	511	Leadership in the Creative Industries	The creative industries construct and principles of leadership as applied within and affecting it through curated interaction with leaders in the field.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Prerequisite(s): Creative Enterprise and Cultural Leadership MA student
HDA	512	Strategy: Problem Identification and Opportunity Recognition in the Creative Industries	Through a combination of short lectures and collaborative exercises, students learn to identify challenges and opportunities for entrepreneurial interventions in the creative industries and arts and culture sectors.	N	LEL	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	2		Prerequisite(s): Creative Enterprise and Cultural Leadership MA student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HDA	513	Creativity and Design Thinking	Activates abilities as a creative thinker and problem solver for the cultural and creative industries through short lectures and collaborative workshop activities.	N	LEL	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): Creative Enterprise and Cultural Leadership MA student
HDA	521	Arts, Culture and the Economy	Builds understanding of economic concepts as applied to the arts and culture sector, with specific attention to how art and culture enterprises work as businesses, how such enterprises function in our wider economic system, which are growing and which disappearing (and why), all toward the goal of building the student's capacity to lead arts and culture enterprise in a complex economic environment.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	522	Media Literacy and Distribution	Addresses the impact that digital distribution has had on traditional media business models and the way media and our culture are changing because of it. Also looks at the way in which industries are adapting to this change in the media landscape. Three distinct sections: content literacy, production and distribution metrics, economic and cultural implications.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	592	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HEB	101	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
HEB	102	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: HEB 101 with C or better
HEB	131	Biblical Hebrew I	Offers an introduction to Biblical Hebrew, the language in which most of the books of the Hebrew Bible/Old Testament have been written. Provides the basic tools to understand and translate Biblical Hebrew texts. Covers the Hebrew alphabet, basic vocabulary, morphology and syntax. Students learn idiomatic expressions, basic literary techniques in narratives and poetry, as well as specificities of Semitic languages. Emphasizes a critical approach to the ancient text. Also introduces the evolution of the biblical text, from ancient manuscripts to contemporary editions and translations. Includes an introduction to the development of writing and to the evolution of Hebrew, from earliest inscriptions to its revival in modern Israel. The texts translated in class are situated in the history of Israel, but also in their Jewish and Christian cultural and religious contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I)

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HEB	132	Biblical Hebrew II	Completes the study of basic Biblical Hebrew grammar and vocabulary (Futato's Beginning Biblical Hebrew, chapters 21-40). Prepares students to translate narrative and legal texts from Hebrew Bible. Students learn to use dictionaries, grammars, paradigms and critical editions of the biblical text.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I) with C or better; Credit is allowed for only HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II)
HEB	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HEB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	201	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: HEB 102 with C or better
HEB	202	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: HEB 201 with C or better
HEB	231	Biblical Hebrew III	Advanced study of Biblical Hebrew. Deepens understanding of the grammar and composition of the Hebrew Bible. Translates texts of different literary genres (narrative, legal, poetic, prophetic) and different periods. Introduces the basic principles of textual criticism and different approaches to interpret the texts of the Hebrew Bible.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II) with C or better; Credit is allowed for only HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III)
HEB	232	Biblical Hebrew IV	Addresses advanced topics in Biblical Hebrew grammar and interpretation. The first half of the semester is devoted to texts from the Hebrew Bible; the second half on extra-biblical texts written in ancient Hebrew (for example: Dead Sea Scrolls, Rabbinic texts, ancient Hebrew poetry). Topics and texts change annually.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III) with C or better; Credit is allowed for only HEB, JST, REL 232 or HEB 294 (Biblical Hebrew IV)
HEB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	313	Advanced Modern Hebrew	Continues developing speaking, reading, and writing skills in modern Hebrew, with a focus on different aspects of the Israeli culture studied in literature, cinema, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: HEB 202 with C or better
HEB	314	Advanced Modern Hebrew	Continues developing speaking, reading, and writing skills in Modern Hebrew, with a focus on different aspects of the Israeli culture studied in literature, cinema, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: HEB 202
HEB	316	Literary Readings of the Hebrew Bible	Literary analysis of two of the main genres of the Hebrew Bible: narrative art and poetry. Students learn the main literary conventions of biblical prose and poetry, and how these conventions are applied or subverted. Each class comprises the study of a literary aspect, close readings, and thematic discussions. Biblical texts are read only in translation. They are situated in the religious, literary and artistic traditions that have developed on their basis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only ENG 316, HEB 316, JST 316, REL 316 or HEB 394 (Literary Readings of the Bible)
HEB	347	Modern Israeli Literature in Translation	Modern Hebrew, or Israeli Hebrew, started at the end of the 19th century in Europe and today it is the language of the State of Israel. During this short period modern Hebrew developed literature with its unique local characteristic, as well as universal ideas. Reads and examines four books against their social and historical background.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HEB 347 or JST 347 or SLC 347 or ENG/HEB/JST/SLC 394 (Modern Hebrew Literature in Translation)
HEB	348	Israeli Society and Culture	Different partitions of the Israeli society, based on ethnic origin, by religious affiliation or by political association. Depicts how Israel is an absorbing immigration state. Israel is a welfare state and the course covers aspects of a welfare state, such as health, retirement, public transportation, art, higher education and more.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only HEB 348, 394 (Israeli Culture and Society), JST 348, REL 311, or SLC 348
HEB	375	Contemporary Culture of Israel	Intense study of aspects of historical, social, political, and cultural modern life in Israel. Beginning of Zionism to present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	
HEB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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HEB	411	Judaism and the Beginnings of Christianity	Studies the beginnings of Christianity in relation to Judaism: their common context, the process of their distinction and their mutual influence. Through a historical and thematic approach, explores the parallel construction of Jewish and Christian identities. Combines readings from primary sources (Hellenistic Judaism, Qumran, New Testament, Early Christianity, Rabbinic Judaism) and up-to-date scholarly literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 or 108 or HST 100 or 102 or REL 100 or SLC 142 or 202 with C or better; Credit is allowed for only HEB/JST/REL 411 or HEB 394 (Judaism and the Origins of Christianity) or HEB 494 (Judeo-Hellenistic Literature)
HEB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
HEB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HEB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
HED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
HED	510	Introduction to Higher Education	Overview of American higher education, including philosophical, political, and social aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	527	Seminar: Student Affairs Administration	Organizational models, administrative competencies and skills, and emerging challenges of student affairs administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	573	Applied Inquiry in Higher Education	Provides an overview of research, evaluation and assessment practices in higher education and strategies for utilizing these practices as professionals in higher education. Focuses on learning about and demystifying the process of scientific inquiry, with the intent of translating that knowledge to regular practice in a higher education professional career. It is not a highly technical methods course--no advanced knowledge of statistics or qualitative techniques is assumed--but instead gives practitioners a foundation in educational research design as well as the tools to be literate, thoughtful, critical and frequent consumers of research.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): MeEd Higher and PostSecondary Education major. Credit is allowed for only HED 573 or HED 591 (Applied Inquiry)
HED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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HED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	603	Foundation of Data Analytics in Higher Education	How decisions are made in higher education and how data and analytics can support university leaders.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	604	Analytics Process and Technology in Higher Education	Process and technology used to facilitate data-informed decision making in higher education.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	605	Data Management and Preparation for Higher Ed Analytics	Data preparation and management for data-informed decision making in higher education institutions.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	620	Diversity in Higher Education	Overview of the demographic profile of college students, faculty, and staff. Addresses issues of access, retention, and development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	634	The American Community College	Philosophy, history, curriculum, faculty, students, organization, financing, research, policy and current issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	644	Higher Education Finance and Budgeting	Financial planning and budgeting in higher education institutions. Issues related to financing public and private colleges and universities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	649	Law of Higher Education	Analyzes legal issues related to higher education; examines key court decisions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	679	The American College Student	Overview of American college student from demographic, background characteristics, and values/attitudes/perspectives. Includes access, persistence, and degree completion.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	688	Organizational Theory	Major views of organizations and their influence on role definition and participant behaviors in educational organization.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	689	Leadership in Higher Education	Theory and practice of leadership and administration in higher education institutions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HED	701	Higher Education Doctoral Proseminar	Students read and discuss recent writings on the sociology of higher education and explore research interests as well as identities as educational researchers. Visits to several types of higher education institutions in the state of Arizona to meet various program faculty who introduce their interests as researchers and practitioners. Learn better understanding of the challenges and promise of higher education as an academic field and of themselves as researchers and practitioners. Time also spent discussing the dissertation and the writing process.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HES	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
HHE	510	Design and Health	Introduces health design core concepts while focusing on evidence-based design research to demonstrate how healthcare environments impact well being.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	540	Current Issues in Health Design	Explores and systematically investigates current issues in health that are driving the current and future directions of the healthcare industry, including the design of healthcare and healing environments.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Degree- or Nondegree-seeking graduate OR Senior with minimum 108 hours
HHE	566	The Healing Experience Research Lab	Connects spatial relationships and healthcare user needs through design, clinical delivery, and architecture. Applying research outcomes to the built environment.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Science in Design or Master of Healthcare Innovation student; HHE 510 and HHE 540 with B or better OR Master of Architecture, Bldg Des(Energy Perform/Bldgs) MS, Master of Landscape Architecture, or Master of Urban Design
HHE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	591	Seminar	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HHE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
HIN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	494	Special Topics		N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HON	171	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	L or HU	Prerequisite(s): Barrett Honors student; maximum 75 hours
HON	171	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	L or HU	Prerequisite(s): Barrett Honors student; maximum 75 hours
HON	171	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	L or HU	Prerequisite(s): Barrett Honors student; maximum 75 hours
HON	171	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	L or HU	Prerequisite(s): Barrett Honors student; maximum 75 hours
HON	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-3		Prerequisite(s): Barrett Honors student
HON	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisites: Barrett Honors students; Maximum 60 earned hours
HON	272	The Human Event	Covers the Renaissance through the modern period.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	272	The Human Event	Covers the Renaissance through the modern period.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	272	The Human Event	Covers the Renaissance through the modern period.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	272	The Human Event	Covers the Renaissance through the modern period.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Prerequisite(s): Barrett Honors student
HON	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Prerequisite(s): Barrett Honors student
HON	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	1-6		Prerequisite(s): Barrett Honors student
HON	310	Justice and Law	Philosophical study of theories of justice in relation to law and morality. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): Barrett Honors student
HON	366	International France	Offered in France, course utilizes the "city as text" to analyze the construction of national identity.	N	PRA	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	3	HU & H & G	Prerequisite(s): Barrett Honors student
HON	370	History of Ideas	Advanced and intensive survey of key social and intellectual currents in the development of humanity as reflected in both philosophical and creative works with an emphasis on critical thinking and discussion, as well as argumentative writing.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3	L or HU	Prerequisite(s): Barrett Honors student; junior or senior standing; Credit is allowed for only HON 171 or HON 272 or HON 370 or HON 394 (History of Ideas)
HON	370	History of Ideas	Advanced and intensive survey of key social and intellectual currents in the development of humanity as reflected in both philosophical and creative works with an emphasis on critical thinking and discussion, as well as argumentative writing.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3	L or HU	Prerequisite(s): Barrett Honors student; junior or senior standing; Credit is allowed for only HON 171 or HON 272 or HON 370 or HON 394 (History of Ideas)

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HON	370	History of Ideas	Advanced and intensive survey of key social and intellectual currents in the development of humanity as reflected in both philosophical and creative works with an emphasis on critical thinking and discussion, as well as argumentative writing.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3	L or HU	Prerequisite(s): Barrett Honors student; junior or senior standing; Credit is allowed for only HON 171 or HON 272 or HON 370 or HON 394 (History of Ideas)
HON	370	History of Ideas	Advanced and intensive survey of key social and intellectual currents in the development of humanity as reflected in both philosophical and creative works with an emphasis on critical thinking and discussion, as well as argumentative writing.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3	L or HU	Prerequisite(s): Barrett Honors student; junior or senior standing; Credit is allowed for only HON 171 or HON 272 or HON 370 or HON 394 (History of Ideas)
HON	378	Culture and Society in England, Ireland, and Scotland	Chronologically explores texts, events, and sites for historical and cultural impact on development of England, Ireland, Scotland, and their countries' relationships with each other.	N	SEM	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	HU & H & G	Prerequisite(s): Barrett Honors student
HON	379	Romantics, Victorians, and Moderns	Examines the development and impact of various literatures, arts, and ideas in England, Ireland, and Scotland from the Romantic through the Modern period.	N	SEM	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	HU & G	Prerequisite(s): Barrett Honors student
HON	380	Aesthetics and Society	Advanced, interdisciplinary seminar explores the unique roles of aesthetics in society through philosophy, cultural studies, art, music, literature, film, and/or other media forms, with themes such as the politics of beauty, art and emotion, or creative production and reception.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3	HU	Prerequisite(s): Barrett Honors student; HON 171; HON 272 (or HON 273 or 274) or HON 370 or HON 394 (History of Ideas); Credit is allowed for only HON 380 or HON 394 (Aesthetics and Society)
HON	380	Aesthetics and Society	Advanced, interdisciplinary seminar explores the unique roles of aesthetics in society through philosophy, cultural studies, art, music, literature, film, and/or other media forms, with themes such as the politics of beauty, art and emotion, or creative production and reception.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3	HU	Prerequisite(s): Barrett Honors student; HON 171; HON 272 (or HON 273 or 274) or HON 370 or HON 394 (History of Ideas); Credit is allowed for only HON 380 or HON 394 (Aesthetics and Society)
HON	380	Aesthetics and Society	Advanced, interdisciplinary seminar explores the unique roles of aesthetics in society through philosophy, cultural studies, art, music, literature, film, and/or other media forms, with themes such as the politics of beauty, art and emotion, or creative production and reception.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3	HU	Prerequisite(s): Barrett Honors student; HON 171; HON 272 (or HON 273 or 274) or HON 370 or HON 394 (History of Ideas); Credit is allowed for only HON 380 or HON 394 (Aesthetics and Society)
HON	380	Aesthetics and Society	Advanced, interdisciplinary seminar explores the unique roles of aesthetics in society through philosophy, cultural studies, art, music, literature, film, and/or other media forms, with themes such as the politics of beauty, art and emotion, or creative production and reception.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3	HU	Prerequisite(s): Barrett Honors student; HON 171; HON 272 (or HON 273 or 274) or HON 370 or HON 394 (History of Ideas); Credit is allowed for only HON 380 or HON 394 (Aesthetics and Society)
HON	381	Science and Social Worlds	Advanced multidisciplinary seminar examining the historical, cultural and political roles of science in society, including the politics of scientific knowledge production, the ethics of new technologies, and philosophical approaches to the study of health and medicine.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): Barrett Honors student; HON 171 and 272 (or HON 370 or 394); History of Ideas; Credit is allowed for only HON 381 or 394: Science and the Self
HON	381	Science and Social Worlds	Advanced multidisciplinary seminar examining the historical, cultural and political roles of science in society, including the politics of scientific knowledge production, the ethics of new technologies, and philosophical approaches to the study of health and medicine.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): Barrett Honors student; HON 171 and 272 (or HON 370 or 394); History of Ideas; Credit is allowed for only HON 381 or 394: Science and the Self
HON	381	Science and Social Worlds	Advanced multidisciplinary seminar examining the historical, cultural and political roles of science in society, including the politics of scientific knowledge production, the ethics of new technologies, and philosophical approaches to the study of health and medicine.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): Barrett Honors student; HON 171 and 272 (or HON 370 or 394); History of Ideas; Credit is allowed for only HON 381 or 394: Science and the Self

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HON	381	Science and Social Worlds	Advanced multidisciplinary seminar examining the historical, cultural and political roles of science in society, including the politics of scientific knowledge production, the ethics of new technologies, and philosophical approaches to the study of health and medicine.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): Barrett Honors student; HON 171 and 272 (or HON 370 or 394: History of Ideas; Credit is allowed for only HON 381 or 394: Science and the Self
HON	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	410	Philosophy, Politics, and Law	Topics in political and legal philosophy, including political authority, obligation and disobedience, the nature of crime and punishment. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): Barrett Honors student
HON	447	Lean Launch	Students learn lean and customer development methodologies to test assumptions made about a new business concept that they wish to explore or launch. Teaches how to effectively utilize business models and critically assess the assumptions made through the testing of hypotheses to create innovative and market-ready ventures. Includes weekly presentations of learning points and team activities outside of the classroom. Open to students in any major of study with the required prerequisite.	N	LEC	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): W.P. Carey BA or BS major; ACC 241 or 242 or 271 with C or better OR non-Business student with minimum ASU 2.50 GPA; minimum 56 hours. Credit is allowed for only HON 447 or MGT 447 or MGT 494 (Lean Launch)
HON	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	0-12		Prerequisite(s): Barrett Honors student
HON	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	0-12		Prerequisite(s): Barrett Honors student
HON	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	0-12		Prerequisite(s): Barrett Honors student
HON	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	0-12		Prerequisite(s): Barrett Honors student
HON	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-6		Prerequisite(s): Barrett Honors student
HON	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-6		Prerequisite(s): Barrett Honors student
HON	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-6		Prerequisite(s): Barrett Honors student
HON	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-6		Prerequisite(s): Barrett Honors student
HON	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Barrett, The Honors College	Barrett, The Honors College	1-6	L	Pre-requisite: Barrett Honors student; Minimum 75 hours
HON	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Barrett, The Honors College	Barrett, The Honors College	1-6	L	Pre-requisite: Barrett Honors student; Minimum 75 hours
HON	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Barrett, The Honors College	Barrett, The Honors College	1-6	L	Pre-requisite: Barrett Honors student; Minimum 75 hours
HON	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Barrett, The Honors College	Barrett, The Honors College	1-6	L	Pre-requisite: Barrett Honors student; Minimum 75 hours
HON	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HON	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-6		Prerequisite(s): Barrett Honors student
HON	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-6		Prerequisite(s): Barrett Honors student
HON	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-7	L	
HON	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-7	L	Prerequisite(s): Barrett Honors student
HON	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-7	L	Prerequisite(s): Barrett Honors student
HON	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-7	L	Prerequisite(s): Barrett Honors student
HON	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-3		Prerequisite(s): Barrett Honors student
HON	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-3		Prerequisite(s): Barrett Honors student
HON	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-3		Prerequisite(s): Barrett Honors student
HON	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-3		Prerequisite(s): Barrett Honors student
HON	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HPS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	311	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
HPS	312	History of Women in Science and Medicine	In-depth inquiry into the history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU or SB	Pre-requisite: ENG 102, 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only HPS or HST 312
HPS	313	Probability, Evidence, and Decision	Philosophical topics in epistemology and practical reasoning; probability and its use in representing and reasoning about belief, evidence, and rational choice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: MAT 119 or higher; Minimum 30 hours; Credit is allowed for only HPS or PHI 313
HPS	314	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU	Credit is allowed for only HPS 314 or PHI 314
HPS	322	History of Science	Development and application of scientific thinking from ancient times through the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HPS	323	History of Science	Development and application of scientific thinking from the 18th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H	
HPS	325	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only CHI 335, HPS 325, HST 385 or SLC 335
HPS	330	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	H	Credit is allowed for only BIO 316 or HPS 330
HPS	331	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H	Credit is allowed for only BIO 318 or HPS 331
HPS	332	The Darwinian Revolution	Origin, nature, and subsequent history of the ideas of Charles Darwin.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
HPS	336	Exploration and Science	500-year survey of exploration as a historical process and cultural activity of Western civilization, with emphasis on its links with modern science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	SB & H	
HPS	340	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 188 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 311 or HPS 340
HPS	347	Science and Social Change	Modern science and technology are rapidly and radically transforming our society in innumerable ways, from how we process food to altering the very core of what it means to be human. Explores historical, philosophical, sociological, ethical, economic and political topics and consequences of modern science in society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Credit is allowed for only BIO 347, BIO 394 (Science and Society) or HPS 347
HPS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	410	Biomedical Research Ethics	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only for BIO 416 or HPS 410
HPS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
HPS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
HPS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
HPS	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Junior or Senior standing; Credit is allowed for only BIO, HPS, MBB, MIC, or PLB 496
HPS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
HPS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
HPS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
HPS	511	History of Science	Teaches crucial skills needed for graduate-level research in history of science, including (1) critical analysis of primary sources from different periods in the history of science and (2) critical analysis and familiarity with important trends in the secondary literature ("historiography of science").	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	512	Philosophy of Science	Serves as a graduate-level introduction to five central themes in philosophy of science, and as a means to begin to investigate new topics.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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HPS	516	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree-seeking); Credit is allowed for only BIO 518, HPS or HST 516
HPS	520	Masters of Nonfiction	Students read and critically discuss works by well-known nonfiction writers to improve their own writing skills. Consists of weekly writing exercises, reviewed with workshop-style discussions centered on individual authors, themes or genres such as history, journalism, personal essays, biography, character profiles, travelogues, book reviews and op/ed commentary.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only HPS or HST 520
HPS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	615	Biology and Society Lab	This course brings together graduate students, postdocs, and faculty members in biology and society. Sessions include panel discussions of biology and society topics from multiple perspectives, student-led discussions of important literature, practice presentations of papers for national meetings, discussion of dissertation and thesis ideas, and other activities that help to forge an active intellectual lab group.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	620	Research Prospectus Writing	Workshop-style course where students develop and peer review graduate-level project prospectuses, such as those for NSF grant proposals, journal articles, theses, and dissertations. Appropriate for graduate students in Biology and Society, History and Philosophy of Science, the life sciences, and related programs.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only HPS 620 or BIO 620
HPS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HRC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HRC	200	Introduction to Social and Cultural Analysis	Introduces social and cultural analysis. Focuses on key terms and analytical categories for interdisciplinary work in social and cultural analysis and related fields such as American studies, ethnic studies, women and gender studies and Latin American studies. Examines a range of forms of oppression and privilege from a social justice perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
HRC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HRC	310	Social and Cultural Studies: Method and Theory	Covers how scholars in social and cultural studies think, argue, research and write. Traces the changing definition of fields such as American studies, ethnic studies, and women and gender studies. Studies these fields in relationship to 20th-century social movements and related theoretical categories including Marxism, cultural studies and class; feminism, gender and sexuality; and post-Colonialism, race and ethnicity. Covers basic archival and ethnographic research techniques underlying interdisciplinary research methods in these fields.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: Minimum 36 hours
HRC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HRC	480	Capstone: Practices and Approaches	Examines theoretical, methodological and epistemological issues in American studies, women and gender studies, and ethnic studies. Studies a wide variety of interdisciplinary theories, methodologies and epistemologies from an intersectional analysis of race, class, gender and sexuality in national and transnational contexts. Places special emphasis on historical definitions and debates on the relationship among theory, activism and praxis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): AMS 201 or ETH 100 or HRC 200 or WST 100
HRC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
HRC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HRC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
HRC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
HSC	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
HSC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
HSC	210	Cultural Aspects of Health	Examines how culture influences health, healthcare practices, barriers to health care, interactions with healthcare professionals, and health disparities in the U.S. Addresses the need for cultural competence among health practitioners.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	C	
HSC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
HSC	300	Complementary Health Care	Evaluates the major components of complementary and alternative healthcare models and evidenced-based recommendations related to complementary healthcare.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 56 hours
HSC	304	Health Communication	Focuses on communicating topics related to health through an examination of theoretical frameworks, communication techniques, and different technologies including ehealth and mhealth. Addresses communication through channels that promote the health of individuals and communities. Topics may include clinician to client communication, peer to peer communication, health literacy, health in the media, and effective public health communication.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only HSC 304 or HSC 394 (Health Communication)
HSC	310	Health Literacy: Creating Healthy and Active Schools	Signature course for elementary educators and special education educators in order to prepare future teachers with the knowledge, skills, and dispositions to teach healthy and active content knowledge and to create healthy and active school environments.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Co-requisite: One of the following: ECD/EED/SED/SPE 396/397/478/496, PPE 474/484 or TEL 484; Credit is allowed for only HSC or PPE 310

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HSC	320	Applied Medical/Healthcare Ethics	Integrates the theory and practice of ethics within health-related disciplines and the application of bioethics by health science professionals, including health disparities.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	HU	Prerequisite(s): PHI 101 (or PHI 103, 306 or 314) OR Medical Studies major with PSY 101 (or SOC 101)
HSC	330	Health Care Systems in the U.S.	Presents and integrates the organization, financing, and delivery of health services in the United States from the professional, organizational, community, and systems perspectives.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCD 101 or HCR 210 or HSC 320 or MED 100 or PBH 100
HSC	332	Health Care Legislation	Provides an overview of the federal/state health policy legislative process, how it is implemented in institutions, and its effect on health science professionals and delivery of services.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 210 or HSC 320; HCR 220 or HSC 330; Credit is allowed for only HSC 332 or HSC 494 (Health Care Legislation)
HSC	340	Changing Health Behaviors	Comprehensive review of the theoretical bases of health behavior change. Students gain the knowledge to identify behaviors associated with optimal health and wellness and to develop theory-based intervention strategies and techniques to effectively influence behavior change.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 230 or HSC 210; PSY 101 (or PGS 101); Credit is allowed for only HSC 340 or HSC 394 (Changing Health Behaviors)
HSC	355	Eating for Lifelong Health	Examines dietary choices throughout the life span and how they impact personal health and wellness. Prepares health and wellness team members to evaluate consumer and professional materials on dietary choices.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Prerequisite(s): NTR 100 or NTR 241
HSC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
HSC	400	Practicum in Health Sciences	Supervised experience in area of student specialization. Students are placed with an agency, organization, business, and/or facility that meets their specific academic goals.	N	PRA	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Health Sciences Senior student
HSC	401	Professions and Practices in the Health Sciences	Provides the opportunity to explore career options within the health sciences, compare credentialing/licensure requirements across the U.S., describe professional organizations and societies related to the health sciences, evaluate employment trends in the health sciences, and interview professionals currently active in a health sciences-related field.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: HSC 320
HSC	410	Supporting the Health of Older Adults	Focuses on community and national policies and programs that affect the health of older adults, programs to improve access to healthcare as well as to improve overall health, issues related to family and professional caregiving, and future challenges related to caring for older adults.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 230 or HSC 210 or Medical Studies major; Credit is allowed for only HSC 410 or HSC 394 (Supt Health Older Adult)
HSC	412	Health Issues in Later Life	Focuses on health issues that primarily affect adults ages 50 years and over as related to nutrition, physical activity, environmental toxins. Focuses on exploring those factors known to promote healthy aging.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 230 or HSC 210; Credit is allowed for only HSC 394 (Health Issues in Later Life) or HSC 412
HSC	420	Evaluation of Health Sciences Research	Investigates methods of inquiry in health sciences and techniques for critiquing and interpreting research within the context of evidence-based practice.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): POS 401 (or PSY 230 or 231 or SOC 390 or STP 226 or 231 or 420) OR Medical Studies major with HCD 300 (or HSC 320)
HSC	432	Legal Issues in Health Care	Legal doctrines provide protection of consumers, health care providers, and health care institutions with regard to health care delivery including access and cost. Provides an overview of the legal obligation and rights of private and public stakeholders in the delivery and receipt of health care services.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 220 or HSC 330 or HSC 332
HSC	435	Environmental Health Issues in the U.S.	Environmental health designed to address public health issues.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 230 or HSC 210; Credit is allowed for only HSC 394 (Envrnmtal Hlth Iss in U.S.) or HSC 435
HSC	440	Health Coaching Concepts and Skills	Health coaching techniques and skills for health promotion professionals with emphasis on the practical application of brief intervention and motivational interviewing skills to promote healthy lifestyle changes.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: HSC 210; PGS 101; Credit is allowed for only HSC 440, 498 (Health Coaching Concepts Skill) or NTR 530
HSC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	YGB	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): minimum 3.00 GPA
HSC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HSC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6	L	Prerequisite(s): Barrett Honors student
HSC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
HSC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-7	L	
HSC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
HSD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	501	Science and Technology Policy	Provides an in-depth introduction to theoretical perspectives on the role and place of science in democratic societies and democratic governance. Emphasizes how the ideas, ideologies, and practices of science are integrated into the design and implementation of government decision making, as well as how science both shapes and is shaped by the political organization and ordering of society. Pursues such questions in the context of U.S. politics, comparatively between the U.S. and Europe, and in emerging regimes of international governance.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only HSD 501 or POS 571
HSD	502	Advanced Science and Technology Policy	Focuses on the role of knowledge and expertise in political and policy decision making. Particular emphasis is placed on the analysis of knowledge systems (formalized institutional approaches to the production, validation, and use of knowledge and expertise in policy decision making), their modes of failure, and the design of approaches that may be able to prevent, avoid, or reduce the frequency of such failures.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): HSD 501 or POS 571 with B or better; Credit is allowed for only HSD 502 or POS 572
HSD	503	Governing Emerging Technologies	Examines the governance of science and technology through a focus on emerging technologies whose potential consequences in society are apparent only in anticipation and whose manifestations are still being shaped by local, domestic, and international institutions. These emerging technologies include nanotechnologies, synthetic biology, and other technologies associated with genetic modification, and information and cognitive science and neuro-technologies.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only PAF 550 or HSD 503 or POS 573
HSD	504	Analysis of Large-Scale Socio-Technological Systems	Provide skills and methods to analyze the design and management of large-scale socio-technological systems and the societal impacts of large-scale technological systems change. Emphasizes assessing the intertwining of lives and livelihoods in large-scale technological systems and the risks and vulnerabilities associated with large-scale systems failures, including the effects of both technological failures and natural hazards.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	505	Science and Technology Policy Workshop	Provides the capstone experience for the Professional Science Master's in Science and Technology Policy. Builds on theoretical and analytical work carried out in the program's required courses, providing an integrative experience that requires students to synthesize knowledge gained in prior coursework and apply it to real-world policy problems and settings. By blending exposure to national science and technology policy officials and nationally recognized academic experts, the workshop both advances student learning beyond that possible in the classroom while encouraging students to expand their abilities to connect theoretical and practical insights. At the same time, the workshop provides a natural transition from the student's formal classroom learning to their required applied policy internships, which commences upon the end of the workshop.	N	SEM	N	YGB	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	515	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BIO 515 or GLG 547 or HSD 515 or PAF 547 or SOS 516

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HSD	517	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
HSD	540	Responsible Innovation and Research	Movements throughout Europe and increasingly the U.S. are beginning to consolidate the recognition of the profound effects that research outcomes have upon the world under the idea of responsible innovation and research. The responsible innovation and research pushes beyond the responsibilities of the individual researchers and addresses larger issues such as research agenda setting, management of large-scale research and innovation enterprises, funding priorities and innovation as a national policy priority. Explores the idea of innovation as a national policy; the practical and theoretical underpinnings of responsibility in the research world; the history, current state and future trajectories of responsible research and innovation. Focuses on the current literature in the field.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		
HSD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	601	HSD I: Human Dimensions of Science and Technology	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	4		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only HSD 601 or POS 671
HSD	602	HSD II: Science, Power and Politics	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology. Continuation of HSD 601.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	4		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only HSD 602 or POS 672
HSD	610	Colloquium	Regular meeting for the entire HSDST community. Includes outside speakers, student and faculty member presentations, and community discussions.	N	SEM	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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HSD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	GRD	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Future of Innovation in Society	School for the Future of Innovation in Society	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	101	Introduction to Human Systems Engineering	Introduces basic principles, methods and theories of psychology and applications to engineering problems relevant to human systems. Gives particular attention to the intersection of psychology and engineering. Students learn brain anatomy and physiology, sensation and perception, cognition, social systems and research methods so that they are able to design systems consistent with human capabilities and limitations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	
HSE	223	Applied Biology of Human Behavior	Introduces the biological basis of human behavior and implications for human systems engineering. Structure and function of the nervous system as well as the behavioral effects of the physiological processes outside the brain (for example, hormones secreted by glands). Biological processes involved in many aspects of our behavior such as eating, sleeping, sexual behavior, emotional responses, sensory perception, learning and memory, language and cognitive functions, mental illness and drug abuses. Introduces a wide range of techniques and methods used to investigate the biological foundations of behavior. Prepares students for advanced courses in neuroscience, psychology or related fields.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): HSE 101 or PSY 101
HSE	224	Applied Social Science	Covers social behaviors, social cognition and emotion critical for engineered systems that interact with humans (artificial intelligence, robots). Students learn how human beings behave, think and feel in daily social situations and think about how that information can be used to create effective human systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): HSE 101 or PSY 101
HSE	225	Human Systems Integration	Reviews human systems integration (HSI), which is basically systems engineering from a human-centered perspective. Research, theory and methodological approach as applied to a variety of systems ranging from transportation systems to medical and military systems. Discusses handbook chapters and specific examples of human systems integration.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): HSE 101 or PSY 101
HSE	230	Statistics for Human Systems Research I	Basic methods of exploratory data analysis (including graphics) and statistical computing methods, including a detailed look at hypothesis testing, effect size and power analysis, as well as some methods for dealing with categorical and discrete data. Introduces both correlation/regression and analysis of variance (ANOVA), as well as common statistical software.	N	LEL	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	CS	Prerequisite(s): HSE 101 or PSY 101 (or PGS 101) with C or better; MAT 117 or 170 or 265 with C or better
HSE	290	Experimental Methods for Human Systems Research	Introduces the basics of research methodology as applied in human systems engineering. Quantitative and experimental design from an applied perspective. Guided study of the process of conducting research within human systems engineering. Project topics range from research question generation and literature review to reporting of results.	N	LEL	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	L	Prerequisite(s): HSE 101 or PSY 101; HSE 230 or PSY 230

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HSE	323	Perceptual Systems	In-depth exploration of methods by which humans receive and interpret information from the world by vision, audition, taste, smell, touch and movement. Emphasizes the integration of behavioral and neural research with potential applications to engineering practice. Topics cover a wide range from the biological basis of sensory information processing to the behavioral aspects of perception, and to the applications of perceptual theories to disciplines like computer vision, display technologies, graphic design and sound processing. Solid foundation for further coursework and research in neuroscience or psychology; students also gain knowledge that could be useful in various professions.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): HSE 101 or PSY 101; junior or senior standing
HSE	324	Applied Cognitive Science	Human cognition and how it bears on the design of technological and social systems. Although focuses on applications, requires student to delve into the basic literature that informs these applications and produce a literature review that draws on both applied and theoretical work. Many weeks involve a hands-on experience with a method or technique, and weekly quizzes emphasize critical thinking about these examples.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): HSE 101 or PSY 101; junior or senior standing
HSE	325	Human-Computer Interaction	Theories, methods, and findings concerning the usability of computer systems and the design of effective user interfaces.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): HSE 101 or PSY 101 (or PGS 101) with C or better
HSE	390	Qualitative Research Methods	Basics of qualitative research as it is implemented within the human systems engineering area. Covers methods of implementing core concepts such as validity and techniques of interviews; questionnaire and observation within various human system methodologies (e.g., cognitive task analysis, protocol analysis, and usability). All concepts taught with an applied focus with emphasis on how the methods can be implemented in real-world settings.	N	LEL	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	L	Prerequisite(s): HSE 290 or PSY 290
HSE	422	Human Factors in Sport	Examines how psychological principles can be applied to enhance the performance of athletes and coaches.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): HSE 101 or PSY 101 (or PGS 101) with C or better
HSE	423	Human Factors in Transportation	Examines human performance and human-machine design issues in aviation and ground transportation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): HSE 101 or PSY 101 (or PGS 101) with C or better
HSE	424	Human Automation Interaction	Explores the application of human systems engineering to automation. Human-automation interaction in domains of cyber security, remotely piloted aircraft systems, synthetic teammates, and human-robot interaction. Reading and discussion related to current articles describing research, methodology and theory.	N	SEM	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): HSE 101 or PSY 101; HSE 290 or PSY 290; HSE 324 or PSY 324
HSE	425	Human Factors in Medical Systems	Comprehensive introduction to human factors issues related to healthcare systems, medical training, and medical device design. Topics range from psychological and physiological aspects of human behavior like perceptual and cognitive functions, motor behavior, learning, motivation, physiology, and ergonomics to applied issues in the context of medicine and healthcare like human-computer interactions in medical information systems, the ergonomic design of medical devices, evaluation of medical device usability, team training in healthcare and the organization of medical environment.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3		Pre- or corequisite(s): HSE 101 or PSY 101; HSE 290 or PSY 290; HSE 324 or PSY 324
HSE	426	Training and Expertise	Theories, methods, and findings concerning the acquisition of skilled performance and the design of effective training systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): HSE 101 or PSY 101 (or PGS 101) with C or better
HSE	427	Designing for Learning	Learning as applied within the human systems engineering area. Overview of the theoretical areas relevant to learning (behavioral, social cognitive, cognitive, emotion and motivation). Applies these perspectives to enhance the design of systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3		Pre- or corequisite(s): HSE 101 or PSY 101; HSE 290 or PSY 290; HSE 324 or PSY 324
HSE	428	Judgment and Decision Making	Covers human judgment and decision making as it applies to the design of intelligent systems or decision aids, tools for augmenting human judgment, and understanding consumer decision making. Covers judgment and decision making approaches, theories, biases, heuristics with applications to engineered systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3		Pre- or corequisite(s): HSE 101 or PSY 101; HSE 290 or PSY 290; HSE 324 or PSY 324
HSE	429	Product Design and Evaluation	Applies human systems engineering methods to product design and evaluation. Consumer behavior, consumer research methods, systems and design thinking, how to conduct interviews, observational research, contextual analysis, questionnaire design and analysis, opportunity identification, usability testing and creativity.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3		Pre- or corequisite(s): HSE 101 or PSY 101; HSE 290 or PSY 290; HSE 324 or PSY 324

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HSE	430	Statistics for Human Systems Research II	Statistical methods commonly used in human systems engineering research. Emphasizes (1) connecting research designs and statistical analysis, (2) interpreting and breaking down significant effects, (3) addressing practical problems associated with doing research in applied contexts, (4) using statistical methods to understand the connection between variables in a complex system, and (5) the use of statistical software. Primarily focuses on analysis of variance (ANOVA) but introduces other techniques (including mediation analysis, structural equation modeling and cluster analysis). Recommended for preparation for both graduate study and careers in related industry.	N	LEL	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	CS	Prerequisite(s): HSE 230 or PSY 230 or PSY 231
HSE	477	Human Systems Engineering Capstone Experience	Applied psychology from a systems perspective. Requires a report based on research and/or applied work as a culminating experience.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): senior standing
HSE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
HSE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-6		Prerequisite(s): Barrett Honors student
HSE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-6		Prerequisite(s): Barrett Honors student
HSE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-3		
HSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Human Systems Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	220	Health Care Organizations	Overview of United States healthcare delivery systems; financing, health policy, basic principles of budgeting, cost-benefit analysis, and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3	H	
HSM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
HSM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Prerequisite(s): Barrett Honors student
HSM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	502	Health Care Organization	Concepts, structures, functions, and values that characterize contemporary healthcare systems in the United States.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	505	Managerial Epidemiology I	Basic constructs and measures of epidemiology. Epidemiologic study designs. Potential impact of chance, bias, confounding, on an epidemiologic study. Causal criteria; levels of evidence in epidemiological studies, implications and limitations of statistical association.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 561 or ECN 501 with C or better.

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HSM	512	Healthcare Economics	Economics of production and distribution of healthcare services, with special emphasis on the impact of regulation, competition, and economic incentives.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	522	Health Sector Information Management	Information technology and knowledge management applications in the health sector, including care delivery and financing institutions and in the pharmaceutical and biotechnology industries.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	542	Healthcare Law	Legal aspects of healthcare delivery for hospital and health services administration. Legal responsibilities of the hospital administrator and staff.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	561	Biostatistics	Aspects of descriptive statistics and statistical inference most relevant to health issues, including data, rates, and confidence intervals.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	564	Health Care Finance	Overview of the acquisition, allocation, and management of financial resources by healthcare providers. Focuses on economic, financial, and accounting principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	565	Introduction to Health Policy	Current policy issues in health through concepts of access, cost, and quality; issues relating to disease trends and policy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	589	Healthcare Strategic Management	Capstone assessment of current policies, problems, and controversies across the broad spectrum of health services administration.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	100	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H & G	
HST	100	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	
HST	100	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H & G	
HST	101	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H & G	Credit is allowed for only HST 101 or SGS 111
HST	101	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST 101 or SGS 111
HST	101	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H & G	Credit is allowed for only HST 101 or SGS 111
HST	102	Western Civilization: Ancient and Medieval Europe	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	
HST	102	Western Civilization: Ancient and Medieval Europe	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST	102	Western Civilization: Ancient and Medieval Europe	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	
HST	103	Western Civilization: Renaissance to Enlightenment	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	103	Western Civilization: Renaissance to Enlightenment	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	
HST	103	Western Civilization: Renaissance to Enlightenment	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	
HST	104	Western Civilization: French Revolution to European Union	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & G & H	
HST	104	Western Civilization: French Revolution to European Union	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G & H	
HST	104	Western Civilization: French Revolution to European Union	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & G & H	
HST	106	Asian Civilizations	Civilizations of China, Japan, and India from antiquity to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G & H	
HST	107	Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	
HST	107	Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	
HST	108	Introduction to Japan	Historical survey of the people, culture, politics, and economy of Japan, supplemented by audiovisual presentations. Intended for nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	
HST	108	Introduction to Japan	Historical survey of the people, culture, politics, and economy of Japan, supplemented by audiovisual presentations. Intended for nonmajors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G & H	
HST	109	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & H	
HST	109	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	
HST	109	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	
HST	110	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	
HST	110	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST	110	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	
HST	111	Introduction to Asia	Offers a basic introduction to the geography, history, cultures, states, and societies of South and Southeast Asia as well as China, Japan, and Korea.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST or REL 111
HST	112	Foundations of Democracy	Introduces an interdisciplinary study of democracy with special attention to its historical development as a form of government.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Credit is allowed for only HST, POS 112 or HST 194 (Foundations of Democracy)
HST	113	United States and Arizona Social Studies	Introduction to the United States and Arizona from the integrated social science perspectives of history, geography, and government.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Credit is allowed for only GCU 113, HST 113, or GCU 194, US & AZ for Aspiring Elmtree Ed
HST	114	World Social Studies	Introduction to the world from the integrated social science perspectives of history, geography, and government.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Credit is allowed for only GCU or HST 114
HST	130	The Historian's Craft	Introduces the ways historians ask questions and propose answers.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Credit is allowed for only HST 130 or HST 330
HST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HST	200	Historical Themes	General introduction to selected themes in history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST	201	Historical Themes in Asia	General introduction to selected themes in Asian history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
HST	203	Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	
HST	203	Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST	204	Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
HST	204	Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HST	210	American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H	
HST	210	American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	
HST	211	Jews and Judaism in America	Chronological analysis of Jews and Judaism in American history and letters.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Credit is allowed for only HST 211 or JST 211 or REL 211
HST	230	Introduction to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST, JST or REL 230
HST	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
HST	245	Introduction to South Asia	Provides an introduction to the history and major contemporary political, economic, social, religious and cultural features of the South Asia region at large and of selected South Asian nations in particular.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HST 245 or POS 245 or REL 245 or SGS 245 or SLC 245
HST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HST	300	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education - History, students; Minimum 45 earned hours; ENG 102, 105 or 108 with C or better
HST	300	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education - History, students; Minimum 45 earned hours; ENG 102, 105 or 108 with C or better
HST	300	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU or SB) & H	Pre-requisites: History, History minor or Secondary Education - History, students; Minimum 45 earned hours; ENG 102, 105 or 108 with C or better
HST	301	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 301 or HST 301 or SSH 301
HST	302	Studies in History	Specialized topics in history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	303	Studies in Asian History	Specialized topics in Asian history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	304	Studies in European History	Specialized topics in European history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 304 or JST 304
HST	305	Studies in Latin American History	Specialized topics in Latin American history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	305	Studies in Latin American History	Specialized topics in Latin American history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	
HST	306	Studies in United States History	Specialized topics in United States history. Explores regions, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours

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HST	306	Studies in United States History	Specialized topics in United States history. Explores regions, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	307	Studies in African History	Specialized topics in African history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	308	History and Philosophy of Sustainability	Examines sustainability issues in a broadly interdisciplinary way, but with a special emphasis on humanities perspectives, focusing on human ideas, values and institutions as they have evolved over time.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours; Credit is allowed for only HST 308 or PHI 322 or SOS 309 or BIO/HST/PHI/SOS 394 (History & Philosophy of Sustainability)
HST	309	Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	309	Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	310	Film as History	In-depth study of moving image media as recorder, object, and writer of history.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	310	Film as History	In-depth study of moving image media as recorder, object, and writer of history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	312	History of Women in Science and Medicine	In-depth inquiry into the history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU or SB	Pre-requisite: ENG 102, 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only HPS or HST 312
HST	313	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 320 or HST 313
HST	313	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 320 or HST 313
HST	313	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 320 or HST 313
HST	314	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 321 or HST 314
HST	314	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 321 or HST 314
HST	314	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 321 or HST 314
HST	315	Political History of the U. S.	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	315	Political History of the U. S.	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; minimum 30 hours

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HST	316	20th-Century U.S. Foreign Relations	U.S. relations with foreign powers from the late 19th century to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	316	20th-Century U.S. Foreign Relations	U.S. relations with foreign powers from the late 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	317	History of Postwar U.S. Conservatism	Traces the origins of U.S. conservatism as it developed in the work of U.S. and European thinkers, intellectuals and authors after WWII.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only HST 294 (American Conservatism), 317 or POS 317
HST	318	History of Engineering	The history of engineering from the earliest record to modern times, examining the social, cultural, and economic effects on society.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & G	Pre-requisite: ENG 102, 105, 108 or ENG 112 with C or better; Minimum 45 hours
HST	318	History of Engineering	The history of engineering from the earliest record to modern times, examining the social, cultural, and economic effects on society.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & G	Pre-requisite: ENG 102, 105, 108 or ENG 112 with C or better; Minimum 45 hours
HST	320	U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	320	U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	321	Constitutional History/US to 1865	Origin and development of the American constitutional system from colonial period through the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	322	Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	H	
HST	322	Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H	
HST	323	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101 with C or better; ENG 102 with C or better; Credit is allowed for only AFR 335 or HST 323 or TCL 335
HST	325	Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H & C	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	325	Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H & C	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	326	The Global History of the Trans-Atlantic Slave Trade	Reading- and writing-intensive course that employs critical thought to look at the origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or HST 109 or minimum 45 hours; Credit is allowed for only AFR 305 (or AFH 305) or HST 326
HST	326	The Global History of the Trans-Atlantic Slave Trade	Reading- and writing-intensive course that employs critical thought to look at the origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or HST 109 or minimum 45 hours; Credit is allowed for only AFR 305 (or AFH 305) or HST 326
HST	327	Women in U.S. History, 1600 to 1880	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	327	Women in U.S. History, 1600 to 1880	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	328	Women in U.S. History, 1880-1980	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	328	Women in U.S. History, 1880-1980	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	328	Women in U.S. History, 1880-1980	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HST	329	Women in 20th-Century U.S. West	Nuanced exploration of how women of various cultures have contended for and shaped the U.S. West, including the West of imagination.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	H & C	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	330	Historical Thinking	Advanced examination of the ways historians ask questions and propose answers.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 130 or HST 330
HST	331	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H & C	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST or TCL 331
HST	332	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H & C	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST or TCL 332
HST	333	African American History to 1865	In-depth examination of African Americans' roles in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H & C	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 363 (or AFS 363) or HST 333
HST	334	African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
HST	334	African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
HST	334	African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
HST	335	History of Black Women in America	Advanced examination of the challenges that black women have faced historically in America and how they have responded to those challenges socially, politically, economically, and culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 302 (or AFS 302) or HST 335 or WST 302
HST	337	American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	337	American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	338	American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	338	American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	340	American Military History	Studies the role of the military in American life during war and peace from colonial times to the present day.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	340	American Military History	Studies the role of the military in American life during war and peace from colonial times to the present day.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	341	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 341 or HIS 320

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HST	341	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 341 or HIS 320
HST	341	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 341 or HIS 320
HST	342	U.S. West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	342	U.S. West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	343	American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	343	American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	344	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	344	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	345	Environmental History	Examines the interaction between humans and the natural world in the United States from the late 19th century to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	345	Environmental History	Examines the interaction between humans and the natural world in the United States from the late 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	346	Ancient Greece II: Late Classical and Hellenistic Period	Trace transformation of the Greek world between the end of the Peloponnesian War (404 B.C.) and the absorption of the last major Greek state by growing power of Rome (30 B.C.), with special attention to how Greeks in this period lived and thought and how the period's political and economic changes helped to create new forms of culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites; ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	346	Ancient Greece II: Late Classical and Hellenistic Period	Trace transformation of the Greek world between the end of the Peloponnesian War (404 B.C.) and the absorption of the last major Greek state by growing power of Rome (30 B.C.), with special attention to how Greeks in this period lived and thought and how the period's political and economic changes helped to create new forms of culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisites; ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	347	Ancient Greece I: Bronze Age through the Peloponnesian War	Traces Greek History from its prehistoric beginnings through the Peloponnesian War (431-404 B.C.), with a special focus on the Archaic (ca. 800-480 B.C.) and Early Classical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-reqs for HST 347
HST	347	Ancient Greece I: Bronze Age through the Peloponnesian War	Traces Greek History from its prehistoric beginnings through the Peloponnesian War (431-404 B.C.), with a special focus on the Archaic (ca. 800-480 B.C.) and Early Classical periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-reqs for HST 347
HST	348	Rome	History and civilization of Rome from the beginning of the Republic to the end of the Empire.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	348	Rome	History and civilization of Rome from the beginning of the Republic to the end of the Empire.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	349	Early Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 5th through 10th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	350	Later Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 11th through 15th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	350	Later Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 11th through 15th centuries.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	351	Renaissance Europe	Culture of the Renaissance in Italy and Northern Europe from the 14th to the early 16th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	352	Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	352	Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU or SB) & H	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HST	353	Old Regime in Europe	Society and culture of Europe during the 17th and 18th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	354	Revolutionary Europe	Political, social, economic, and intellectual currents in Europe from the French through the Russian Revolutions.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	354	Revolutionary Europe	Political, social, economic, and intellectual currents in Europe from the French through the Russian Revolutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	355	Total War and the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	355	Total War and the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	355	Total War and the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	356	Europe since 1945	Europe in its world setting since World War II, emphasizing major political and social issues from 1945 to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	356	Europe since 1945	Europe in its world setting since World War II, emphasizing major political and social issues from 1945 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	357	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite: ENG 102, 105 or ENG 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357 or PHI 391 or REL 391
HST	357	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite: ENG 102, 105 or ENG 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357 or PHI 391 or REL 391
HST	358	Jewish History from Antiquity to 1492	Continuity and change in political, legal, economic and sociocultural history of the Jews from ancient through medieval times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	359	Jewish History from 1492 to 1948	Jewish history from early modern through modern times, highlighting emancipation, enlightenment, and Jewish responses to modernity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	360	The Crusades: Religion & Conflict in the Middle Ages	Examines the origins, the development, and the outcomes of the movement that we call "crusades" by connecting the military aspect of the crusades to broader developments. Focuses primarily, but not exclusively, on the period 1095-1453. Geographically covers chiefly the Mediterranean, and, to a lesser extent, northeastern Europe.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours; Credit is allowed for only HST 360 or 394 (Crusades in the Middle Ages)
HST	361	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours. Credit is allowed for only HST 361 or REL 374
HST	361	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours. Credit is allowed for only HST 361 or REL 374
HST	362	Sex and Society in Classical and Medieval Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and religious change in classical and medieval Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	362	Sex and Society in Classical and Medieval Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and religious change in classical and medieval Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	363	Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	363	Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	364	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours

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HST	364	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	365	World Wars I and II: Europe's Eastern Front	In-depth study of the history of the Eastern Front in Europe in the two world wars.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 365 or 394 (WWI and WWII Eastern Front)
HST	366	England to 1689	In-depth examination of the political, economic, and social development of the English people to the late 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	367	Modern Britain	In-depth examination of the political, economic, and social development in Britain from 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	368	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	368	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	369	History and Memory of the Holocaust	In-depth study of the history of the genocide of Jews, the rise of modern antisemitism within the context of Nazi Germany, and the memory and memorialization of the Holocaust post 1945.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 369 or JST 369 or REL 312 or HST 304 (Shoah: History, Memory, and Representation) or HST 394 (History of the Holocaust)
HST	370	Eastern Europe in Transition	Democratization, privatization, and identity transformations since the fall of communism in contemporary Eastern Europe and the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	371	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 371 or REL 377
HST	372	Modern Middle East	In-depth examination of the effect of the West and modernization on Middle Eastern governments, religion, and society in the 19th and 20th centuries.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	Pre-requisite: Minimum 24 hours
HST	372	Modern Middle East	In-depth examination of the effect of the West and modernization on Middle Eastern governments, religion, and society in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: Minimum 24 hours
HST	373	Roman History I: Foundations and Republic	Traces the growth of Roman power from Rome's humble beginnings in the eighth century B.C. to its domination of the Mediterranean and the transformation of the Roman Republic into the Roman Empire after the Battle of Actium (31 B.C.).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	374	Roman History II: The Roman Empire	The Roman Empire from the reign of the first emperor, Augustus (27 B.C.-A.D. 14), to that of Justinian (A.D. 527-565), focusing on the lives of the Roman emperors, the society and culture of the empire, and the profound changes that eventually contributed to the empire's collapse.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours
HST	375	Colonial Latin America	Ancient civilization, exploration and conquerors, and colonial institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	375	Colonial Latin America	Ancient civilization, exploration and conquerors, and colonial institutions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	376	Modern Latin America	In-depth examination of the development of independent Latin American republics since 1821.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	376	Modern Latin America	In-depth examination of the development of independent Latin American republics since 1821.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	378	Latin American Women: The National Period	In-depth study of the history of women, gender relations, and state policies in a broad continental setting, from independence to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	383	China	Political, economic, social, and cultural history of the Chinese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 333, HST 383 or SLC 333

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HST	384	China	Political, economic, social, and cultural history of the Chinese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	385	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only CHI 335, HPS 325, HST 385 or SLC 335
HST	386	Interpreting China's Classics	Study of selected Confucian and/or Taoist classics and ways they have been read in both Asian and Western scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 336, HST 386 or SLC 336
HST	387	Japan	Political, economic, social, and cultural history of the Japanese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	388	Japan	Political, economic, social, and cultural history of the Japanese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	389	Japan Society and Values/Premod	Effects of economic and social transitions on personal and social values as reflected in the dramatizations of contemporary events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	390	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
HST	390	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
HST	391	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 391 or SGS 381
HST	392	Modern India	In-depth study of modern India and its neighboring countries from the 18th century to the present.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 392 or HST 303 (Modern South Asia) or HST 394 (Modern South Asia)
HST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	397	Greece and Rome at War	Familiarizes students with the major battles, leaders and tactics of Classical Greece and Rome. Supplements lectures with student participation including study of original sources, group presentations, and gaming battle simulations. This multifaceted approach gives a greater sense of the evolution of the leaders, armies and tactical systems of the Greeks and Romans.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 360, HST 397, LAT 360, SLC 360 or SLC 394 (Greece and Rome at War)
HST	400	Topics in American Historical Periods	Focuses on specific periods in American history. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		

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HST	404	Conquest and Encounters in Colonial Latin America	How did Hernan Cortés and Francisco Pizarro defeat the Aztec and Inca Empires? Despite numeric inferiority, limited provisions, and little knowledge about the Americas, Cortés and Pizarro defeated advanced civilizations that had experienced warriors and millions of inhabitants. Possible explanations include the conquistador's valor, advanced weaponry, superior military strategy, Indian allies, and biological attacks. In their encounters with native peoples of the Americas, Europeans were not always conquerors. Álvaro Núñez Cabeza de Vaca and Lope de Aguirre failed both in their attempt to conquer a large Indian civilization and in their effort to find mineral wealth. A few Europeans such as Bartolomé de Las Casas spoke out against the abuses committed against the Indians during the conquest. Explores these issues from the perspective of both Europeans and native peoples and looks at the long-term impact for Latin America and its peoples.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 404 or HST 494 (Conquest & Encounters)
HST	405	Colonial American History to 1763	Political, economic, social, and cultural history of the colonial era. Concentrates on English colonies, with some consideration of Spanish, French, and other colonial regions in North America.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	405	Colonial American History to 1763	Political, economic, social, and cultural history of the colonial era. Concentrates on English colonies, with some consideration of Spanish, French, and other colonial regions in North America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	406	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	406	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	406	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	407	Early U.S. Republic/1789-1850	Political, social, economic, and cultural development of the United States from the Revolution to 1850.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	407	Early U.S. Republic/1789-1850	Political, social, economic, and cultural development of the United States from the Revolution to 1850.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	408	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	408	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	408	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	409	Emergence Modern U.S. 1877-1918	Triumph of modern political, social, and economic structures and values, 1877-1918; role of region, religion, race, and ethnicity.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	409	Emergence Modern U.S. 1877-1918	Triumph of modern political, social, and economic structures and values, 1877-1918; role of region, religion, race, and ethnicity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	410	Modern U.S., 1918 to1945	1920s boom and the crash, the Depression and the New Deal response. The Second World War at home and abroad.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	411	Postwar U.S., 1945-1973	Cold War, prosperity, reform, and immense social and political change in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	412	Contemporary U.S., 1973-Present	End of the Cold War, political crises, and cultural transformations in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	413	Contemporary America	The United States from 1945 to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	413	Contemporary America	The United States from 1945 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	413	Contemporary America	The United States from 1945 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours

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HST	414	Political Thought and Leadership	Research seminar in political values and leadership. Combines lecture, readings and guest lectures by leaders in business, public affairs and the media. Culminates in a substantial written research effort.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; HST 112 with C or better; minimum 55 hours; Credit is allowed for only HST 414 or POS 414
HST	415	Unequal Sisters: Women and Political and Cultural Change	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H & C	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	415	Unequal Sisters: Women and Political and Cultural Change	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or SB) & H & C	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	416	Western Rivers	Examines the relation between rivers, culture, and environment in the American West.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L & H	Pre-requisites: ENG 102, 105, 108 or 112 with C or better; Minimum 55 hours
HST	418	The Hispanic Southwest	Development of the Southwest in the Spanish and Mexican periods to 1848.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	
HST	419	20th Century Chicano/a History	Historical development of the Chicano community in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only HST 419 or LAS 419
HST	423	The Tudor Monarchy	Political, cultural, and social foundations of 16th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	424	The Stuart Monarchy	Political, social, economic, and cultural developments in 17th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	426	The British Empire	British imperialism and colonialism in Africa, the Americas, Asia, and the South Pacific.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	427	French Revolution/Napoleonic Era	Conditions in Pre-Revolutionary and Revolutionary France; organization of France under Napoleon and impact of French changes upon Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	428	Modern France	Social, political, economic, and cultural transformations of French society, 1815-present. Impact of industrialization, war, and revolution on people's lives.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	428	Modern France	Social, political, economic, and cultural transformations of French society, 1815-present. Impact of industrialization, war, and revolution on people's lives.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	429	Modern Germany	Germany since 1871.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	429	Modern Germany	Germany since 1871.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	430	The Ottoman Empire in the Classical Period	Focuses on the largest and most powerful Islamic polity from the late Middle Ages until the early twentieth century: its formation, institutions, social and cultural life, and its multifaceted impact on Europe and the Near East.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 430 or HST 495 (The Ottoman Empire in the Classical Period) or HST 498 (The Ottoman Empire in the Classical Period)
HST	431	Eastern Europe and the Balkans, Pre-1914	Empire and nation in Eastern Europe and the Balkans before World War I, emphasizing Hapsburg and Ottoman lands.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	432	Eastern Europe the Balkans, 20th Century	Politics and culture in Eastern Europe and the Balkans from World War I to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	435	The Russian Empire	Development of Russian imperial institutions and civil society from the 17th to the early 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	436	The Soviet Experiment	In-depth study of Communist revolutionaries' rule of Russia, focusing on utopian culture, Stalinist terror, heroism in war, and the breakup of the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	438	Modern Spain	Cultural, economic, political, and social development of modern Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours

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HST	441	Latin America and the World Economy	Globalization did not begin in the late twentieth century, but rather global trade has linked Latin America with the rest of the world for over five hundred years. The region has been an active and important participant in the world economy since Columbus's first voyage in 1492. This course explores the social, cultural, economic, and environmental impact of such participation on both Latin America and the rest of the world. It is organized both chronologically and thematically. We will study both colonial and post-colonial trade. The commodities studied include sugar, rubber, bananas, and cocaine.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L & G & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 441 or HST 305 (Latin America and the World Economy) or HST 494 (Latin America and the World Economy)
HST	443	The United States and Latin America	Latin American struggle for diplomatic recognition, attempts at political union, participation in international organizations since 1810, and relations between the United States and Latin America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	444	Latin American Independence	History of independence movements throughout the Western hemisphere from the late 18th century until the mid-19th century.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & G	Pre-requisites: ENG 102, 105, 108 or 112 with C or better; Minimum 55 hours
HST	445	20th-Century Cuba	History of Cuba from colonial era to formation of the early republic; political, economic, social development in late 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	447	Modern Mexico	In-depth examination of political, economic, social, and cultural developments in Mexico from 1810 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 55 hours. Credit is allowed for only HIS 423 or HST 447
HST	447	Modern Mexico	In-depth examination of political, economic, social, and cultural developments in Mexico from 1810 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 55 hours. Credit is allowed for only HIS 423 or HST 447
HST	448	Mexican/U.S. Border	Analyzes the evolution of the Mexican/U.S. border region from the mid-19th century to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: ENG 102, 105, 108 with C or better; Minimum 55 hours
HST	449	Mexican Immigration to the U.S.	Assesses the evolution of immigration and emigration public policy since the mid-19th century. Seeks to contextualize the relationship between immigration and other elemental nation-state issues as the economy, education, identity, and civil rights.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H & C	Pre-requisites: ENG 102, 105, 108 with C or better; Minimum 55 hours
HST	450	Postmodern Mexico	Challenges historical myths about the evolution of the nation state and calls into question that globalization and transnationalism are only recent phenomena of the postmodern world.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & G	Pre-requisites: ENG 102, 105, 108 with C or better; Minimum 55 hours
HST	451	Chinese Cultural History I	China's classics in translation studied both for their intrinsic ideas and for the origins of Chinese thought.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 451, HST 451 or SLC 451
HST	452	Chinese Cultural History II	Evolution of Confucian thought, its synthesis with Taoism and Buddhism, and modern reactions against, and uses of, Confucian traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 452 or HST 452 or SLC 452
HST	453	The People's Republic of China	Analyzes major political, social, economic, and intellectual trends in China since the founding of the People's Republic in 1949.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	454	History of Genocide	Examines the individuals and institutions responsible for the most infamous episodes of state-sanctioned violence in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G & H	Prerequisite(s): minimum 45 hours. Credit is allowed for only FOR 454 or HST 454
HST	456	The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	456	The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	459	Gandhi and the Politics of Nonviolence	In-depth study of Gandhi and the Ghandian political philosophy and practice of nonviolence.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 55 hours. Credit is allowed for only HST 459 or HST 498, Gandhi: Politics of Non-Violence
HST	465	Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Pre-requisite: ENG 102, 105, 108 with C or better; Minimum 55 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HST	465	Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	Pre-requisite: ENG 102, 105, 108 with C or better; Minimum 55 hours
HST	480	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): admission to Professional Teacher Preparation Program; Credit is allowed for only HST 480 or HST 530
HST	480	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): admission to Professional Teacher Preparation Program; ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 480 or HST 530
HST	480	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): admission to Professional Teacher Preparation Program; Credit is allowed for only HST 480 or HST 530
HST	481	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): HST 480 or SED 480 with C or better; admission to Professional Teacher Preparation Program
HST	481	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): HST 480 or SED 480 with C or better; admission to Professional Teacher Preparation Program
HST	481	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): HST 480 or SED 480 with C or better; admission to Professional Teacher Preparation Program
HST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
HST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
HST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
HST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Barrett Honors student; HST 300 (HIS 300) or 495 with C or better
HST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
HST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
HST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Barrett Honors student; HST 300 (HIS 300) or 495 with C or better
HST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
HST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HST	495	Methods of Historical Inquiry	Capstone course in history as an academic discipline, including formulation of research questions, use of primary and secondary sources to evaluate, form and support historical arguments. Students draft and revise a scholarly research paper.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): History or Secondary Education (History) student; ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 300 or HST 495 or JST 490
HST	495	Methods of Historical Inquiry	Capstone course in history as an academic discipline, including formulation of research questions, use of primary and secondary sources to evaluate, form and support historical arguments. Students draft and revise a scholarly research paper.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Prerequisite(s): History or Secondary Education (History) student; ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 300 or HST 495 or JST 490
HST	495	Methods of Historical Inquiry	Capstone course in history as an academic discipline, including formulation of research questions, use of primary and secondary sources to evaluate, form and support historical arguments. Students draft and revise a scholarly research paper.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): History or Secondary Education (History) student; ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 300 or HST 495 or JST 490
HST	496	South, Southeast, and East Asia in the Global Matrix	In this capstone seminar, majors in Asia Studies take up broad comparative themes, integrating knowledge from the major's three tracks (East, South, and Southeast Asia) and executing a research project culminating in a major paper.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s) with C or better: ASB 240 (or GCU 240 or HST 111 or 240 or 245 or POS 240 or REL 240 or 245 or SGS 240 or 245); ENG 102 (or ENG 105, or 108); minimum 55 hours
HST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
HST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7	L	Pre-requisites: HST 200 or 300 (HIS 300) with C or better; History major with senior standing or Education-History student with minimum 75 hours
HST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7	L	Pre-requisites: HST 200 or 300 (HIS 300) with C or better; History major with senior standing or Education-History student with minimum 75 hours
HST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: HST 200 or 300 (HIS 300) with C or better; History major with senior standing or Education-History student with minimum 75 hours
HST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
HST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
HST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
HST	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	502	Public History Methodology	Introduces historical research methodologies, techniques, and strategies used by public historians. Readings, short papers, and guest speakers. Required for students in the public history concentration.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student
HST	515	Studies in Historiography	Methods and theories of writers of history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student
HST	520	Masters of Nonfiction	Students read and critically discuss works by well-known nonfiction writers to improve their own writing skills. Consists of weekly writing exercises, reviewed with workshop-style discussions centered on individual authors, themes or genres such as history, journalism, personal essays, biography, character profiles, travelogues, book reviews and op/ed commentary.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only HPS or HST 520
HST	525	Historical Resource Management	Identification, documentation, and interpretation of historic period buildings, sites, and districts. Emphasizes interdisciplinary efforts among historians, architects, and anthropologists.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student
HST	527	Historical Administration	Preparation of historians in administration of archives and historical sites, museums, societies, and offices in government agencies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student
HST	532	Community History	Techniques and methods of community history emphasizing local resources. Required for community history option.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student
HST	573	Museum Administration	Formal organization and management of museums, governance, personnel matters, fund raising and grantsmanship, legal and ethical issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ASB 573 or HST 573
HST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: History MA or PHD student
HST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: History MA or PHD student
HST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-15		Pre-requisite: History MA or PHD student
HST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Pre-requisite: History MA or PHD student
HST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	640	Historical Methods	Core readings course engages key historical monographs focused on historical methods. Provides core content knowledge and an understanding of debates and trends in the field. Provides a basic understanding of existing literature in the field. Develops ability to analyze historical methods and develop scholarly historical arguments.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): History MA or PhD student; Credit is allowed for only HST 640 or HST 500 (Historical Methodology)
HST	641	North American History	Core readings course engages key historical monographs focused on historical methods. Provides core content knowledge and an understanding of debates and trends in the field. Provides a basic understanding of existing literature in the field. Develops ability to analyze historical methods and develop scholarly historical arguments.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): History MA or PhD student; Credit is allowed for only HST 641 or HST 598 (US to 1877)
HST	642	European History	Core readings course engages key historical monographs focused on European history. Provides core content knowledge and an understanding of debates and trends in the field. Provides a basic understanding of existing literature in the field. Develops ability to analyze historical methods and develop scholarly historical arguments.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): History MA or PhD student; Credit is allowed for only HST 642 or HST 598 (European Core I: Pre-Modern Europe) or HST 598 (Medieval and Early Modern Europe) or HST 598 (Pre-Modern Europe and the World)
HST	643	Global History	Core readings course engages key historical monographs focused on global history. Provides core content knowledge and an understanding of debates and trends in the field. Provides a basic understanding of existing literature in the field. Develops ability to analyze historical methods and develop scholarly historical arguments.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): History MA or PhD student; Credit is allowed for only HST 643 or HST 598 (World and Global History)
HST	682	Advanced Research Skill	Designed for students who are demonstrating a non-linguistic skill such as: quantitative methods of analysis, geographic information system mapping, documentary editing, training in archival management, oral history interview techniques and historic preservation, or interdisciplinary training in fields relevant to the student's research interests such as geography, anthropology, sociology, political science or public administration, literature, ethnic studies, women's studies, ecology.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Prerequisite(s): History MA or PhD student; Credit is allowed for only HST 682 or HST 692 (Documentary Editing Advanced Research)
HST	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Pre-requisite: History MA or PHD student
HST	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HST	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Pre-requisite: History MA or PHD student
HST	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HUD	301	Housing and Community Design and Development	Single- and multifamily housing, residential neighborhoods, and planned communities. Affordability in owner-occupied and rental housing. First-time, move-up, and adult markets.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	302	Housing Production Process	Development feasibility analysis, finance, contracts, land acquisition, community and permit presentation and negotiation, scheduling, cost control, marketing, and sales.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	361	Housing and Urban Development Studio I: Residential Design and Development	Affordable residential design, development, and production process.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Housing & Community Developmnt student; Passed Milestone; Co-requisites: HUD 301; HUD 363
HUD	362	Housing and Urban Development Studio II: Community Design and Development	Neighborhood and new community design and development process.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Housing & Community Developmnt student; HUD 361 with C or better; Co-requisite: HUD 302; HUD 364; HUD 403
HUD	363	Housing and Urban Development Seminar I: Residential Design and Development	Affordable residential design, development, and production process.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Housing & Community Developmnt student; Co-requisites: HUD 301; HUD 361
HUD	364	Housing and Urban Development Seminar II: Community Design and Development	Neighborhood and new community design and development process.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Housing & Community Developmnt student; Co-requisites: HUD 302; HUD 362; HUD 403
HUD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
HUD	401	Assisted Housing	Publicly subsidized and nonprofit housing. Policy, implementation, and administration. FHA, Section 8, FmHA, projects and scatter site, and tax considerations.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	402	Community Revitalization: Problems and Strategies	Public policy and strategies for neighborhood revitalization and community renewal. Preservation and adaptive reuse, gentrification, neighborhood safety, and related socioeconomic concerns.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	403	Advanced Topics in Housing and Urban Development	Varying topics, such as manufactured housing, homelessness, mortgage and finance in housing, housing abroad, marketing housing, and sustainable community development.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	461	Housing and Urban Development Studio III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction, cost management, and marketing.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Housing & Community Developmnt student; HUD 362 with C or better; Co-requisites: HUD 401; HUD 463
HUD	462	Housing and Urban Development Studio IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Housing & Community Developmnt student; HUD 461 with C or better; Co-requisites: HUD 402; HUD 464
HUD	463	Housing/Urban Dev Seminar III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction and cost management, and marketing.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Housing & Community Developmnt student; HUD 302 and HUD 364 with C or better; Co-requisites: HUD 401; HUD 461

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
HUD	464	Housing and Urban Development Seminar IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Housing & Community Developmnt student; Co-requisites: HUD 402; HUD 462
HUD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Housing & Urban Developmnt BSD student
HUD	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
HUD	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
HUD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
HUD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
HUM	530	Pop Culture America		Y	LEC	Y	CNV	Liberal Arts and Sciences	Division of Humanities	3		
HUM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IAP	101	Art, Artist, and Culture	Provides an approach to art, creativity, and culture in global, historical, and contemporary contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
IAP	102	Foundations I: Performance Techniques and Composition	Focuses on practice-based studies of contemporary presentational strategies and techniques.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	103	Foundations I: Interdisciplinary Digital Media	Digital media studies and application of contemporary artists, processes, and presentation practices in Interdisciplinary arts.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	104	Foundations I: Fundamentals of Sound Art	Investigates late 20th- and 21st-century sound art and our relationship with it.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	105	Foundations I: Fundamentals of Visual Art	Focuses on contemporary aesthetic concepts and language for interdisciplinary visual arts application. Introduces core concepts of visual design: the elements and principles of design and the creative process, the basics of drawing, color theory, typography and 2D design. Engages student in the fundamental aspects of design to build an adequate foundation and prepares for the next level of the study of interdisciplinary arts practice.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		

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IAP	201	Introduction to Interdisciplinary Arts	Considers interdisciplinarity in practical terms in all art forms. Also considers antecedents and cross-cultural issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
IAP	202	Perspectives on Interdisciplinary Arts and Performance	Social, cultural, and historical examination of interdisciplinary art and performance and a survey of current interdisciplinary work and approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
IAP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAP	301	Energetic Systems of Art: Collaboration in the Arts	Identifies and explores the energetic systems at work in the creation, performance, and perception of art.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	302	Cross-Cultural Perspectives on the Arts	Social and cultural perspectives of art and performance through a survey of historical and contemporary attitudes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	304	Traditions of the Avant-Garde and Experimental Art	Surveys 20th-century art movements and isms, including futurism, dada, surrealism, constructivism, realism, the Bauhaus, abstract expressionism, minimalism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	305	20th and 21st Century Art, Performance, and Media	Surveys artists, movements, and trends in the arts with an emphasis on interdisciplinary performance, media, and technology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	307	Art and War	Global interdisciplinary survey of the range of work created by artists in response to war, through time.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	
IAP	310	Women in Art	Cultural, historical, and social issues relating to the seeming scarcity of women artists and changing social contexts for women artists.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre/Co-requisite: ENG 101 or 105 with C or better; Credit is allowed for only IAP or IAS 310
IAP	321	Music Composition I	Study and implementation of specific compositional theories and procedures. May be repeated for credit when topics vary.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	322	Multitrack Digital Recording	Introduces students to theory and practice of Musical Instrument Digital Interface (MIDI) technology.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	324	The Voice and Performance	Involves all aspects of the human voice, including research, creation, and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	325	Sound Performance: Exploring Alternative Performance Groups	Utilizes innovative sound ensembles to explore all aspects of sound and its place in various art forms.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: BA Digital Culture major or BA Interdisciplinary Arts and Performance major; Pre/Co-requisite: IAP 201 or 202
IAP	331	Performance, Acting, and the Individual	Explores the concepts of the self, the subject, and the author as each pertains to the solo artist.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Minimum 45 hours
IAP	332	Technical Production for Interdisciplinary Arts	Develops basic technical knowledge and application of fundamental stagecraft techniques used in the creation and presentation of performance works.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	333	Directing for Performance	Explores various strategies for performance. Emphasizes nontraditional staging and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	334	Conceptual Development in the Arts	Conceptual development processes in the arts from initial idea to formal project proposals, grants, and production plans.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): BA Digital Culture major or BA Interdisciplinary Arts and Performance major or BA Performance and Movement major. Corequisite(s): IAP 201 or IAP 202
IAP	352	Seeing and Drawing	Develops drawing and seeing skills that are important not only to visual arts but also to music, dance, and theatre.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	354	Visual Representation	Explores materials, processes, and aesthetic concepts of art making through various media with readings on cultural perspectives and contemporary theory.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: BA Digital Culture major or BA Interdisciplinary Arts and Performance major; Co-requisite: IAP 201 or 202
IAP	355	Illusion and Vision	Inquiry into 2-D surfaces for visual representation and personal expression; includes readings on color theory, visual perception, and historical/cultural patterns.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	361	Digital Editing and Media Literacy	Investigates the approaches used in digital editing with a focus on interactivity, graphics, audio, and desktop video.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	CS	Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing or BA Digital Culture student
IAP	362	Games & Narratology	Focuses on design techniques for the writing of nonlinear and interactive stories in the video game development process. Compares and contrasts game writing with other creative writing such as short story, song writing, oral history, poetry, fiction and film. Examines, deconstructs and questions the game design approach commonly referred to as narratology. Inspects key texts in media and cultural studies for attitudes, ideas and thoughts on games and narrative in games. Uses materials, processes, and aesthetic concepts of level design and visual skills needed to create a video game using a game engine. Knowledge of introductory computer science recommended.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: ENG 101 and 102 with C or better; IAP 105 with C or better

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IAP	363	Sound, Image, and Media	Interdisciplinary arts projects for experimental approaches to relating sound and visual image, accompanied by survey of historical and contemporary material.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	364	Documentaries	Media arts projects exploring new and experimental forms of visualization based upon an interdisciplinary survey of historical and contemporary examples.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	365	Digital Interactivity	Combines graphics, video, and animation with digital authoring tools for creation of interactive multimedia Web sites.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing or Digital Culture student
IAP	368	Digital Graphic Technologies	Employs technology used in contemporary graphic designs to design concepts and techniques for modeling and representation applications.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing or Digital Culture student
IAP	371	Verbal Art	Examines varieties of verbal art in everyday life, literature, oral and literate cultures. Considers diverse cultural forms and values.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	375	Contemporary Performance: Theories and Practice	Performance course focusing on elements of contemporary and digital performance in relationship to stage, new technologies, video, installations, and public art. Through interdisciplinary strategies, students gain tools to deepen their knowledge and range of performance. Requires students to engage in research, conceptualization, and the creation of new original work, combining classroom workshops, various readings, fieldwork, and production to emphasize interdisciplinarity, collaboration, and personal vision. Once theories and concepts are explored, students work in a conceptually based and physically rigorous environment toward producing new work, culminating in a final performance project.	N	STO	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): BA Digital Culture major or BA Interdisciplinary Arts and Performance major or BA Performance and Movement major. Corequisite(s): IAP 201 or 202
IAP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAP	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
IAP	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
IAP	421	Composition: Process, Technique, and Style II	Advanced study of specific compositional theories and procedures; in-depth analysis of individual work.	N	LEL	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	431	Perspectives on Performance and Acting	Focuses on the interaction of the performer with media, alternative stagings, and collaboration with other performers.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	433	Directing Workshop	Applies experimental directorial techniques to presentations and deconstruction of classical works including European and cross-cultural traditions.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Credit is allowed for only IAP 433 or MAS 598 (Directing Workshop)
IAP	434	Production Laboratory	Develops original scripts into showcase productions. Students function as theatrical ensemble, participate in all phases of performance and production values.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	441	Movement for Performance	Explores the relationship of movement as it relates to performance, both historically and cross-culturally.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	462	Games and Play	Focuses on a study of play and game design. Discusses what play is and why humans need it as it pertains to game design. Considers and analyzes an examination of the dark side of play. Scrutinizes the concept of what critical play is and how games are working within social, political and cultural systems. Studies these concepts as the students design and execute a serious or artistic game demo using the materials, processes, aesthetic concepts of art making and scripting skills needed to create a video game using a 3D game engine. Knowledge of introductory computer science recommended.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: IAP 105 with C or better
IAP	464	Media and Diversity	Interdisciplinary art projects exploring identity, perception, and technologies from a basis of class, race, ethnicity, gender, sexuality, and ecology.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	
IAP	465	Media Technologies and the Arts	Practical explorations of media arts interrelated with cultures, society, and technology, addressed through readings, discussion, research, and student arts projects.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	466	Digital Interactivity, Advanced	Advanced multimedia authoring skills for creation of interactive works in DVD, CD ROM, and other media formats.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing students
IAP	467	Acoustic Ecology	Investigations into the relationship between audio art and ecology; covers field recording, oral histories, digital editing, and designing audio Web site and databases.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		

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IAP	468	Digital Graphic Applications	Targeting, planning, design, authoring, development, and presentation of professional digital media graphics for Internet and print.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing students
IAP	469	Advanced Audio Production	Engages advanced media students in the technical, logistical, and aesthetic concerns specific to audio in all forms of digital media.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	471	Language, Culture, and Performance	In-depth examination of language in myth, poetry, social and aesthetic performance genres.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	473	Aesthetic Research	Investigates how artists, in all disciplines and from different historical periods, conduct or participate in research.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	474	Art and Film	Focuses on film as an art form in relation to the arts through aesthetics, cinematic theory, period study.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	480	Senior Project	Capstone course. Students develop an exit project for the IAP degree under the guidance of an advisor.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3-6		
IAP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
IAP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
IAP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
IAP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
IAP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
IAP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IAS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
IAS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAS	220	Psychology, Multicultural Narratives, and Religion	Examines contemporary multicultural life narratives that explore diversity in America and the authors' constructions of psychological identity and religious values.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Pre-requisite: ENG 101 or 105 with C or better
IAS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
IAS	300	Adult Career Development	Analysis of sociological and economic factors of 21st-century work environments, integrated with a psychological understanding of adult development.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or SB	Pre-requisites: ENG 101 or 105 with C of better or Applied Science student
IAS	305	Work and Identity	Explores the relationship between work and identity, as well as the search for meaning in work across generations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	
IAS	324	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
IAS	340	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-reqs for IAS 340. Credit is allowed for only BIO 312 or IAS 340 or PHI 320
IAS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAS	401	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Credit is allowed for only IAS 410, MAS 598 (Sacred Scriptures & Social Choices) or REL 401
IAS	406	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 101 or 105 or 107 with C or better. Credit is allowed for only FOR 406 or IAS 406 or PHI 406

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IAS	407	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisite: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
IAS	409	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Credit is allowed for only IAS 409 or PHI 409
IAS	410	Evolution of Ideas	Investigates ideas (paradigms) and revolutions (paradigm shifts). Examines several topics from perspectives of science, arts, humanities, social sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisite: ENG 101 or 105 with C or better
IAS	411	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Credit is allowed for only IAS 411 or MAT 411
IAS	415	Life in the Universe	Examines the search for life in extreme environments on Earth and in remote locations beyond Earth.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAS	416	Black Holes and Beyond	Explores developments in understanding nature's most basic force-gravity-from Aristotelian concepts to modern theories of curved space-time.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAS	420	Multicultural Autobiographies	Examines the human experience via autobiographies and personal narratives. Multicultural, literary, and psychological perspectives on individual lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits; Credit is allowed for only ENG or IAS 420
IAS	430	Science and Religion	Examines evolving relationships between scientific thought and Western and Eastern religious thought. Explores cosmologies, worldviews, and epistemologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisite: ENG 101 or 105 with C or better; Credit is allowed for only IAS 430 or MAS 510
IAS	477	World Literature	Introduces world literature, mostly outside the United States and England.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours; Credit is allowed for only ENG 477 or IAS 477
IAS	480	Capstone: Practices and Approaches	Individualized projects developed by the student under the guidance of the capstone coordinator based upon the student's area of concentration. Provides an opportunity to apply the knowledge and skills developed in the course of their program to real-world situations.	N	RSC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): Interdisciplinary Arts and Sciences BA or Philosophy, Religion, and Society BA or Applied Science BAS major
IAS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
IAS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
IAS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
IAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
IAS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
IAS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	410	Behavioral and Mental Disorders	Common co-occurring mental and behavioral health issues related to patients' chronic medical conditions and evidence-based assessment strategies to address behavioral health needs in primary care and other medical settings.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IBC	415	Behavioral Health Over the Lifespan	Common issues and concerns faced throughout the different life stages and the associated behavioral health needs. Presents evidence-based strategies for primary prevention and early intervention. Provides case examples to effectively illustrate the application of the key constructs addressed in the course.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours
IBC	420	Population Health Management	Population health management as it applies to the triple aim. Discusses identifying patient populations (through electronic medical records (EMR) and other strategies), using groups (including group dynamics) to manage health, engagement strategies, and risk stratification strategies.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours
IBC	425	Cognitive and Behavioral Counseling	Frameworks for conceptualizing health behavior change. Reviews evidence-based approaches that address patient's behavioral health needs in primary care and other medical settings.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours
IBC	430	Clinical Medical Pathophysiology	Provides an overview of pathophysiology and medical treatment of common medical conditions in primary care (e.g., diabetes, coronary heart disease, hypertension, asthma, cancer). Emphasizes medical terminology, pathophysiology, common medical treatments and behavioral health issues associated with those conditions that students can expect to see in integrated medical settings, especially integrated primary care. Students learn appropriate medical terminology for symptoms, diseases, treatments and medical tests so they can communicate effectively with inter-professional medical teams. Discusses the role of the behavioral health provider as it relates to these conditions as well.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours
IBC	520	Integrated Health: The Patient-Centered Medical Home (PCMH)	Provides an introduction to the Patient-Centered Medical Home (PCMH); alignment of PCMH within primary care systems; and the importance of PCMH within integrated health care design, implementation and relevancy to the triple aim.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	530	Evidence-Based Integrated Health Care	Provides a management-level introduction to evidence-based guidelines for the management of health care concerns through an integrated health care design and delivery system meeting the triple aim.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	540	Integrated Health Care Process Improvement	Help students evaluate, measure, analyze, change and lead improvement in health care systems. Students learn how to apply principles of quality improvement based on Lean Six Sigma health care to effectively shape and create sustainable health care systems that meet "triple aim" of improved patient experience of care, improved population health, and reduced utilization and cost of care. Based on principles of value-based health care delivery in which achieving high value for patients is the overarching goal of health care delivery, defined as health outcome achieved per dollars spent.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	550	Integrated Care Business Operations	Provides a management-level introduction to operationalizing integrated health care delivery systems meeting the triple aim.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	560	Strategic Business Planning and Big Data	Provides a survey of emerging use of "big data" in health care, a term used to describe data sets that contain massive amounts of health care information that are beyond the capacity of commonly used software programs that can be analyzed for the purpose of health care analytics. Covers analytical tools that can be used to leverage health information technology (HIT) from health care systems and applies quality improvement methodologies such as Lean and Six Sigma to make strategic improvement in health care. Covers approaches to big data business intelligence and health care analytics to design, implement and evaluate sustainable health care systems that meet the "triple aim" of improved patient experience of care, improved population health, and reduced utilization and cost of care. Based on principles of value-based health care delivery in which achieving high value for patients is the overarching goal of health care delivery, defined as health outcomes achieved per dollar.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	570	Financial Management	Provides a management-level introduction to financial management of integrated health care.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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IBC	585	Interprofessional Consultation, Leadership and Teamwork in Integrated Health Care	Integrates the closely related topics of consultation, leadership and teamwork in integrated health care. Integrated care settings are characterized by interprofessional teams representing diverse stakeholders such as clinical (e.g., PCP, nurse); management (CEO, CFO, Quality) and administrative. External stakeholders such as health plans, specialty care providers and community resources may also need to participate in the integrated care strategic plan. The integrated care consultant must effectively consult with and engage these stakeholders to develop integrated care teams committed to achieving the "Triple Aim" of improved patient experience of care, improved population health and decreased cost. Emphasizes consultation skills designed to engage stakeholders such as networking, marketing and negotiation. Teamwork emphasizes strategies and techniques of building effective and efficient teams across multiple systems of care.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		
IBC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded and no grade is assigned.	Y	RSC	Y	Z3	College of Health Solutions	College of Health Solutions	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	602	Healthcare Statistics	Provides an overview of contemporary issues in health statistics and develops student proficiency in completing hands-on statistical analyses using Microsoft Excel. Develops proficiency in using Excel to manage data analyses as an ongoing tool to collect and analyze clinical and cost-effectiveness data in primary care and related healthcare settings.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	604	Clinical Medicine/Pathophysiology	Overview of each of the main systems within the human body. Addresses the major diseases (symptoms, diagnosis, and medical treatments) within each system. Students learn appropriate medical terminology for symptoms, diseases, treatments, and medical tests so they can communicate effectively with medical practitioners (nurses and physicians). Content is equivalent to pathophysiology training in an RN program. Also addresses the role of behavioral care providers in medical settings; design and implementation of psychoeducational programs in primary care; stress management techniques for use in medical settings; chronic pain management; identification and treatment of somatization disorder; increasing compliance in noncompliant patients; alternative/complementary medicine; overview of nutrition; and the effects of exercise and nutrition on prevention and treatment of diseases.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	608	Psychopharmacology for the Behavioral Care Provider	Provides overview of psychopharmacology to equip the behavioral care provider with the understanding of psychotropic medications necessary to make prescription recommendations to primary care physicians and to participate in medication management for patients being prescribed psychotropics. Basic principles of pharmacology in general, including pharmacokinetics, pharmacodynamics, medication development and the FDA approval process, interaction effects, drug company marketing strategies, appropriate and inappropriate medication usage, over-medication, and off-label medication use. Pharmacokinetics and pharmacodynamics in special populations (children, the elderly, and patients with co-morbid medical and psychological conditions). The Biodyne protocol for medication management, with emphasis on determining which psychological disorders are likely to be medication responsive. Major classifications of psychotropic medications: stimulants, antidepressants, anxiolytics, antipsychotics, mood stabilizers, narcotics.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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IBC	609	Clinical Neuropsychophysiology	Presents overview of each of the basic neuroanatomy, neurophysiology, and a focus on the manifestations of neurophysiological dysfunction across the life span for Doctor of Behavioral Health (DBH) program behavioral clinicians. Covers the basic human brain anatomy, neurophysiological processes, development, and maturation. Using case studies, presents and discusses evidence-based support for theories of psychiatric disorders and neuropsychopathology. Incorporates evidence-based research findings on the role of genetics, neurophysiological adaptation, epidemiological and societal influences in order to develop understanding of disruptions in normal neurophysiological functioning.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	610	Behavioral and Psychological Assessment in Primary Care	Presents a comprehensive model of behavioral and psychological assessment for behavioral health clinicians in primary care and related medical settings. Provides behavioral health consultants with the necessary knowledge base and skills to develop an appropriate assessment and treatment plan for a variety of commonly seen complaints in primary care. Places attention on the assessment of both psychiatric and behavioral complaints across the lifespan. Students become familiar with both structured interview and empirically support quantitative measures consistently utilized to enhance our understanding of the presenting complaint.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	612	Introduction to Behavioral Interventions	Provides a foundational understanding of behavioral health interventions for primary care settings for those students intending to work in administrative, management or allied health positions. Provides a theoretical basis for various psychological schools of thought, as well as an overview of the empirical evidence for those approaches. Reviews models of therapy including: psychodynamic, brief strategic, cognitive-behavioral and solution-focused. Also reviews two intervention strategies typically used in integrated settings: Acceptance and Commitment Therapy (ACT) and Motivational Interviewing (MI). Explores the ways that these approaches serve as the theoretical framework of the Biodyne model.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 612 or IBC 780 (Introduction to Behavior Intervention)
IBC	613	Cognitive/Affective Bases of Health	Provides an overview of cognitive and affective theories and their intersection with health and health behavior change among individuals and communities. Covers topics including (but not limited to): Health Belief Model, self-efficacy, attribution theory, social-cognitive theory, and the transtheoretical model of change.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	615	Innovative Technologies in Behavioral Health	Provides a quick overview and answers to basic questions related to both online therapy and telemental health. Gives a downloadable audio recording (MP3) and access to the accompanying video clips that augment a rich sampling of pages extracted from our other coursework. As a composite, this experience introduces our multi-modal learning environment and, more importantly, gives an idea of the issues involved with establishing an online or otherwise remote practice.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	1		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 616 or IBC 780 (Innovative Technologies in Behav. Health Intervention)
IBC	620	Psychosomatic Illness: Diagnosis & Treatment	Teaches how to successfully diagnose and treat physical illness caused by various forms of psychosocial stress (psychophysiological disorders, PPD). Because patients are often unaware of the nature or degree of stresses that are responsible for their illness, places emphasis on learning how to detect and use clues that patients provide to develop a more complete understanding of the struggles than they are able to perceive for themselves. Focuses on selecting, assessing and treating a patient known to the student who has medically unexplained physical symptoms.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	1		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 620 or IBC 780 (Psychosomatic Illness: Diagnosis and Treatment)
IBC	624	Integrated Behavioral Health Care for Children and Adolescents	Integrates developmental psychology with pediatric psychology in order to prepare behavioral clinicians to provide screening, assessment, and intervention for children and adolescents in primary care and other medical settings. Presents an overview of developmental stages with an emphasis on critical tasks, while contrasting normal versus abnormal development. Develops societal, familial, and cultural influences.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	634	Strategies and Techniques for Behavior Change in Primary Care	Examines and discusses the theoretical and applied health-related research changing nutrition, smoking and physical activity behaviors in clinical practice.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	660	Healthcare Legal, Ethical, and Professional Issues	Integrate three key areas of healthcare ethics, law, and professional issues for the Doctor of Behavioral Health (DBH) clinician in primary care: (1) the code of ethics for psychologists; (2) legal and ethical issues in medicine; and (3) technological issues and the behavioral health provider.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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IBC	670	Integrated Behavioral Health Interventions for Substance Use Disorders	Focuses on the theoretical foundations, research and strategies for identifying, intervening and/or referring patients in primary care and other healthcare settings that present with substance use disorders or problem use. Provides detailed information about the clinical model of SBIRT (Screening, Brief Intervention, and Referral to Treatment), along with strategies for implementing sustainable business models for SBIRT in healthcare environments.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 670 or IBC 780 (Integrated Behavioral Health Interventions for Substance)
IBC	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	701	Models of Integrated Primary Care	Provides an overview of the primary care environment as well as current models of integrated primary behavioral health care. Reviews and critiques models of health care based on their success in impacted patient health outcomes and improving physician satisfaction, along with fiscal and care delivery systems for each.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	702	Brief Interventions in Primary Care	Provides an overview of evidence-based care for the integrated primary care environment. In particular, reviews and applies the most common approaches to addressing co-morbid behavioral and medical conditions, including but not limited to brief psychotherapy, adherence enhancement, lifestyle medicine, and others, using cognitive-behavioral, acceptance and commitment therapy, solution-focused, and motivational interviewing approaches.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only IBC 691 (Brief Interventions in Primary Care) or IBC 702
IBC	704	Psychopathology & Personality in Integrated Primary Care	Covers the basic principles of the Biodyne Model, which are applicable to all behavioral health cases, both in outpatient mental health settings and in integrated care settings. Core knowledge forms the basis for success as a behavioral care provider in integrated medical settings. Includes common psychotherapist mistakes, evidence-based treatment, basics of the Biodyne Model, survey of integrated care approaches, defense mechanisms, case conceptualization strategies for maximum efficiency, and when to refer a patient for specialty care. Presents in detail common conditions (anxiety and depression), with a focus on how these conditions can be subcategorized for maximum treatment efficiency. Emphasizes the development of comprehensive treatment plans (including psychotropic medications, group programs, and other modalities). Presents didactic material in the context of actual cases. Strong focus on case examples, both illustrative cases provided by the instructor and the students' cases (past and/or current).	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	708	Evidence-Based Behavioral Intervention III	Covers advanced principles of evidence-based integrated behavioral care in primary care and other medical settings. Continuation and third course in the Evidence Based Behavioral Intervention I and II sequence. Further develops evidence-based approaches in the assessment and treatment of children and families and deepens and expands the skills in specific applications of assessment and treatment modalities for adults.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	712	Population-Based Behavioral Health Management	Overview epidemiology for health care followed by population-based approaches to behavioral intervention. Epidemiology includes concept of populations; descriptions and definitions of health and disease; measurement of health (measures, morbidity, mortality and health); designs for studying the health of populations and standardization of population health measures. Population-based management includes definitions of medical management; planning health care for populations and population health outcomes; quality of care and economic analysis of population-based interventions; adjunctive treatments as a core component of population-based interventions. Also, advanced application of population-based behavioral interventions with a focus on design, measures, analysis, results and discussion of current approaches. Includes predictive modeling methods for defining populations; interventions focusing on stepped-care approaches; engagement strategies, interventions, measurement, and follow-up.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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IBC	714	Quality and Performance Measurement, Improvement, and Incentives in Health Care	Overview of healthcare quality management, emerging models of healthcare performance measurement, and models of pay for performance incentives in healthcare designed to reward providers for attaining quality of care goals. Prepares behavioral clinicians to provide services that are consistent with best practices in quality management and performance measurement in healthcare and to provide care that is consistent with performance incentive programs that are present or on the horizon. A key characteristic of healthcare reform is increased focus on provider quality of care, accountability for quality via performance measurement, and aligning provider incentives to meet national and regional quality of care performance targets.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	718	Healthcare Systems: Organization, Delivery and Economics	Provides an overview of the U.S. healthcare system with a focus on economics and policy. Primary goals of the course are to enable students to recognize the relevance of economics to healthcare and to apply economic principles to better understand health-related issues; understand the U.S. healthcare delivery system in the context of social, policy, and economic factors; evaluate the evolving nature of healthcare reform initiatives and their implications for clinical practice, financing, research and policy; analyze public healthcare policy from an economic perspective. Students also focus on behavioral healthcare economics and policy and the economics of behavioral health services in medical settings. Students also understand the medical cost offset effect, including economic benefits of behavioral interventions for co-morbid medical and behavioral conditions, measurement of medical cost-offset, and cost-offset for psychopharmacology and specific behavioral conditions.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	720	Behavioral Health Entrepreneurship	Provides an introduction to the essential entrepreneurship skills for the behavioral healthcare clinician. Focuses on entrepreneurial skills designed to prepare the behavioral clinician to start a new business venture or revitalize an existing organization or business, to meet the needs of the evolving healthcare system and marketplace.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	724	Behavioral Health Management	Presents an introduction to the roles and responsibilities of supervisor/manager in a healthcare organization. Provides behavioral health professionals moving into management with the necessary knowledge base and skills to be an entry-level manager and focuses on the further knowledge acquisition needed to become an experienced, effective manager and leader. In addition, discusses the larger context in which healthcare businesses operate—healthcare reform, regulations and technological changes. Participants take time to look at personal characteristics, interpersonal styles and presentation that affect how one is perceived and responded to in an organization. Too often we have observed individuals with high-level clinical skills moving into management without the requisite skills and understanding of issues, restricting their ability to be successful.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 724 or IBC 780 (Behavioral Health Management)
IBC	728	Cultural Diversity, Health and Illness	Focuses on the relationship among cultural diversity, health and illness, and multicultural psychotherapy in primary care and other healthcare settings. Prepares behavioral clinicians to identify the relationship between cultural diversity and health and illness and to use effective psychotherapy informed by cultural diversity in primary care and related medical settings.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IDN	101	Elementary Indonesian I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
IDN	102	Elementary Indonesian II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		Pre-requisites: IDN 101 with C or better
IDN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
IDN	201	Intermediate Indonesian I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: IDN 102 with C or better
IDN	202	Intermediate Indonesian II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: IDN 201 with C or better
IDN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
IDN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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IDN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
IDN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IED	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		
IED	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
IED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
IED	410	History American Indian Education	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H & C	Credit is allowed for only IED 410 or 510
IED	430	Lang/Literacy-Indig Peoples	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(HU or SB) & C	Credit is allowed for only IED 430 or 530
IED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
IED	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
IED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
IED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
IED	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
IED	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7		
IED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
IED	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	510	History of American Indian Education	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only IED 410 or 510
IED	530	Language/Literacy-Indig People	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only IED 430 or 530
IED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
IED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
IED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
IED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		
IEE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	210	Introduction to Industrial Engineering	History of IE: IE career paths; ethical, social, and contemporary issues; introduces IE techniques, methods, and their application; case studies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: IEE 100(or BME100,CHE100,CEE100, CSE101, ECE100,EEE101,EGR101, FSE100,MAE100,MSE 100, or SES 100) with C or better; MAT 265 (or MAT 270) with C or better
IEE	220	Business and Industrial Engineering	Introduces business for industrial engineers, including business/financial structures, fundamentals of cost and accounting, role of business/engineering in society.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student: Introduction to Engineering course with C or better OR Engineering Management Minor/Concentration: minimum 25 earned hours
IEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	300	Economic Analysis for Engineers	Economic evaluation of alternatives for engineering decisions, emphasizing the time value of money.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student: MAT 265 or 270 with C or better and Introduction to Engineering course with C or better OR Engineering Management Minor/Concentration: MAT 265 or 270 with C or better
IEE	305	Information Systems Engineering	Overview of computer and information systems applications. Topics include client/server; distributed computing; networks; process modeling; e-commerce; enterprise applications; Internet.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	CS	Prerequisite(s): Fulton Engineering undergraduate student and CSE 205 OR other majors with minimum 3.00 GPA and CSE 205
IEE	369	Work Analysis and Design	Planning, analysis, and design of methods of accomplishing work. Emphasizes human factors, work planning, methods analysis and design, and work measurement. Applications in diverse fields.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): Fulton Engineering undergraduate student or Engineering Management Minor/Concentration; FIN 300 or IEE 300 with a C or better

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IEE	376	Operations Research Deterministic Techniques/Applications	Industrial systems applications with deterministic operations research techniques. Resource allocation, product mix, production, transportation, task assignment, networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): CSE 205 with C or better; MAT 242, 342 or 343 with C or better; or Industrial Engineering graduate student
IEE	380	Probability and Statistics for Engineering Problem Solving	Applications-oriented course with computer-based experience using statistical software for formulating and solving engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	CS	Prerequisite(s): Fulton Engineering undergraduate or Engineering Management minor; MAT 266 (or 271) with a C or better; or Industrial Engineering graduate student
IEE	381	Lean Six Sigma Methodology	Define, measure, analyze, improve and control (DMAIC) steps of six sigma methodology for business and quality improvement. Reviews the necessary statistical tools and illustrates their integration into the problem-solving process. Overview of lean principles and design for six sigma. Unique features of applying six sigma and DMAIC in transactional and service organizations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: IEE 380 with C or better; Credit is allowed for only IEE 381, 498 (Six Sigma Methodology) or 498 (Six Sigma Green Belt)
IEE	382	Probability and Statistics Lab	Applied modeling and data analysis using Excel and Minitab.	N	LAB	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1		Pre-requisites: Industrial Engineering or Engineering Management BSE student; Co-requisite: IEE 380
IEE	385	Engineering Statistics: Probability	Conditional probability, common probability models, Goodness-of-fit tests and reliability models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): undergraduate Fulton Engineering major or Engineering Management minor with IEE 380 with C or better OR graduate Industrial Engineering major
IEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	405	Developing Information Systems Applications	Analysis and design of distributed information system applications using object and relational architectures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student
IEE	412	Introduction to Financial Engineering	Intensive exploration course of three phases: (1) a preparation phase for the terminology and financial lingo to be used throughout the semester, (2) introduction of more advanced financial topics such as portfolio formation, assessment and traditional portfolio theory, (3) several financial engineering topics such as the application of stochastic models to stock and derivatives pricing and financial risk management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): IEE 300 and 380 with C or better
IEE	421	Urban Operations Research	Probabilistic modeling and analysis of transportation systems (car, bus, train) and emergency service systems (fire, police, ambulance) using functions of random variables, geometric probability, queueing theory, location theory, network analysis and graph applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s) with C or better: IEE 376, 380, 385. Credit is allowed for only IEE 421 or IEE 498 (Urban Operations Research) or IEE 521 or IEE 598 (Urban Operations Research)
IEE	426	Operations Research in Healthcare	Quantitative methods for modeling and analysis of healthcare systems to address operational and tactical decision-making problems. Topics include forecasting, scheduling, decision making, facility location and layout, staffing, quality control and supply chain management in hospitals and healthcare delivery facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: IEE 376 and 380 with C or better; Credit is allowed for only IEE 426, 498 (OR in Hospitals), 526 or 598 (OR in Hospitals)
IEE	431	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): Fulton Engineering undergraduate, Digital Culture (Media Processing) BA, or Engineering Management minor or concentration; junior or senior standing. Credit is allowed for only IEE 431 or IEE 541

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IEE	437	Human Factors Engineering	Studies the human psychological and physiological factors that underlie the design of equipment and the interaction between people and machines.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student OR other majors with minimum 3.0 GPA; Credit is allowed for only IEE 437 or 547
IEE	454	Risk Management	Methods and tools for identifying, assessing, mitigating and controlling risk in business and engineering design activities. Decision tools include cost-benefit analysis, decision trees, value of information, Bayesian statistical decision making, fault trees, and failure modes and effects analysis (FMEA).	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: ECN 221 or IEE 380 with C or better; Engineering major OR Engineering Management Minor/Concentration; Junior or Senior student
IEE	456	Introduction to Systems Engineering	Foundation course addressing the concepts needed for successful system planning, design and build process. Topics include successfully bringing large-scale systems to completion on schedule and on budget, modeling and cost estimating techniques, risk and variability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Junior or senior Engineering student OR Engineering Management Minor/Concentration; Credit is allowed for only IEE 456 or 556
IEE	458	Project Management	Life-cycle processes for selecting and managing large-scale projects to ensure successful completion. Topics include project phases, defining milestones, work breakdown structure, group decision making and teamwork, organizational structure, human resource management, technological and economic feasibility, configuration management, budget control, and resource allocation and scheduling. Use of modern tools for planning and controlling project performance.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): ECN 221 or IEE 380 with C or better; junior, senior, or postbaccalaureate in Engineering OR Engineering Management minor or concentration
IEE	461	Production Control	Techniques for the planning, control, and evaluation of production systems. Forecasting, inventory control, scheduling, enterprise requirements planning, supply chain design, and coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student; IEE 376 with C or better; IEE 380 with C or better
IEE	470	Stochastic Operations Research	Modeling and analysis with emphasis on stochastic operations research. Models for stochastic processes, including Markov chains, queueing and decision analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Industrial Engineering, Engineering Management or Computer Science undergraduate; IEE 376 and IEE 385 with C or better; or Industrial Engineering graduate; Credit is allowed for only IEE 470 or 598 (Stochastic Operations Research)
IEE	474	Quality Control	Basic statistical process control techniques, capability analysis, design of experiments, and acceptance sampling plans.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: IEE 380 with C or better
IEE	475	Simulating Stochastic Systems	Analyzes stochastic systems using basic queuing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	CS	Prerequisite(s): Fulton Engineering undergraduate student or other majors with minimum 3.00 GPA; CSE 205 and IEE 380 with C or better; Credit is allowed for only IEE 475 or IEE 545
IEE	477	System Dynamics and Thinking	Methods for the modeling and analysis of system dynamics; metrics to measure business performance; continuous simulation tools for evaluation of system performance over time.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: CSE 205 with C or better; IEE 380 with C or better; Credit is allowed for only IEE 477 or 498 (System Dynamics Engineering)
IEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	485	Systems Design Capstone I	Senior capstone project provides students with the skills required to effectively complete a capstone project in design and development.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): BSE Engineering Management major with pre- or corequisite(s): IEE 475 or 477; or BSE Industrial Engineering major with IEE 376 with C or better and pre- or corequisite(s): IEE 475 or 477

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IEE	486	Systems Design Capstone II	Project in design and development. Individual or team capstone project in creative design and synthesis.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): Engineering Management BSE or Industrial Engineering BSE major; senior standing or postbaccalaureate; IEE 485 with C or better
IEE	490	Project in Design and Development	Individual or team capstone project in creative design and synthesis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): BSE Industrial Engineering major; IEE 376 with C or better and pre- or corequisite(s): IEE 475 OR BSE Engineering Management major; pre- or corequisite(s): IEE 475
IEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6		Prerequisite(s): Barrett Honors student
IEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6	L	Prerequisite(s): Barrett Honors student
IEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-7		
IEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		
IEE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	505	Information Systems Engr	Studies information systems application engineering. Topics include information technology, data modeling, data organization, process mapping, application and database engineering, and user interface development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	506	Web-Enabled Decision Support Systems	Development and analysis of Web-enabled applications for decision support. Topics include: (1) Web application development using ASP.NET; (2) design for computing scalability, interface usability and cyber security; and (3) use of application development skills and design concepts to develop a decision support system consisting of database, analytical data processing, expert knowledge and reasoning, and user-friendly interface for enabling transitions from data to information, knowledge and decisions. Knowledge of database development is necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering graduate student; Credit is allowed for only IEE 506 or 598 (Design of Computational Systems)
IEE	511	Analysis of Decision Processes	Methods of making decisions in complex environments and statistical decision theory; effects of risk, uncertainty, and strategy on engineering and managerial decisions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only IEE 498 (Analysis of Decision Processes) or 511
IEE	512	Introduction to Financial Engineering	Introductory course on financial engineering covering traditional portfolio theory, forwards, futures, financial stochastic models, option pricing, and risk management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	520	Statistical Learning for Data Mining	Surveys data analysis methods for massive data sets and provides experience in analysis with computer software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 515 or IEE 572 or IEE 578; Credit is allowed for only BMI 555 or IEE 520
IEE	521	Urban Operations Research	Probabilistic modeling and analysis of transportation systems (car, bus, train) and emergency service systems (fire, police, ambulance) using functions of random variables, geometric probability, queueing theory, location theory, network analysis and graph applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only IEE 421, 498 (Urban Operations Research), 521 or 598 (Urban Operations Research)

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IEE	526	Operations Research in Healthcare	Quantitative methods for modeling and analysis of healthcare systems to address operational and tactical decision-making problems. Topics include forecasting, scheduling, decision making, facility location and layout, staffing, quality control and supply chain management in hospitals and healthcare delivery facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Graduate Engineering student; Credit is allowed for only IEE 426, 498 (OR in Hospitals), 526 or 598 (OR in Hospitals)
IEE	530	Enterprise Modeling	Focuses on social, economic, and technical models of the enterprise with emphasis on the management of technological resources. Includes organization, econometric, financial, and large-scale mathematical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	533	Scheduling	Provides the basic theory of scheduling and introduction to the applications domain.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	534	Supply Chain Modeling and Analysis	Techniques for modeling and analysis of supply chains. Inventory management, transportation/location models, value of information, channel alignment, risk pooling, contracts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): IEE 574 or 620
IEE	535	Intro Intrnl Logistics Systems	Exploratory project-oriented course that addresses domestic and international logistics practices from a high-level descriptive perspective and an analytical model-based perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	541	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student; Credit is allowed for only IEE 431 or 541
IEE	545	Simulating Stochastic Systems	Analyzes stochastic systems using basic queuing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only IEE 475 or 545
IEE	547	Human Factors Engineering	Study of people at work; designing for human performance effectiveness and productivity. Considerations of human physiological and psychological factors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only IEE 437 or 547
IEE	552	Strategic Technological Planning	Studies concepts of strategy, strategy formulation process, and strategic planning methodologies with emphasis on engineering design and manufacturing strategy, complemented with case studies. Presents and uses an analytical executive planning decision support system throughout course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	556	Introduction to Systems Engineering	Foundation course addressing the concepts needed for successful system planning, design and build process. Topics include successfully bringing large-scale systems to completion on schedule and on budget, modeling and cost estimating techniques, risk and variability. Graduate students are expected to have a background in and understanding of large-scale systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Engineering graduate student; Credit is allowed for only IEE 456 or IEE 556 or IEE 598 (Intro to Systems Engineering)
IEE	561	Production Systems	Understanding how factories operate, how performance is measured, and how operational changes impact performance metrics. Operational philosophies, increasing production efficiency through quantitative methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	570	Advanced Quality Control	Process monitoring with control charts (Shewhart, cusum, EWMA), feedback adjustment and engineering process control, process capability, autocorrelation, selected topics from current literature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	571	Quality Management	Total quality concepts, quality strategies, quality and competitive position, quality costs, vendor relations, the quality manual, and quality in the services.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	572	Design Engineering Experiments	Analysis of variance and experimental design. Topics include strategy of experimentation, factorials, blocking and confounding, fractional factorials, response surfaces, nested and split-plot designs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	573	Reliability Engineering	Nature of reliability, time to failure densities, series/parallel/standby systems, complex system reliability, Bayesian reliability, and sequential reliability tests.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	574	Appl Deterministic Oper Rsch	Develops advanced techniques in operations research for the solution of complex industrial systems problems. Goal programming, integer programming, heuristic methods, dynamic and nonlinear programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Industrial Engineering MS, MSE or PhD student
IEE	575	Appl Stochastic Oper Rsch Mdis	Formulate and solve industrial systems problems with stochastic components using analytical techniques. Convolution, continuous-time Markov chains, queues with batching, priorities, balking, open/closed queuing networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	578	Regression Analysis	Regression model building oriented toward engineers and physical scientists. Topics include linear regression, diagnostics, biased and robust fitting, nonlinear regression.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Engineering Graduate student
IEE	579	Time Series Analy/forecasting	Forecasting time series by regression-based, exponential smoothing, and ARIMA model techniques; uses digital computer programs to augment the theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student

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IEE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	581	Six Sigma Methodology	The six sigma process improvement strategy of define, measure, analyze, improve, and control (DMAIC). Integrates and deploys statistical methods and other six sigma problem solving via the DMAIC framework. Requires background in undergraduate engineering statistics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Engineering Graduate student
IEE	582	Response Surfaces/Process Opt	Classical response surface analysis and designs including steepest ascent, canonical analysis, and multiple responses. Other topics include process robustness studies, robust design, and mixture experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering MS, MSE or PHD; IEE 572 with C or better
IEE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	585	Six Sigma Capstone.	The DMAIC (define, measure, analyze, improve, control) improvement strategy is applied in the formulation and execution of a six sigma project.	N	PRA	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Engineering Graduate student
IEE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		Pre-requisite: Engineering Graduate student
IEE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	605	Foundations of Information Systems Engineering	Introduces science and engineering technologies of information systems design and analysis with focus on industrial engineering applications. Topics include: design and analysis of computational algorithms; and data mining techniques for classification, clustering, feature extraction and data reduction problems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Industrial Engineering Graduate student; Credit is allowed for only IEE 598 (Found Info Syst Engr) or 605
IEE	620	Optimization I	First course of the PhD-level deterministic course series. Covers foundations of optimization and linear programming. Prior working knowledge of linear algebra and knowledge of how to formulate linear programs is required for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	622	Optimization II	Introduces computational methods to solve optimization problems with integer variables and the mathematical theory behind them. Follows formulation of integer programming models with a survey of relaxation, decomposition and cutting-plane methods. Discusses various practical problems such as facility location, transportation and distribution problems. Assigns computational examples using the software IBM ILOG OPL.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: IEE 620; Credit is allowed for only IEE 622 or 598 (Optimization II)

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IEE	640	Probability & Stochastic Processes	Presents fundamentals of probability and stochastic processes from a non-measure theoretic point-of-view to develop (a) basic model building and probabilistic reasoning skills, and (b) an understanding of important qualitative characteristics of some basic stochastic processes used to model dynamical systems with noise. Topics include a review of probability theory with particular attention to conditional probability and expectation; Markov chains; Renewal theory and the Poisson process. Considers applications in reliability, inventory theory, queueing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: IEE 470, Graduate Industrial Engineering major; Credit is allowed for only IEE 598 (Prob & Stoch Model) or 640
IEE	670	Mathematical Statistics	Introduction to the field of mathematical statistics at a level intended for first-year PhD students in Industrial Engineering. Builds a solid background in the principles, concepts, and techniques of mathematical statistics. Prepares students for advanced study and research in statistics, and is useful for understanding statistical data analysis techniques and developing statistical thinking. Completion of at least one course in probability and statistics is required prior to taking this class.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	672	Adv Topics-Experimental Design	Multilevel and mixed-level factorials and fractions, design optimality, incomplete blocks, unbalanced designs, random effects and variance components, analysis of covariance.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering MS, MSE or PHD student; IEE 572 with C or better
IEE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	100	Introduction to Information Technology	Project-based introduction to the key concepts, tools and devices underlying today's technologies. Introduces computer hardware, software and system architecture, the Internet, the World Wide Web and information technology ethics. Forms a foundation for future courses offered in the Information Technology major and the information technology discipline.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		
IFT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-3		
IFT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-4		
IFT	200	Information Modeling, Storage and Retrieval	Notations, tools and languages for modeling, representing and manipulating information; database creation, access and management in the context of a controlling application. Analyzes information storage needs and design of an appropriate representation. Project-based access to information through tools and languages such as structured query language.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): SER 102 or CST 200 or SER 200
IFT	201	Computer and Network Systems: Organization and Administration	Fundamentals of computer networks, computer organization and computer operating systems. Components, tools and languages for configuring and administering computer systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): CST 100 or SER 101; IFT 100; Corequisite(s): CST 200 or SER 102 or SER 200

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IFT	250	Introduction to UNIX Utilities	Technical overview (introduction) of the UNIX/Linux operating system. Emphasizes using the command line UNIX or Linux system. Covers fundamental UNIX commands and utilities including the use of a text editor and a mail handler, configuring a shell, the UNIX file system organization, pipes and filters, shell environment and simple shell scripts. Additional topics include UNIX GUIs and Windows Active Directory. Assumes no previous experience with the UNIX operating system.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 100; SER 101 or CSE 110 or CST 100 or SER 100
IFT	259	Introduction to Internet Networking	Introduces the OSI model and the protocol layers associated with information communication technology. Describes the role and purpose of each layer. Provides an overview of how the Internet is structured and used to support networking in a modern information technology structure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 100; IFT 201
IFT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-5		
IFT	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	1-6		Prerequisite(s): Barrett Honors student
IFT	301	Introduction to Interactive Media	Human-computer interaction design for rich media systems. Introduces design processes, tools and principles for applications that are highly interactive with their users and which include multiple input/output modalities and multimedia. Project-driven course.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Pre-requisites: IFT 100 and 200
IFT	302	Foundations of Information and Computer System Security	Introduces information technology (IT) security aspects and how technology can be vulnerable to unwanted intrusions. Project-based introduction to privacy, authentication and malware incursions for information technology. Principles of information security and assurance and their implications on access. Tools and methods to identify intrusion, best security practices. Includes securing communications and applications, including symmetric and asymmetric encryption and Hash functions.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 201; IFT 259 (or IFT 359); MAT 243; Pre- or corequisite(s): IFT 383
IFT	333	Introduction to Big Data	Architecture of Hadoop clusters at both the hardware and system software levels. Applies Hadoop and related Big Data technologies such as MapReduce, Pig, Hive and Impala in developing analytics and solving the types of problems faced by enterprises today. Expects programming experience in Java or Python and a general understanding of databases, networking and distributed systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 200; IFT 259
IFT	358	Network Information Communication Technology	Focuses on the physical layer and data-link layer of the OSI model. Concentrates on data communications, including signals, noise, modulation, demodulation and transmission media. Incorporates digital transmission, including pulse-coded modulation. Includes data-link protocols, network topologies and local-area networks involving access control, addressing at the network and subnetwork layer. Incorporates network layer protocols (IPv4 and IPv6), as well as Internet Control Messaging Protocols and configuration and domain name protocols.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 259
IFT	372	Wireless Networking	Systems-level coverage of advanced information communication technology (ICT) topics including both digital and analog wireless communications systems used in today's ICT networks. Transmission systems covered include microwave, satellite, cellular radio, Bluetooth and wireless fidelity communications systems. Topics include: PCM, TDM, antennas, transmission lines, microwave radio, satellite radio, Bluetooth, cellular and wireless fidelity systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 201 or IFT 358; Credit is allowed for only EST 372 or IFT 372
IFT	383	Shell and Script Programming with UNIX	UNIX operating system programming of shells, environment and 4th-generation languages and tools, such as sed, awk, perl, grep, make.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): CST 100 or IFT 250 or SER 101
IFT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-4		
IFT	401	Information Technology Capstone Project I	First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier coursework.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): CST 250 or IFT 359 or IFT 372 or IFT 394 (Wireless Networking); senior standing
IFT	402	Information Technology Capstone Project II	Second half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier coursework.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Pre-requisite: IFT 401
IFT	433	Intermediate Database Management Systems	Fundamental methods in managing data-oriented systems. Relational, object and hierarchical data architectures. Query languages including SQL. Semantics of transaction processing. Database system architectures including cloud-based, client-server and embedded databases. Security and privacy issues associated with SQL-structured databases. Modern trends in data management including unstructured data type management, data mining and business analytics. Describes NoSQL data management platforms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): CST 200 or SER 102 or SER 200; IFT 200; MAT 243; Credit is allowed for only IFT 433 or SER 322

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IFT	443	Analyzing Big Data	Data mining and statistical techniques that arise in data analytic applications. Students learn and practice working with big data using data analytic techniques presented in earlier coursework. Discusses one or more applications associated with data analytic techniques. Practices using advanced techniques that build on the knowledge provided in earlier coursework and knowledge gained from a statistical methods course. Familiarity with databases and statistics are essential.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 333; STP 226; Pre- or corequisite(s): IFT 433 (or CST 433); IFT 458
IFT	458	Middleware Programming and Database Security	Covers the main concepts of middleware technologies. Includes the various methodologies used to integrate applications, databases and Web services. Students develop multilevel applications using programming/scripting languages (such as PHP, Java, Python, Perl) which access data stored in a database. Middleware programs typically control database access and protect database SQL programs from security breaches. Students access the data from applications and other Web technologies such as XML, as well as protecting the data from unauthorized access.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 301; IFT 383; Pre- or corequisite(s): ACO 320 or IFT 433; Credit is allowed for only ACO 321 or IFT 458
IFT	472	Managing the Cloud	Focuses on the cloud environment. Students learn the architecture characteristics of Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS), including how these architectures are created and maintained in a cloud environment. Also addresses networking associated with cloud interaction, SQL programming and cloud security issues.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 200; IFT 201; IFT 302; IFT 383; Pre- or corequisite(s): IFT 433
IFT	475	Security Analysis	Processes used in cyber security analyses. Presents through exercises techniques to ensure confidentiality, integrity and availability. Includes vulnerability assessments based on faulty software design. Explores malicious code and computer crime, including operating system (OS) root kits. Students are instructed in how to conduct analyses in support of cyber security initiatives.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 302; Pre- or corequisite(s): IFT 481
IFT	481	Information System Security	Implementation, development, and analysis of computer and network security policies, legal ramifications and development and analysis of risk management measures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 259 (or IFT 359); IFT 302 (or IFT 202)
IFT	482	Network Forensics	Use and creation of advanced network forensics tools: intrusion detection and prevention, honeynets, traffic routing and management, and data reduction and graphing tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 383; IFT 481
IFT	483	Developing Security Policy	Focuses on development of security policy, risk solutions and incident response facilities. Using the information security framework, identifies strategies and processes used in governance, risk management, asset management, human resources and physical security to create, evaluate and audit security policies.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 302; Pre- or corequisite(s): IFT 481
IFT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		
IFT	488	Systems Administration of UNIX	UNIX administration of system and user services using command line and GUI tools. System security and forensics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 201 or 250; IFT 383
IFT	489	Network Administration with TCP/IP	Configuration and installation of networks: addressing, routing, naming, and LAN and MAN services. Network security checking, monitoring, and basic forensics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 259 or IFT 358 or IFT 359; IFT 383
IFT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-6		Prerequisite(s): Barrett Honors student
IFT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Information Technology	1-6	L	Prerequisite(s): Barrett Honors student
IFT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-4		
IFT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-7	L	
IFT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-3		
IFT	510	Principles of Computer and Information Technology	Comprehensive introduction to computer and information technology (IT). Provides a detailed understanding of computer architecture, system software and important related issues in an IT context. Forms a technical foundation for understanding current technologies and how they work. Topics include principles of systems' physical architecture, operating systems and application software, storage and systems management as well as current developments in cloud computing, green IT, social networking systems, and Internet search.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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IFT	520	Principles of Telecommunication Technology	Basic communication technology concepts from an information technology perspective. Addresses signals, spectra and bandwidth; attenuation, distortion and noise; filtering, equalizing, modulation and multiplexing; information measurement, source and channel coding, channel capacity, baseband data transmission, digital modulation and spread-spectrum systems; local area networks and architecture and performance; layered network architecture, protocols, switching techniques, TCP/IP, traffic engineering and basic capacity analysis. Focuses not on detailed component design but on understanding the interrelationships of these concepts and telecommunication systems to support broad system design and management.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	530	Information Analysis, Modeling, Representation, and Communication	Teaches proven techniques for modeling information requirements and organizational data resources with a strong focus on gleaning information from data. Students learn how to discover and document database requirements, functional system requirements, and user interface requirements at a level appropriate for advanced information technology practitioner. Covers techniques including entity-relationship modeling for data analysis, functional dependency and normalization for the logical design of the database, Structured Query Language (SQL) for data management, and use cases for learning the process of requirement specification.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	540	Software Development for Information Technology	Teaches proven techniques for modeling information requirements and organizational data resources with a strong focus on gleaning information from data. Students learn how to discover and document database requirements, functional system requirements, and user interface requirements at a level appropriate for advanced information technology practitioner. Covers techniques including entity-relationship modeling for data analysis, functional dependency and normalization for the logical design of the database, Structured Query Language (SQL) for data management, and use cases for learning the process of requirement specification.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Pre-requisites: IFT 530
IFT	545	Advanced Security Analysis	Advanced inspection of concepts and exercises related to security analysis. Expands analysis techniques to include wireless protocols, interception techniques, man-in-the-middle attacks, forgeries, cloned and replay attacks, cyber warfare, data corruption, data leakage and peer-to-peer networks. Through a variety of exercises, students work with tools and technologies available on the commercial market. The teaching environment is designed to impart the skills required by a corporate security professional.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Information Technology	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IMD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IMD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
IMD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
IMD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IMD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IMD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IMD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	120	Drawing for Industrial Design	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for industrial design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Environmental Design or Industrial Design major
IND	121	Principles for Industrial Design I	Industrial design as a language and process for creative thinking and realization.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Environmental Design or Industrial Design major. Corequisite(s): IND 122
IND	122	Principles for Industrial Design II	Continued exploration of industrial design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): IND 120 with C or better; Environmental Design or Industrial Design major. Corequisite(s): IND 121
IND	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
IND	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
IND	227	Visual Methods for Problem Solving	Introduces conceptual design activity based on the mind-eye-media feedback loop. Graphic language used to represent conjecture, analysis, synthesis of objects, and their contexts.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student, IND 122 with C or better; Passed Milestone; Co-requisite: IND 260
IND	228	Imaging and Visualization	Design activities stressing graphic language abstraction practiced for presentation. Discusses structure of criticism, including description, interpretation, and evaluation.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student; IND 227 with C or better; Co-requisite: IND 261
IND	242	Materials and Design	Materials application in design. Introduces characteristics and properties of metals and organic materials, including plastics, and inorganic materials.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
IND	243	Design for Ecology and Social Equity	Explores the role of design in the ecological crisis; materials, processes, strategies and methods to design more ecologically friendly and socially equitable products.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
IND	260	Industrial Design I	Introduces the method and process of the industrial designer. Determinants necessary in small product design.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student; IND 122 with C or better; Passed Milestone; Co-requisite: IND 227
IND	261	Industrial Design II	Issues of physical form development related to product and design; form development properties of paper, fibers, wood, metal, and plastics.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student; IND 260 with C or better; Co-requisite: IND 228
IND	316	20th-Century Design I	European and American design from 1850 to 2000 with thematic emphases on worldview, technology, transportation, economics and nature.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Prerequisite(s): minimum 45 hours

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IND	317	20th-Century Design II	European and American design from 1850 to 2000 with thematic emphases on communication, education, material culture, politics and society.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Prerequisite(s): minimum 45 hours
IND	327	Presentation Graphics	Studies methods for portfolio and professional product presentation using graphic media for information transfer. Stresses aesthetic judgment, organization, and craftsmanship .	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Industrial Design student; Co-requisite: IND 360
IND	328	Graphics for Industrial Design	Investigates and applies applications and planning to the development of an identity for a product line structured as a system.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student; IND 327 with C or better; Co-requisite: IND 361
IND	344	Human Factors in Design	Man-machine environment systems; human characteristics and behavior applied to design of products, systems, and their operating environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
IND	354	Principles of Product Design	Influences of physical and mechanical concepts in product design; mechanisms, kinematics, and fastening systems. Concepts of analysis for product design. Influences of concepts on aesthetics.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: PHY 111 with C or better; Digital Culture: Design, Industrial Design BSD, or Pre-Industrial Design major
IND	360	Industrial Design III	Methods of visual thinking, conceptualization, and ideation related to building skill levels in professional design presentation techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Industrial Design student; IND 261 with C or better; Co-requisite: IND 327
IND	361	Industrial Design IV	Emphasizes developing ideas into a complete functional product, including survey and application of aesthetics, human factors, materials, and manufacturing.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Industrial Design student; IND 360 with C or better; Co-requisite: IND 328
IND	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
IND	460	Design Project I	Complete analysis of the product unit as an element of mass production, featuring marketing, technology, human factors, and visual design. Emphasizes professional standards.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 484; IND 470
IND	461	Design Project II	Product design, with emphasis in systems interaction. Culmination of design process and technique. Encourages individual project direction.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Industrial Design BSD student; IND 460 with C or better
IND	464	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 464 or MGT 464 or SOS 474
IND	465	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 465 or IND 465 or MGT 465 or SOS 475
IND	470	Professional Practice for Industrial Design	Business procedures, management techniques, accounting systems, ethics, and legal responsibilities of the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	L	Pre-requisite: Industrial Design student; Co-requisite: IND 460 or Design Studies minor student
IND	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 460
IND	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
IND	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
IND	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
IND	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IND	521	Advanced Industrial Design Studio I	Design language, motivation and inspiration, form exploration sketching, rough form study mock-ups, form development, and presentation. Product redesign. Students create new design language proposals for an existing product and redesign the product based on one of these languages. Provides instruction and opportunities to understand product design language and how to redesign existing products with different design guidelines. Results include evidence of concept development (sketches, drawings, models); functional development; human factors and ergonomic considerations; materials and process specifications; sustainability recommendations; and appearance visual materials and models (virtual and physical). Project-based course includes readings, presentations, critical analysis, discussion and the public exhibition and presentation of design work.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): Master of Industrial Design major. Credit is allowed for only IND 521 or IND 590 (Advanced Industrial Design Studio I)
IND	522	Advanced Industrial Design Studio II	New product development with emphasis on design research, problem solving and functional/aesthetic development. Preliminary research about human behavior and health promotion. Based on the research findings, students conduct design research in teams and work on individual design projects. Student project results include evidence of concept development (sketches, drawings, models); functional development; human factors and ergonomic considerations; materials and process specifications; sustainability recommendations; and final appearance visual materials and models (virtual and physical). Project-based course includes readings, presentations, critical analysis, discussion, and the public exhibition and presentation of design work.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): IND 521. Corequisite(s): DSC 501. Credit is allowed for only IND 522 or IND 590 (Advanced Industrial Design Studio II)
IND	544	Human Factors Systems and Documentation	Advanced topics associated with theory and methods of human factors in design. Individual projects stressing problem organization, evaluation, and documentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Herberger Institute of Design and the Arts Graduate student
IND	548	Design for Sustainable Development	Research on designing systems that are economically viable, ecologically friendly, and socially equitable.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	621	Advanced Industrial Design Studio III	Structured around the Design School traveling-studio model, this studio challenges students to identify new design concepts that improve society and the natural environment while also delighting users and creating value for business. For approximately one week, students travel to an off-campus location to examine a local condition there for which new design solutions are needed. Students return to ASU and continue working on the project for the semester. Project-based course includes readings, presentations, critical analysis, discussion and the public exhibition and presentation of design work.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): IND 522

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IND	622	Advanced Industrial Design Studio IV	Challenges students to create new design concepts that improve society and the natural environment while also delighting users and creating value for business. Requires some independent direction by the student; however, instructor assigns deadlines and expectations for deliverables, and requires cooperation and collaboration among students. Project-based course includes readings, presentations, critical analysis, discussion and the public exhibition and presentation of design work.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): IND 621
IND	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	111	Interior Design Issues and Theories	Interiors issues, theories, and philosophies. Emphasizes unique social and cultural factors that shape 20th-century design concepts.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	
INT	120	Design Fundamentals I	Development of visual literacy. Introduces drawing and graphic representation as methods of seeing and problem solving.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Architectural Studies or Environmental Design or Landscape Architecture major; Credit is allowed for only ALA 121 or INT 120
INT	121	Introduction to Computer Modeling for Interior Design	Computers in interior design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	The Design School	3	CS	Credit is allowed for only INT 121 or 320
INT	123	Introduction to Computer-Aided Design and Building Information Modeling	Introduces AutoCAD computer-aided design and Revit building information modeling principles and strategies for designers of the built environment.	N	LAB	N	OPT	Herberger Inst Design & Arts	The Design School	3		
INT	131	Design and Human Behavior	Applies conceptual design to issues of programming and space planning, user needs, and behavior.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	SB	
INT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
INT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
INT	221	Principles of Design	Applied visual vocabulary: studio experience exploring applications, process and conceptual development of the principles of order and composition.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): INT 120 with C or better; Environmental Design or Interior Design major. Corequisite(s): INT 222
INT	222	Principles of Design Lecture	Applies the visual vocabulary: explores the principles of organization through examination of historical precedence and contemporary interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): Environmental Design or Interior Design major. Corequisite(s): INT 221
INT	223	Drafting for Interior Design	Orthographic, paraline, axonometric, and perspective projection; shades and shadows; and basic descriptive geometry for interior designers.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 261
INT	253	Interior Materials, Finishes, and Specifications	Survey, evaluation, and specification of materials, finishes, and performance criteria for interiors.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design student; INT 261 with C or better
INT	261	Interior Design Studio I: Residential	Studio problems in interior design related to behavioral response in personal and small-group spaces.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 223
INT	262	Interior Design Studio II: Hospitality	Focuses on environments that entertain or host the public, including but not limited to nightclubs, restaurants, theaters, hotels, city and country clubs, golf facilities, cruise ships and conference facilities.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design student; INT 261 with C or better
INT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
INT	310	History of Interior Design I	Evolution of interior design as an expression of cultural influences from the ancient periods to 1835. Analysis of interior architecture, planning and lighting of interior spaces, and furniture.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Pre-requisites: ARS 102 with C or better

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INT	311	History of Interior Design II	Evolution of interior design as an expression of cultural influences 1835 to present. Analysis of interior architecture, planning and lighting of interior spaces, and furniture.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Pre-requisites: INT 310 with C or better
INT	341	Interior Codes: Public Welfare and Safety	Codes and regulations as performance criteria for interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisite: Interior Design student; Co-Requisites: INT 253; INT 262
INT	351	Ambient Environment	Surveys environmental control systems, acoustics, and lighting issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design major; PHY 101 with C or better. Co-requisites: INT 352, INT 362 and INT 381; OR Digital Culture: Design major
INT	352	Construction Methods in Interior Design	Design theory related to analysis, materials, and building techniques of horizontal and vertical construction in interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Interior Design student; Co-requisites: INT 362; INT 381
INT	354	Construction Documents	Elements of construction drawing sets, application of codes and specifications, and contract administration.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Interior Design student; Co-requisite: INT 363
INT	362	Interior Design Studio III: Hospitality and Retail	Investigates interior design issues in hospitality and retail environments.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Interior Design student; Co-requisites: INT 351, INT 352 and INT 381
INT	363	Interior Design Studio IV	Explores the poetics of materials and their assemblage in the design of public and private spaces.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Interior Design student; INT 362 with C or better; Co-requisite: INT 354
INT	381	Preinternship Seminar	Preparation of internship materials that produce and enhance a successful internship experience.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	1		Prerequisite: INT 262
INT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
INT	412	History of Decorative Arts in Interiors	Design of decorative arts as an expression of cultural influences and as an extension of interior spaces.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	Prerequisite(s): INT 311 with C or better. Credit is allowed for only INT 412 or INT 515
INT	413	History of Textiles in Interior Design	Cultural and historical expression of textiles as related to interiors.	N	PRA	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): INT 412 with C or better. Credit is allowed for only INT 413 or INT 516
INT	415	Latin American Design	The impact of Latin American culture and civilization on design throughout the Americas.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Minimum Junior standing
INT	446	Furniture Design and Production	Design, construction, cost estimating, and installation in interior furniture and millwork.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Graphic Design BSD, Interior Architecture BSD or Industrial Design BSD student
INT	464	Interior Design Studio V: Work Environments	Studio problems in interior design-related issues in work environments.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Interior Design student; INT 363 with C or better; Co-requisites: INT 484; INT 471
INT	465	Interior Design Studio VI: Institutional Design	Advanced interior design problem solving related to institutional facilities.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Interior Design student; INT 464 with C or better; Co-requisite: INT 472
INT	471	Facilities Management	Facility management process in large-scale organizations. Planning, long-range forecasting, and productivity. Project management methodologies using micro-based software programs.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
INT	472	Professional Practice for Interior Design	Business procedures, project control, fee structures, and professional product liabilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Interior Design student; Co-requisite: INT 465
INT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Interior Architecture BSD student; DSC 483 or INT 381 with Y grade
INT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
INT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
INT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
INT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
INT	515	Decorative Arts in Historic Interiors: A Thematic Overview	A thematic overview of decorative arts used in historic interiors that explores their aesthetic, functional, and symbolic contribution.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Herberger Institute of Design and the Arts graduate major. Credit is allowed for only INT 412 or INT 515
INT	516	Textiles in Historic Interiors: Appearance, Function, Symbolism	Overview of textiles used in historic interiors that explores their aesthetic, functional, and symbolic contribution.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Herberger Institute of Design and the Arts graduate major. Credit is allowed for only INT 413 or INT 516
INT	521	Advanced Interior Architecture Studio I	Studio problems in interior architecture related to the integration of building structure and systems with the behavioral response to personal spaces.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): Master of Interior Architecture major. Credit is allowed for only INT 521 or INT 590 (Advanced Interior Architecture Studio I)
INT	522	Advanced Interior Architecture Studio II	Investigates interior architecture issues, including construction, technology, programmatic and environmental determinants.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): INT 521; Corequisite(s): INT 527; Credit is allowed for only INT 522 or INT 590 (Advanced Interior Architecture Studio II)
INT	527	Contemporary Design Theory	Aesthetic, political, economic, and social theories that have shaped modern design; theory as the basis for design philosophies.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Herberger Institute of Design and the Arts Graduate student
INT	529	Design Criticism	Applies critical methods to design as material culture and human expression; evaluates achievement versus intention.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Herberger Institute of Design and the Arts Graduate student
INT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	621	Advanced Interior Architecture Studio III	Structured around the Design School traveling-studio model, based on design problems emphasizing the global context of interior architecture as it influences interior space and architectural form.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): INT 522
INT	622	Advanced Interior Architecture Studio IV	Individual, student-initiated capstone project reflecting a culminating synthesis of interior architecture ideas.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): INT 621

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
INT	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
INT	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ITA	101	Elementary Italian I	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
ITA	102	Elementary Italian II	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
ITA	110	Intensive Italian I	Proficiency-oriented language course designed to achieve the maximum level of proficiency in an intensive and dynamic communicative environment. Class time is spent on a variety of fast-paced communicative activities focused especially on the development of speaking skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Credit is allowed for only ITA 101 or ITA 102 or ITA 110 or ITA 111
ITA	111	Accelerated Elementary Italian	Accelerated elementary Italian for experienced language learners. Emphasizes reading, writing, listening, speaking, and cultural proficiency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
ITA	112	Italian for Romance Language Speakers	15-week hybrid course: 3 hours class meetings, 1 hour student self-study. Designed for students with an active competence in Spanish or another Romance language such as French, Portuguese and/or Romanian, who wish to learn the essential elements of the Italian grammar at an accelerated pace, as well as acquire listening, speaking, reading and writing skills. Based upon the theory of "intercomprehension" which implies the speaker's ability to understand the speech of another speaker who communicates in a dialect of the same language or a related language. Due to the linguistic similarities between Spanish, other Romance languages and Italian, students master the four language skills of listening, speaking, reading and writing of in Italian at a faster pace.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Credit is allowed for only ITA 112 or ITA 194 (Italian for Spanish Speakers) or ITA 194 (Italian for Romance Language Speakers)
ITA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ITA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	201	Intermediate Italian I	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on both spoken and written genres of Italian culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
ITA	202	Intermediate Italian II	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on values of Italian culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
ITA	210	Intensive Italian II	Proficiency-oriented language course designed to achieve the maximum level of proficiency in an intensive and dynamic communicative environment. Class time is spent on a variety of fast-paced communicative activities focused especially on the development of speaking skills. Class meets four times a week.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Prerequisite(s): ITA 102, 110, or 111 with C or better; Credit is allowed for only ITA 201 or ITA 202 or ITA 210
ITA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	311	Italian Conversation	Engages students in different oral/aural activities to reach an advanced proficiency level.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: ITA 202 with C or better
ITA	312	Italian Composition	Engages students in different written activities to reach an advanced proficiency level.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L & G	Pre-requisites: ITA 202 with C or better
ITA	315	Italian Civilization	Students read and analyze texts and artifacts that represent important cultural and political movements of Italian civilization.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisites: ITA 202 with C or better
ITA	319	Italian for Professions	Read and analyze texts and artifacts that represent important cultural and political movements of Italian civilization.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ITA 202 with C or better
ITA	321	Introduction to Italian Literature I	Studies the development of early Italian language, literature, and culture through reading, discussion, and writing activities in Italian.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ITA	322	Introduction to Italian Literature II	Studies the development of modern and contemporary Italian language, literature, and culture through reading, discussion, and writing activities in Italian.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: ITA 202 with C or better
ITA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	413	Advanced Italian	Development and assessment of advanced spoken and written Italian proficiency through activities using all four skills.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: ITA 311 or 312 with C or better
ITA	420	Italian Cinema	Major trends of Italian cinema from the post-war period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		

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ITA	430	Italian Literature of the Middle Ages	Emphasizes Stil Novo, Dante's minor works, Petrarch, and Boccaccio.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: ITA 321 or 322 with C or better
ITA	441	Dante: Divina Commedia	Critical reading of the three Cantiche (Inferno, Purgatorio, and Paradiso).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: ITA 321 or 322 with C or better
ITA	443	Italian Literature of the Renaissance	Emphasizes Lorenzo de'Medici, Poliziano Castiglione, Machiavelli, Ariosto, and Tasso.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H	Pre-requisites: ITA 321 or 322 with C or better
ITA	449	20th-Century Italian Literature	Major works, figures, and movements of contemporary Italian literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisites: ITA 321 or 322 with C or better
ITA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ITA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
ITA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
ITA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ITA	550	Italian for Reading Knowledge	Teaches non-speakers of foreign language, or those with only basic notions of the language, how to read in a foreign language at an advanced level. Consists of a concise overview of grammar as well as reading comprehension practice for students who plan to take the Graduate Foreign Language Exam or others who would merely like to learn to read in a foreign language. Focuses only on reading and not on listening, speaking or writing as in a traditional language course.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ITA 494 (Italian for Reading Knowledge) or ITA 550
ITA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ITA	594	Conf And Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ITA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
JAC	101	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCDC will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCDC tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0		
JAC	101	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCDC will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCDC tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0		
JAC	101	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCDC will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCDC tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0		

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JAC	101	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCDC will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCDC tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0		
JHR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
JHR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
JHR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): minimum 45 hours
JHR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): minimum 45 hours
JHR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Prerequisite(s): Barrett Honors student
JHR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Prerequisite(s): Barrett Honors student
JHR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): minimum 45 hours
JHR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-3		Prerequisite(s): minimum 45 hours
JHR	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Social Justice & Human Rights MA student
JHR	501	Proseminar in Social Justice and Human Rights	Classical and contemporary theories of social justice and human rights in the context of current local, national, and international issues. Special reference made to the roles of both governmental and nongovernmental organizations in addressing social justice and human rights issues.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Social Justice & Human Rights MA student
JHR	506	Grant Writing for Social Justice and Human Rights	Seminar in grant writing and fund raising for social justice and human rights. Provide an introduction to the grassroots grant writing and fund raising process, with a particular focus on justice-oriented nonprofit and international nongovernmental organizations.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	510	Problem-Based Seminar in Social Justice and Human Rights	Interdisciplinary seminar examines current problems in social justice and human rights from several different theoretical and analytical viewpoints. May be repeated once for credit.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Social Justice & Human Rights MA student
JHR	511	Community-Embedded Seminar in Social Justice and Human Rights	Interdisciplinary seminar requiring students to be placed in community organizations dealing with the course issue during the semester. Emphasizes developing effective strategies for partnerships with relevant community organizations and evaluating institutional settings, policies, and procedures from the perspective of social justice and human rights.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Social Justice & Human Rights MA student
JHR	525	Action Research in Social Justice and Human Rights	Advanced practicum in engaged, community-embedded research and interpretive analysis. Gives students experience in the practice of engaged fieldwork as well as the writing it generates.	N	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Social Justice & Human Rights MA student
JHR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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JHR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JMC	101	Grammar for Journalists	Grammar course specifically designed to help journalism majors master the essentials of grammar. All majors must achieve an 80 percent in the course, indicating a mastery of grammar, before they can move on to any other journalism course.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major
JMC	105	Freshman Seminar	Exploring the impact of technology on the profession of journalism during the last 20 years.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Credit is allowed for only JMC 105 or 194 (Freshman Seminar)
JMC	110	Principles and History of Journalism	Fundamental principles of journalism and the evolution of those principles through the history of the U.S. news media. By understanding the history of journalism, students learn about the most critical values of the profession. This is the first of four "values" courses Cronkite students take during the four-year curriculum.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB	Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; Credit is allowed for only JMC 110 or MCO 120
JMC	120	Studio Production	Introduces the vocabulary of production. Develops familiarity with the studio equipment, its care and operation, and basic production procedures. Covers the ability to function as a member of a production team; sound attitudes toward assignments and constructive criticism; and an appreciation of production as a tool of the communication process. Discusses career opportunities in the diverse marketplace.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Pre-requisite: Journalism and Mass Communication major; Credit is allowed for only JMC 120 or 194 (Studio Production)
JMC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major
JMC	201	News Reporting and Writing	Introductory news writing course required for all Cronkite majors. Students learn the basic reporting and writing skills needed for further study in print, broadcasting, online or public relations. Students practice reporting and writing news stories with an emphasis on accuracy, newsworthiness, deadlines, objectivity and fairness.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	L	Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; ENG 101, 105, or 107 with C or better; JMC 101; JMC 110 or MCO 120 with C or better
JMC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major

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JMC	301	Intermediate Reporting and Writing	Required of all students specializing in print, online and public relations; trains students in news reporting and writing under deadline. Students produce professional-level stories that are clear, well reported and accurate for publication. Students hone their reporting techniques and learn how to cover a beat and write news, feature and enterprise stories. They gain a deeper and more sophisticated understanding of newsworthiness, journalism ethics and law and news diversity.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	L	Prerequisite(s): Journalism and Mass Communication major; ENG 102 or 105 or 108 with C or better; JMC 201 with C or better; minimum 2.50 cumulative GPA
JMC	302	Sports Reporting	Students learn how to cover a sports beat in this hands-on class. They develop story ideas and sources and report and write multiple stories on deadline. Expects students to pitch stories to professional outlets with the goal of publication.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 201 with C or better; minimum 2.50 GPA
JMC	305	Multimedia Journalism	Software and digital tools commonly used by multimedia journalists, including shooting and editing photos and video, social media, Web analytics, basic HTML, blogging, and design for the Web.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; ENG 101 or 105 or 107 with C or better; JMC 101; JMC 110 or MCO 120 with C or better
JMC	310	Public Relations	Theory and practice of publicity, public relations and related techniques and procedures.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 201 with C or better; minimum 2.50 cumulative GPA
JMC	313	Introduction to Editing	Hands-on training in editing copy, photos and graphics and writing headlines and other display text for print and digital platforms. Emphasizes editing for accuracy, clarity, brevity, grammar and tone. Students practice AP style, develop news judgment and consider the ethical implications of their work.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 201 with C or better
JMC	315	Intermediate Reporting and Writing (Broadcast)	Intermediate broadcast news reporting and writing techniques with emphasis on audio.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	L	Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 cumulative GPA; ENG 102 or 105 or 108 with C or better; JMC 201 with C or better
JMC	320	Newscast Producing	Principles of broadcast news producing, delivered via a combined lecture/lab experience and assignments based on editorial judgment, technical skills and industry awareness. Students emerge with strategies for total newsroom management, confidence in producing news content and newscasts under deadline pressure and prepared for a variety of producer-related roles in professional newsroom environments.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 302 or JMC 315 with C or better; minimum 2.50 GPA
JMC	325	Breaking News Multimedia Reporting	Students cover breaking news for azcentral.com, gaining practical experience in an online, multimedia environment. Students work out of a Republic Media newsroom under the direction of professional editors. Students often have the opportunity to work with full-time professional reporters on big news stories, and their work may appear on azcentral.com, in The Arizona Republic and in 12 News reports. Students must commit to two full days a week, and they earn pay in addition to class credit.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; minimum 2.50 GPA; JMC 305 with C or better
JMC	330	Television Reporting	Writing, reporting and editing for television.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 315 and JMC 345 with C or better
JMC	331	Television Sports Reporting	Hands-on experience reporting and producing television sports packages. Skills taught include sports writing, reporting and editing for broadcast.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 302 with C or better; JMC 346 with C or better; minimum cumulative 2.50 GPA
JMC	345	Videography	Students conceive, plan, shoot, write and edit television news packages in this hands-on class. Skills taught include sequencing, framing, lighting, sound, story structure, news judgment, storytelling and editing. Students may use school-supplied cameras and editing facilities but must provide a Flash Memory card and portable external FireWire Hard Drive.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 201 with C or better; minimum 2.50 cumulative GPA
JMC	346	Sports Videography	Develops an understanding of visual sports storytelling and craft compelling sports stories using video and sound.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 201 with C or better; minimum 2.50 GPA

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JMC	351	Photojournalism I	Teaches basic skills required to compose, shoot and prepare still photos for publication. Hands-on, with students shooting a range of assignments from news events to environmental portraits, and producing a portfolio of their work. Students may share a school-supplied Canon camera or provide their own. The camera should be a digital SLR camera body with at least a kit zoom lens, and the camera body must have a manual setting and have the ability to turn off any built-in camera flash. Students need digital media cards of at least 2 GB and an external digital card reader. Students may not use point-and-shoot cameras or cameras with Flash (built-in or external) for this class.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 201 with C or better; minimum 2.50 cumulative GPA; successful completion of the English Grammar Test administered by the Cronkite School (or JMC 101 or JMC 194 - Grammar for Journalists)
JMC	352	Sports Photojournalism	Students learn photojournalism skills, including composition, shooting and preparing still photos for publication in a sports context. Hands-on, with students shooting a range of sports assignments and producing a portfolio of their work. Students may share a school-supplied Cannon camera or provide their own. The camera should be a digital SLR camera body with at least a kit zoom lens, and the camera body must have a manual setting and have the ability to turn off any built-in camera flash. Students need digital media cards of at least 2 GB and an external digital card reader. Students may not use point-and-shoot cameras or cameras with flash (built-in or external) for this class.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 201 with C or better; minimum 2.50 GPA
JMC	366	Journalism Ethics and Diversity	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 110 with C or better; minimum 2.50 cumulative GPA; minimum 25 hours
JMC	367	Ethics and Diversity in Sports Journalism	Explores ethical problems related to sports media in a seminar setting. Discussion-based course applies journalistic values and principles to contemporary ethical dilemmas in sports media and helps prepare students for work in the profession.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; minimum 2.50 GPA; JMC 101; JMC 110 with C or better
JMC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 300, JMC 315, TCM 300 or TCM 315 with C or better
JMC	402	Mass Communication Law	Provides a grounding in the laws and regulations that govern various aspects of the media with a focus on First Amendment guarantees and privileges and the extent to which those have been limited by courts and lawmakers. Topics include freedom of expression, libel, privacy and obscenity.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; ENG 102, 105, or 108 with C or better; JMC 201 with C or better; minimum 2.50 cumulative GPA; minimum 56 hours
JMC	410	Turning Points in TV History	Uses historic television footage to talk about the evolution of news coverage and the ethical decisions journalists face.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism and Mass Communication major; Minimum 2.50 GPA; JMC 101 (or successful completion of English Grammar Exam); Credit is allowed for only JMC 410 or 494 (Turning Points in TV History)
JMC	412	Opinion Writing	Provides hands-on experience writing and editing opinion and first-person narratives for ASU-affiliated Zocalo Public Square, an innovative LA-based publication syndicated by more than 100 publications nationwide including Time, The Washington Post, the San Francisco Chronicle and Gannett newspapers.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 301 with C or better; minimum 2.50 cumulative GPA
JMC	413	Advanced Editing	Builds on skills learned earlier. Students master editing skills that include AP style, grammar, headline writing and page layout as well as editing graphics and other visuals, editing Web content and uses of social media. Students hone their news judgment and learn to work quickly and accurately on deadline.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student, JMC 313 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	414	Graphic Design for Print and Web	Theory, organization, and practice of layout, typography, and design in traditional and multimedia publishing.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 305 with C or better; minimum 2.50 cumulative GPA

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JMC	415	Writing for Public Relations	Develops the professional-level writing and strategic skills expected of public relations practitioners. Students learn how to design and produce strategic plans, news releases, media kits and executive communications. They are exposed to communications approaches required for different audiences and media and learn about public relations theory as well as audience research and analysis.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student; JMC 301 with C or better; JMC 270 or JMC 310 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	417	Public Relations Campaigns	Students work with professional clients in an agency setting to research, plan and create comprehensive public relations campaign that address clients' needs. Concepts, theories and techniques relevant to public relations campaigns as well as strategic planning, campaign components and technology resources and tools. Analyzes, discusses and responds to current public relations issues and case studies.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): JMC 415 with C or better; JMC 436 or 494 (Public Relations Research) with C or better; Minimum 2.50 GPA OR graduate Mass Communications major
JMC	420	Reporting Public Affairs	Instruction and assignments in reporting the courts, schools, government, city hall, social problems, and other areas involving public issues.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student, JMC 301 with C or better; Minimum 2.5 GPA OR Graduate Mass Communication student
JMC	430	Sports Marketing and Campaigns	Creates a professional campaign engaging viewers and fans in new and meaningful ways solidifying Fox Sports Network's (FSN) position as a leader in sports programming. Students work within FSN's "Creative University" program to execute the campaign; FSN selects a campaign to implement.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301 or 302 or 315 with C or better; minimum 2.50 GPA; Credit is allowed for only JMC 430 or JMC 494 (Sports Marketing and Campaigns)
JMC	435	Latino and Transnational Issues	Provides background and understanding of some of the most pressing and controversial issues of the day that are taking place in the Southwest borderlands.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 201 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 435 or JMC 494 (Latino and Transnational Issues)
JMC	436	Public Relations Research	Students learn about the importance of research in communications, conduct research using qualitative and quantitative methods, and analyze data to understand implications within a specific communications context. They also critically evaluate published academic and professional research and are exposed to types of research and their application in the field of public relations.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; Minimum 2.50 GPA; JMC 301 and 310 with C or better; Credit is allowed for only JMC 436 or 494 (Public Relations Research)
JMC	437	Documentary Production	Students learn the fundamentals of producing documentaries, including research, script writing, production and shooting and editing video. Students produce a long-form documentary. Students become familiar with television documentary history in order to identify trends and learn about legal and ethical issues relevant to video documentary production.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 345 or JMC 346 with C or better; minimum 2.50 GPA
JMC	440	Magazine Writing	Students report and write stories suitable for magazine outlets. They develop and pitch stories, learn new reporting techniques and employ literary techniques such as description and scene setting in their writing. See class notes for additional information.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.5 GPA OR graduate Mass Communication student
JMC	445	Science and Medical Writing	Develops writing, reporting, and an understanding of key concepts in science as they relate to medical science research and practice.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	450	Issues in Coverage of Business and the Economy	Basics of business and economic reporting, one of the fastest-growing areas of journalism. Students learn what skills are needed to cover business and economic stories as well as the basics of how private companies operate and the factors that drive the economy. Students learn about opportunities in the field and hear from leaders in business journalism.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism and Mass Communication major; Minimum 2.50 GPA; JMC 201 with C or better; Credit is allowed for only JMC 450 or 494 (Issues in Coverage Bus/Economy)

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JMC	451	Photojournalism II	Develops photojournalism and visual storytelling skills through extensive hands-on practice shooting and editing for online and print media. Introduces shooting video with DSLR cameras and becoming proficient at image cropping, writing cutlines and editing using Adobe Photoshop.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 305 with C or better; JMC 351 with C or better; minimum 2.50 cumulative GPA
JMC	452	Visual Storytelling	Develops visual storytelling skills, working closely with a professional visual journalist to tell multimedia documentary stories that utilize video, still photos and text. In addition to the basics of storytelling, covers non-traditional techniques, including time-lapse, panos, HDR and star trails. Students should have basic skills in both still photography and videography and are expected to provide their own DSLR camera that can accommodate external mics and that have video capability.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA; JMC 345 or JMC 351 with C or better
JMC	453	Reporting on Business and the Economy	Trains in the basics of reporting about business and the economy. Helps students tell the stories behind companies, people and money, while improving competence in using numbers in stories. Offers the opportunity to have stories appear in print, online or broadcast.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; Minimum 2.50 GPA; JMC 301 (or 315) and JMC 450 with C or better; Credit is allowed for only JMC 453 or 494 (Reporting on Business/Economy)
JMC	455	Digital Media Entrepreneurship	Students identify a marketable idea and transform it into a product and/or company. In the process, they learn about key concepts of entrepreneurship and practice skills that they can employ as entrepreneurs themselves. Students are exposed to a range of national and regional entrepreneurs and emerge with a deeper understanding of entrepreneurship's importance within the media and communications landscape.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; minimum 2.50 GPA; JMC 305 with C or better; Credit is allowed for only JMC 455, JMC 494 (Digital Media Entrepreneurship), MCO 555, or MCO 598 (Digital Media Entrepreneurship)
JMC	460	Advanced Online Media	Covers online trends, Web design and usability, and copyright; legal, and ethical issues facing online journalists. Students critically examine journalistic Web sites and recognize excellence as well as mediocrity. Hands-on experience in using Photoshop, Dreamweaver, CSS, Soundslides, Final Cut, and Flash to produce original, compelling multimedia stories as well as an award-winning online magazine.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 305 with C or better; minimum 2.50 cumulative GPA
JMC	465	Telling Stories with Data	Techniques and tools of reporting using data and public records as well as how to use the Internet and other online sources to find information and sources for stories. Students get experience with computer spreadsheets, database software and statistical techniques as they develop their advanced reporting skills.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301 or 302 or 315 with C or better; minimum 2.50 GPA
JMC	470	Depth Reporting	Teaches students how to conceptualize, report and write long-form, in-depth stories. Students deeply research a selected topic through public records, interviews and investigative reporting techniques and write an in-depth article with the goal of publication.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; minimum 2.50 cumulative GPA; JMC 301 or 302 or 315 with C or better
JMC	473	The Business and Future of Journalism	Exposes advanced journalism students to broad media management problems; helps students understand how essential the bottom-line and quality journalism are to the entire journalistic enterprise; helps students think about how to balance those two concerns.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism student; minimum cumulative GPA of 2.5; JMC 201 with C or better
JMC	474	Advanced Issues in 21st-Century Sports and Media	Exposes challenges facing sports and media in the 21st century, including changing content models, revenue streams, and the evolving relationship between teams and media outlets.	N	SEM	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 201 with C or better; minimum 2.50 cumulative GPA
JMC	475	Cronkite News: Broadcast	Students increase their knowledge of the television and multimedia news industry and receive a realistic experience in field and studio newscast production.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 330 or 331 with C or better; minimum 2.50 cumulative GPA

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JMC	476	Public Relations Laboratory	Synthesizes and applies the theories, principles and techniques of public relations. This body of knowledge includes research, planning techniques, types of budgets, organizational systems, management styles, campaign components, types of campaigns, technology, ethics, diverse channels of communication and target audiences. Students: (1) analyze, discuss, then respond to public relations case studies; (2) develop an in-depth understanding of a client's needs; (3) conduct primary and secondary research; (4) work with a client in a team-based approach to prepare a comprehensive campaign proposal to address the client's problem or issue; (5) design and develop media products for client; (6) formally present the proposal to the client and the class.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication major; 2.50 cumulative GPA; JMC 417 with C or better. Credit is allowed for only JMC 476 or JMC 498 (Public Relations Lab)
JMC	477	New Media Innovation and Entrepreneurship Lab	Research and development program designed to help media companies create new and exciting multimedia products and to help students create digital media startups. Brings together students from disciplines across campus, including journalism, business, computer engineering and design. Journalism students conduct research into developing new products and creating prototypes for those products. Students learn by doing, interacting with clients or investors, the director and the lead Web developer. Students schedule meeting times with the director to discuss projects.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 301 or JMC 315 and 305 with C or better; 2.50 cumulative GPA. Credit is allowed for only JMC 477 or JMC 498 (Innovation and Entrepreneurship Lab)
JMC	478	Cronkite News: Phoenix Bureau	Applies and enhances reporting, writing and multimedia skills.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication major; 2.50 cumulative GPA; JMC 301 or JMC 315 with C or better
JMC	479	Cronkite News: Washington Bureau	Students participate in a full-time regional reporting bureau that gives them the opportunity to work as a Washington correspondent.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication major; JMC 301 or 315 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 479 or JMC 478 (Cronkite News - Washington Bureau)
JMC	480	Cronkite News: Phoenix Sports Bureau	Students gain valuable experience in sports reporting, shooting, editing and voicing packages for partnership outlets.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301, 302, or 315 with C or better; minimum 2.50 GPA; Credit is allowed for only JMC 480 or JMC 478 (Cronkite News - Phoenix Sports Bureau)
JMC	481	Cronkite News: Los Angeles Sports Bureau	Students gain valuable experience in sports journalism reporting, shooting, editing and voicing packages for partnership outlets.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 330 or 331 with C or better; minimum 2.50 GPA; Credit is allowed for only JMC 481 or JMC 478 (Cronkite News - L.A. Sports) or JMC 478 (Sports Journalism Santa Monica)
JMC	483	Cronkite News: Digital Production	Students produce stories and multimedia across platforms for Cronkite News and professional news outlets.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301 or 302 or 315 with C or better; JMC 305 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 483 or JMC 478 (Cronkite News Digital Production)

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JMC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301 or 302 or 315 with C or better; JMC 305 with C or better; minimum 2.50 GPA
JMC	485	Public Insight Network Bureau	Community engagement, story development, collaboration and entrepreneurship. Opportunity to build relationships with journalists in different markets and across media.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 301 or 302 or 315 with C or better; JMC 305 with C or better; minimum cumulative 2.50 GPA; Credit is allowed for only JMC 485 or JMC 494 (Public Insight Network)
JMC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		Prerequisite(s): Barrett Honors student
JMC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; minimum 2.50 cumulative GPA OR graduate Mass Communication student
JMC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-7		Pre-requisites: JMC student; Minimum 2.25 GPA; Successful completion of English proficiency exam OR Graduate Mass Communication student
JMC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-3		
JPN	101	First-Year Japanese I	Basic speaking, listening, reading, writing, computer skills, and culture. Hiragana, katakana, 75 kanji. For students without previous Japanese instruction.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	
JPN	102	First-Year Japanese II	Continued development of JPN 101 skills. 99 additional kanji. Communication skills goal: ACTFL Guideline Novice-Mid to Novice-High.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: JPN 101 with a C or greater or in progress. Students may not take JPN 102 if they have received credit for JPN 201, 202, 309, 310, 311, 312, 313, 314 or 321
JPN	110	Intensive Japanese I	First semester of the one-year intensive Japanese language sequence designed to train novice-level speakers to become competent intermediate speakers who can carry out conversation on familiar topics or handle straightforward situations. Emphasizes both oral and written communication through development of skills in listening, speaking, reading, writing and cultural awareness. Students manage a number of communicative tasks in social situations. Conversations are restricted to a few of the predictable topics necessary for survival; students express themselves in straightforward situations and on familiar topics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		Credit is allowed for only JPN 101 or JPN 102 or JPN 110
JPN	115	Japanese Popular Culture: Anime, Manga, and Film	Examines different media of Japanese popular culture such as comics (manga), animation (anime) and film for evidence of how the Japanese express their self identity in Japanese society. By separating the media into themes such as technology and the future, war/apocalypse/disaster, violence in society, gender and sexuality, and human relations, understands the Japanese culture (and social consciousness) more intimately. Students view films, read scholarly articles on the subject matter, and actively participate in the course through written papers and discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Credit is allowed for only JPN 115 or 194 (Japanese Popular Culture: Anime, Manga, and Film)
JPN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours

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JPN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	201	Second-Year Japanese I	Continued development in speaking, listening, reading, writing, culture, and computer skills. 74 additional kanji. Introduction to kanji dictionary.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: JPN 102 with C or better; Students with credit for JPN 202, 309, 310, 311, 312, 313, 314 or 321 may not enroll in JPN 201
JPN	202	Second-Year Japanese II	Continued development of JPN 201 skills. 116 additional kanji. Communication skills goal: ACTFL Guideline Intermediate-Low to Intermediate-Mid.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisite: JPN 201 with C or better
JPN	206	Japanese Calligraphy	Introduces Japanese calligraphy using traditional implements, starting with basic brush strokes and stroke order for kanji and kana.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): JPN 101 or 110 with C or better
JPN	210	Intensive Japanese II	Second semester of the one-year intensive Japanese language sequence designed to train novice-level speakers to become competent intermediate speakers who can carry out conversation on familiar topics or handle straightforward situations. Emphasizes both oral and written communication through development of skills in listening, speaking, reading, writing and cultural awareness. Students manage a number of communicative tasks in social situations. Conversations are restricted to a few of the predictable topics necessary for survival; students express themselves in straightforward situations and on familiar topics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		Prerequisite(s): JPN 102 with B or better or JPN 110 with C or better; Credit is allowed for only JPN 201 or JPN 202 or JPN 210
JPN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	301	Third-Year Japanese I	Development of reading skills, using authentic materials to comprehend structure, grammar, idioms, and culture. Expansion of kanji and vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisite: JPN 202 with C or better
JPN	302	Third-Year Japanese II	Continued development of reading skills, as in JPN 301. Reading proficiency goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: JPN 301 with C or better
JPN	309	Japanese Oral Communication I	Development of interpersonal, interpretive, and presentational oral/aural skills in familiar topics with sociolinguistic skills and understanding of Japanese culture. JPN 309 and 310 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 202 with C or better
JPN	310	Japanese Oral Communication II	Continued development of oral/aural skills, with increased emphasis on honorifics. Speaking proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 309 with C or better
JPN	311	Japanese Composition I	Learning structural guidelines for narrative writing, developing organization skills to support ideas. Writing proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: JPN 202 with C or better
JPN	312	Japanese Composition II	Continued development of writing skills, introducing research and creative writing. Writing proficiency goal: ACTFL Guideline Intermediate-high to Advanced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: JPN 311 with C or better
JPN	315	The Language of Japanese Popular Culture I: Gender and Onomatopoeia/Mimesis	Develops reading and listening skills using Japanese popular culture materials of various genres, including narratives, comics, anime, film and music. Introduces linguistic elements that are not found in regular language textbooks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre- or corequisite(s): JPN 202 with C or better if completed; Credit is allowed for only JPN 315 or JPN 394 (The Language of Japanese Popular Culture I)
JPN	316	The Language of Japanese Popular Culture II: Honorifics and Dialects	Understands Japanese popular culture materials such as anime, music, movies, manga and narratives through their target language of Japanese. Emphasized language areas are honorifics, formal expressions, dialects and slang and vulgar expressions that are tolerable in the classroom environment. Introduces elements of the history, geography and culture of Japan to further students' understanding of the materials. Students improve their receptive skills, i.e., listening and reading, by engaging with these materials, and through the technique of shadowing, also improve their pronunciation, intonation and grammatical accuracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre- or corequisite(s): JPN 301 with C or better if completed; Credit is allowed for only JPN 316 or JPN 394 (The Language of Japanese Popular Culture II)
JPN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	401	Reading Modern Japanese Texts I	Readings in modern literary and expository texts. Focus varies from year to year.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Prerequisite(s): JPN 302 with C or better; SLC 202 with C or better
JPN	414	Introduction to Classical Japanese	Readings from various genres of pre-20th-century literature, with analysis of the structure of the classical language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 302 with C or better
JPN	415	Advanced Classical Japanese	Close readings of selected premodern texts, with focus on grammatical and stylistic features.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 414 with C or better
JPN	445	Readings in Modern Japanese Letters and Culture	Advanced study of selected facets of modern Japanese letters and culture, including literature, material and visual culture, film, and other media.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 401 and SLC 202 with C or better. Credit is allowed for only JPN 445 or 535

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JPN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	485	Literary Translation: Theory and Practice	Introduces theories and practice of literary translation, with an emphasis on the translation of Japanese literary texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 401 and SLC 421 with C or better. Credit is allowed for only JPN 485 or 585
JPN	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
JPN	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
JPN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
JPN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
JPN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	535	Advanced Readings	Readings in primary and secondary sources in history, art, religious studies, literature, or other fields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only JPN 445 or 535
JPN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	585	Advanced Problems of Translation	Theories and practice of translation; strategies for handling a variety of Japanese texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only JPN 485 or 585
JPN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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JST	131	Biblical Hebrew I	Offers an introduction to Biblical Hebrew, the language in which most of the books of the Hebrew Bible/Old Testament have been written. Provides the basic tools to understand and translate Biblical Hebrew texts. Covers the Hebrew alphabet, basic vocabulary, morphology and syntax. Students learn idiomatic expressions, basic literary techniques in narratives and poetry, as well as specificities of Semitic languages. Emphasizes a critical approach to the ancient text. Also introduces the evolution of the biblical text, from ancient manuscripts to contemporary editions and translations. Includes an introduction to the development of writing and to the evolution of Hebrew, from earliest inscriptions to its revival in modern Israel. The texts translated in class are situated in the history of Israel, but also in their Jewish and Christian cultural and religious contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Credit is allowed for only HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I)
JST	132	Biblical Hebrew II	Completes the study of basic Biblical Hebrew grammar and vocabulary (Futato's Beginning Biblical Hebrew, chapters 21-40). Prepares students to translate narrative and legal texts from Hebrew Bible. Students learn to use dictionaries, grammars, paradigms and critical editions of the biblical text.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I) with C or better; Credit is allowed for only HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II)
JST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
JST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
JST	210	Introduction to Judaism	Beliefs, ceremonies, festivals, and institutions of Judaism emphasizing the contemporary era. Assumes no previous knowledge about Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only JST 210 or REL 210
JST	211	Jews and Judaism in America	Chronological analysis of Jews and Judaism in American history and letters.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Credit is allowed for only HST 211 or JST 211 or REL 211
JST	230	Introduction to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST, JST or REL 230
JST	231	Biblical Hebrew III	Advanced study of Biblical Hebrew. Deepens understanding of the grammar and composition of the Hebrew Bible. Translates texts of different literary genres (narrative, legal, poetic, prophetic) and different periods. Introduces the basic principles of textual criticism and different approaches to interpret the texts of the Hebrew Bible.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II) with C or better; Credit is allowed for only HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III)
JST	232	Biblical Hebrew IV	Addresses advanced topics in Biblical Hebrew grammar and interpretation. The first half of the semester is devoted to texts from the Hebrew Bible; the second half on extra-biblical texts written in ancient Hebrew (for example: Dead Sea Scrolls, Rabbinic texts, ancient Hebrew poetry). Topics and texts change annually.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III) with C or better; Credit is allowed for only HEB, JST, REL 232 or HEB 294 (Biblical Hebrew IV)
JST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
JST	304	Studies in European History	Specialized topics in European history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 304 or JST 304
JST	314	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314

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JST	314	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
JST	315	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST or REL 315
JST	316	Literary Readings of the Hebrew Bible	Literary analysis of two of the main genres of the Hebrew Bible: narrative art and poetry. Students learn the main literary conventions of biblical prose and poetry, and how these conventions are applied or subverted. Each class comprises the study of a literary aspect, close readings, and thematic discussions. Biblical texts are read only in translation. They are situated in the religious, literary and artistic traditions that have developed on their basis.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only ENG 316, HEB 316, JST 316, REL 316 or HEB 394 (Literary Readings of the Bible)
JST	317	Introduction to Rabbinic Judaism	Historical analysis of the thought, literature, and institutions of rabbinic Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST or REL 317
JST	318	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST 318, REL 318 or SOC 375
JST	347	Modern Israeli Literature in Translation	Modern Hebrew, or Israeli Hebrew, started at the end of the 19th century in Europe and today it is the language of the State of Israel. During this short period modern Hebrew developed literature with its unique local characteristic, as well as universal ideas. Reads and examines four books against their social and historical background.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HEB 347 or JST 347 or SLC/HEB/JST/SLC 394 (Modern Hebrew Literature in Translation)
JST	348	Israeli Society and Culture	Different partitions of the Israeli society, based on ethnic origin, by religious affiliation or by political association. Depicts how Israel is an absorbing immigration state. Israel is a welfare state and the course covers aspects of a welfare state, such as health, retirement, public transportation, art, higher education and more.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better. Credit is allowed for only HEB 348 or HEB 394 (Israeli Culture and Society) or JST 348 or REL 311 or SLC 348
JST	369	History and Memory of the Holocaust	In-depth study of the history of the genocide of Jews, the rise of modern antisemitism within the context of Nazi Germany, and the memory and memorialization of the Holocaust post 1945.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 369 or JST 369 or REL 312 or HST 304 (Shoah: History, Memory, and Representation) or HST 394 (History of the Holocaust)
JST	373	Women in Judaism	Studies the legal, social and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better and minimum 24 earned hours or WST 100 or 300 with C or better; Credit is allowed for only JST 373, REL 373 or WST 372
JST	384	The Bible and Archaeological Discoveries	Studies the Bible alongside the stories that architecture, pottery, metalwork, sculpture, tombs, and paintings of the ancient Near East have to tell. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only JST 384 or REL 384
JST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
JST	396	Women in the Bible	Uses feminist criticism to reconstruct the remarkable women who stand in the shadow of the patriarchy in the bible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only JST or REL 396

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JST	411	Judaism and the Beginnings of Christianity	Studies the beginnings of Christianity in relation to Judaism: their common context, the process of their distinction and their mutual influence. Through a historical and thematic approach, explores the parallel construction of Jewish and Christian identities. Combines readings from primary sources (Hellenistic Judaism, Qumran, New Testament, Early Christianity, Rabbinic Judaism) and up-to-date scholarly literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101 or 105 or 107 or 108 or HST 100 or 102 or REL 100 or SLC 142 or 202 with C or better; Credit is allowed for only HEB/JST/REL 411 or HEB 394 (Judaism and the Origins of Christianity) or HEB 494 (Judeo-Hellenistic Literature)
JST	445	The Holocaust in German-Mediated Memory	Examines representations of the Holocaust from across different media (literature, film, architecture, memoir, photography) and from across multiple generations of German engagement with this period in history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 200 or ENG 201 or ENG 202 or ENG 204 or FMS 100 or FMS 200 or JST 210 or JST 230 or SLC 202 with C or better; Credit is allowed for only FMS/GER/JST/SLC 445 or GER 494 (Holocaust & German Media or Holocaust & German Mediated Memory)
JST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
JST	490	Methods of Historical Inquiry	Capstone course in history as an academic discipline, including formulation of research questions, use of primary and secondary sources to evaluate, form and support historical arguments. Students draft and revise a scholarly research paper.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Prerequisite(s): History or Secondary Education (History) student; ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 300 or HST 495 or JST 490
JST	491	History of Anti-Semitism	Anti-Semitism means hostility, negative perceptions, and persecution of Jews. Examines the evolution of anti-Semitism in the West from antiquity to modern times. Explains the history of anti-Semitism by looking at the interplay of religious, economic, cultural, and political factors. Special attention given to the origins of Christianity, the place of Judaism in Christian self-understanding, the power struggle between popes and emperors during the Middle Ages, the involvement of Jews in money lending, the alliance between the Jews and the secular princes, the rise of modern nationalism, and the place of racism in the politics of modern nation states. With a better understanding of the history of anti-Semitism, ponders the differences and similarities between premodern anti-Judaism and modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108; JST 230 (or REL 210) with C or better
JST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
JST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Prerequisite(s): Barrett Honors student
JST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
JST	495	Judaism, Science and World Religions	Studies the correlation between science and religion as an interdisciplinary study from a historical perspective. Session topics fall into three distinct units. The first correlates the physical sciences with Western religious theology; the second explores the consequences of the life sciences on religious psychology; and the third examines the impact of the interconnection between sciences and religions in society. Each unit is studied through specific readings, film, lectures, and discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108; JST 210 or REL 210 (or JST 230) with C or better
JST	496	Biblical Narratives: Literary Approaches	Presents different trends in synchronic approaches applied to the Bible such as narrative criticism, semiotics, reader-response criticism, and situates them both in the postmodern cultural context and in the history of biblical exegesis. Explores various literary devices in biblical narratives, such as repetition, type-scenes, characterization, the change of points of view, the use of metaphors. Studies each technique on particular biblical texts, literally translated into English, with a special emphasis on how these techniques guide the interpretation and create meaning. Questions the significance of literary approaches for religious or ideological texts, such as the Hebrew Bible. Also considers criticisms raised against these approaches, assesses their limits, and envisions their future.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108 with C or better; JST 210 or REL 210 (or JST 230) with C or better
JST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		

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JST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
JUS	105	Introduction to Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Appropriate for freshmen and sophomores.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Credit is allowed for only JUS 105 or 305
JUS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Must have less than or equal to 25 earned hours
JUS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Must have less than or equal to 25 hours
JUS	200	Topics in Concepts and Issues of Justice	Uses critical thinking skills to analyze and comprehend controversial social issues (e.g., abortion, affirmative action, capital punishment, the flat tax, and immigration).	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	
JUS	207	Homicide and Serial Killers	Explores the scholarship, research and rational analysis of the mass, spree and serial killer. It will examine some of the causes and underpinnings of these killers within the U.S. as well as the major theories and understandings of this phenomenon.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	
JUS	210	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only AFR 212 (or AFS 210) or APA 210 or JUS 210 or TCL 210
JUS	214	The Pursuit of Justice in the 21st Century	Introduces a wide variety of institutions and organizations--locally, nationally and internationally--that seek justice. Provides an understanding of the many ways justice is institutionalized in modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	
JUS	215	Bob Marley and Reggae: Lyrics of Resistance	Studies political content, influence, and impact of Caribbean popular music, in particular the music of Bob Marley.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Credit is allowed for only AFR 215 or AFR 394 (Bob Marley: Reggae and Resistance) or JUS 215
JUS	220	Introduction to Social Transformation	Introduces key concepts in the study of social change, social innovation, and social transformation. Studies examples of social movements, social activism, community organizing, and coalition building and how such efforts have transformed society and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only APA 220 or JUS 220 or SST 220
JUS	222	Drugs and Justice	Provides an historical overview of the development and circulation of certain drugs; explores the more specific effects of drug use and abuse in everyday life; and examines the efforts by governments to both restrict/end and facilitate/expand the drug trade.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Credit is allowed for only JUS 200 (Drugs and Justice) or 222
JUS	225	Black Movements in America	Survey course on the historical and political development of mass movements by African Americans and Black resistance in the United States. Traces nearly 400 years of Black resistance against injustices and mass struggles for equality and liberation. Topics include the anti-slavery movement, anti-lynching campaign, the Civil Rights movement, the Black Power movement, prison abolitionism, the reproductive justice movement, and movements for economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only AFR 225 (or AFS 225) or JUS 200 (Black Movements in America) or JUS 225
JUS	235	Disability, Justice and Advocacy	Overarching history of the disability rights movement and how it is similar to and different from other civil and rights movements. Examines how policies and activism are interconnected within this movement, in addition to looking at other human categories related to disabilities such as gender, sexuality, race and socioeconomic status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only COM 235, JUS 235, SST 235, WST 235 or SST 294 (Disability Justice and Advocacy)
JUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
JUS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
JUS	300	Race and Racism in Africa/African Diaspora	Advanced study of the concepts of race and racism and how they manifest themselves in the USA, the Caribbean, and Africa. Examines the construction of race, racism, and race relations in Africa and the African Diaspora as well as practices to challenge ethnicity, racism, and racial oppression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 301 (or AFS 301) or JUS 300
JUS	301	Research in Justice Studies	Focuses on developing and evaluating research designs, data collection, and the relationship between validity and reliability. Stresses methods for conducting research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA

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JUS	302	Statistical Analysis for Justice Studies	Concepts and application of descriptive and inferential statistics, including linear regression, for justice studies research..	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	CS	Prerequisite(s): minimum 2.00 cumulative GPA; minimum 24 hours; ENG 102, 105 or 108 with C or better; MAT 117, 142, 170 or approved MA General Studies course
JUS	303	Justice Theory	Examines classic and contemporary philosophies and theories of justice, including legal, social, and criminal justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Minimum 2.00 GPA
JUS	304	Islands of Globalization: Caribbean Politics and Political Economy	In-depth study of the complexities of contemporary Caribbean politics and political economy. Examines the countries that constitute the Caribbean community and common market and the Caribbean Latin American countries such as Cuba and the Dominican Republic and analyzes the historical evolution of the region's political and economic systems and the impact of globalization. Traces the development of the region's political economy from the colonial period to the present; looks at the impact of globalization on contemporary politics, economics, and culture and the region's response.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 304 (or AFS 304) or JUS 304
JUS	305	Principles of Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Appropriate for juniors and seniors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Minimum 2.00 GPA; Credit is allowed for only JUS 105 or 305
JUS	308	Courts and Society	History and development of courts. Relationship between dispute resolution mechanisms and cultural/social structure/processes in which they are embedded.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	320	Community and Social Justice	Discusses and analyzes definitions of community; impact of environment on behavior; promises of community organization for local empowerment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	321	Wealth Distribution and Poverty	Examines wealth and income distribution in the United States and analyzes ideological and political forces producing an increasingly unequal society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	323	Justice and the Development of the Welfare State	Provides a comprehensive overview of the development of social welfare and relevant issues pertaining to social justice. Introduces upper-division students to different ideas about the meaning of social welfare in the context of the development of the U.S. welfare state.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	325	Globalization and Socio-Economic Justice	Addresses a trend producing increasing interconnectedness of economies and societies, as well as creating new conflicts and divisions. Provides greater understanding of global forces, as well as the effect of these forces on global economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA; Credit is allowed for only JUS 325 or SGS 325
JUS	326	Music as Political Discourse: Reggae, Calypso, and Hip Hop	This is a reading and writing intensive course that employs critical thought that explores African Diaspora popular music as a medium of social and political expression. It examines the political content of Reggae, Calypso and Hip Hop and their role in triggering and influencing popular discourse in the Caribbean and the USA. Course material will analyze the interrelationships among the musical forms and their role in fostering Black and Pan African Cultural Identity, Political Consciousness and World Peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & H & G	Prerequisite(s): AFR 200 (or AFS 200); minimum 45 hours; Credit is allowed for only AFR 325 (or AFS 325) or JUS 326
JUS	329	Domestic Violence	Critical inquiry into the legal, historical, theoretical, comparative, and treatment literatures on domestic violence; application of contemporary justice and social change theories to research how society defines and organizes against domestic violence. May include consideration of intimate partner abuse, child abuse and neglect, and gender violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	330	Survey of African American Politics	In-depth study of the dynamics of the African American political experience. Examines the historical development of African American politics from the anti-slavery era to the Civil Rights breakthrough of the 1960's through the present political climate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 330 or JUS 330
JUS	332	Politics of Energy Policy and Justice	Examines the social and political dimensions that shape energy and environmental policy. Focuses primarily on the U.S. Introduces elements of regional or global policy where they influence or shape domestic politics and policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA

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JUS	334	Science, Technology and Inequality	Conceptual and theoretical frameworks; provides empirical case studies that contribute to understandings of science and technology as they are used in society. The applications of science and technology in society need to be understood as instrumental to the creation and maintenance of inequality within and between societies. Science and technology does not merely cause or alleviate inequality, but are more profoundly implicated in social relations regarding distribution and access to the benefits of different technologies as well as exposure to risks from science and technology projects in society. The more pervasive and obdurate sources of social distribution are enshrined and entrenched in these scientific and technological systems.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only FIS 334 or JUS 334
JUS	335	Organized Crime	Critical inquiry into organized crime and its illegal activities; analysis and application of contemporary theories; analysis of strategies for reducing the prevalence and power of organized crime in the U.S. and other nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	345	Peoples and Cultures of the Caribbean	Traces the socio-political history of the wider Caribbean from the 15th century to the present. Focuses on the following broad areas: the early years of European settlement and colonization; the construction of slavery and plantation society; and the transition from colonization to political independence. Critically examines the origins and building blocks of Caribbean society as well as analyzes the linkages between the region and the rest of the African diaspora.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 345 (or AFS 345) or JUS 345
JUS	347	Immigration, Education and the Family	Cultural processes related to immigration and their impact on the social construction of the immigrant family and the education of other children. Immigration theories, immigration debates and discourses, the immigration landscape of the 21st century, conceptualizations of the family, and the methodological challenges family researchers face. Topics include issues pertaining to education and the family and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only APA 347, JUS 347, APA 394 (Immigration, Education & Family) or JUS 394 (Immigration, Edu. & Family)
JUS	350	Immigration and Justice	Examines immigration policy, history of immigration, refugee issues, labor force participation, gender, family, children, social networks, and transnationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	352	The Global Politics of Human Rights	Examines political forces that have shaped gradual construction of an international human rights regime and a universal culture of rights, including civil and political rights, as well as economic, social, and cultural rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	353	Race, Space and the Production of Inequality	Explores how the relationship between race and space has been important to the development of broad patterns of social inequality in the United States. Through a variety of readings, films and other material, examines how ideas of race and space have been important to the making and maintenance of national boundaries, citizenship, regional histories and spatial typologies such as border, ghetto, suburb and prison.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): APA 200 or 210; minimum 45 hours; Credit is allowed for only AFR 352 (or AFS 352) or APA 352 or JUS 353 or TCL 353 or APA 394 (Race, Space and the Production of Inequality)
JUS	360	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	365	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
JUS	370	Cultural Diversity and Justice	Analyzes how cultural diversity challenges and broadens conventional understanding of justice. Examines how cultural beliefs and practices come into conflicts with public law and policy. Assesses the U.S.'s performance on incorporating cultural diversity in its social institutions including education, media, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Pre-requisites: 2.00 cumulative GPA; Pre/Co-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours
JUS	374	The Holocaust, Genocide, and Human Rights	Explores the psychological, social, historical, and political dimensions of the Holocaust and the phenomenon of genocide. Also examines the more recent international cases of genocide along with a discussion and analysis of the Universal Declaration of Human Rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	375	Justice and the Mass Media	Analysis of the impact of mass media and popular culture on social justice issues, including criminal justice. Critical inquiry into portrayals of gender, race, culture and class in mass media and other forms of popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA

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JUS	382	Justice and Pop Culture	Explores the connections between the production, reproduction, and consumption of popular culture and the resultant impact on issues of justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU or SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	385	Justice and Everyday Life	Justice and injustice in everyday life and how small things can become legal issues. Role of language and interaction in social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 2.00 GPA; Minimum 24 hours
JUS	405	Economic Justice	Addresses economic issues and justice implications, including the interplay among economic conditions, race-ethnicity, class, and gender worldwide.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & G	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	408	Comparative Development of the Welfare State	Embodies a multidisciplinary perspective on welfare issues and exposes students to different ideas about justice beyond the United States. Allows them to better understand how and why states organize and deliver justice in different ways. Exposes students to cross-national variation in how history, culture, politics, and economics have shaped the development and content of different types of welfare states. Engages theoretical perspectives from political sociology and political economy concerning the emergence and future fate of these welfare states. Analyzes comparative analysis of three distinctive types of welfare states; Liberal, Conservative, and Social Democratic Welfare States, with particular emphasis on their varying capacity to combine economic efficiency with social justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & G	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	410	Punishment: Logic and Approach	Analyzes forms of punishment, how and why they have changed. Areas include philosophy, history, and social structure of punishment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	414	Black Political Movements: Pan Africanism to Black Power	In-depth examination of the three defining 20th century political movements in Africa and the African Diaspora (USA, Europe, Latin America and the Caribbean)the Pan Africanist, the Civil Rights and the Black Power movements. A primary course objective is to synthesize a comprehensive understanding of Black/African politics and society from a Diasporan perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 9 upper-division hours; junior standing; Credit is allowed for only AFR 394 (Black Political Movements) or AFR 414 or JUS 414
JUS	415	Gender and International Development	Examines the ways in which international development is gendered as well as women's rights as human rights in both national and international arenas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & G	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	420	Women, Work, and Justice	Examines gender inequality in the workplace, including the nature of women's work, theoretical issues, and models for promoting gender justice at work.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	421	Race Ethnicity and Politics in the African Diaspora	Reading and writing intensive course that employs critical thought to look at the competition for political power among different ethnic groups in Africa, the Caribbean and the USA and the implications for political stability, economic development, democratic governance, democratization, nationhood and the empowerment of African and African Diasporan populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): AFR 200 (or AFS 200) and minimum junior standing OR minimum 9 upper-division hours in any classes with the following prefix: AFH, AFS, AFR, APA, JUS, POS, SGS, SOC, WST; Credit is allowed for only AFR 420 or JUS 421
JUS	422	Women, Law, and Social Control	Examines social, economic, and legal factors that are relevant to mechanisms of social control of women, including formal legal control and informal control through violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 36 hours; Minimum 2.00 GPA. Credit is allowed for only JUS 422 or WST 422
JUS	424	Ethics and Alternative Tourism	Cultural processes related to alternative tourism and their impact on both the tourist and local. Travel, tourism, globalization, development, human rights and the commodification of people and places. Topics include issues pertaining to Western tourism, commodification, race/class/gender and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 36 hours. Credit is allowed for only JUS 424 or JUS 494 (Sex, Drugs and Death)

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JUS	425	Race, Gender, and Justice	Critically examines major theories, research findings, policies, and controversies concerning race, ethnicity, gender, and crime.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	427	Identity and Justice	Theory of symbolic interaction which provides a vocabulary, observational methodology (i.e., dramaturgy) and a set of grounding concepts that allow students to explore identity in its everyday practices. Explores the transformation and emergence of identities in public discursive spaces and the political impact of identity as it is deployed (invoked) and interpreted (imputed) among interactants in the social world. Establishes the position that identity operates as a central constitutive function in the construction of meaning and, subsequently, our ideas and attitudes about justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only JUS 427 or JUS 494 (Identity & Justice)
JUS	428	Critical Race Theory	In-depth analysis of the ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	GRD	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only AFR, APA, JUS or SST 428
JUS	430	Social Protest, Conflict, and Change	Analyzes historical and contemporary protest movements advocating equality based on race, gender, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	432	Racial Justice	Racial inequality remains a dominant theme in understanding social, legal, and economic justice in the U.S. today. Explores controversial topics surrounding race and justice. Emphasizes current legal, economic, political, and social conceptual frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	435	Cinema and Justice	Tracks the conceptualizations of justice that have been and are currently conveyed in film, including but not limited to the relationship between crime and various notions of justice. Other depictions include social issues such as gender, race, or economics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	438	Human Differences: Dilemmas of Justice	General examination of democracy and human differences that expands into in-depth investigations of (1) racial difference and identity politics; (2) gender and sexual difference in democracy; and (3) cultural difference and the multiculturalism debate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	440	Prisons, Power and the Punishments of the Past	Examines the history and logics of a "U.S. Penal Democracy," tracing how prisons became the preferred and accepted choice for punishment. Traces how the practices, policies and rationalizations of punishment (physical, psychological and social) have been at the center of U.S. politics beginning in the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 36 hours. Credit is allowed for only JUS 440 or JUS 494 (Prisons, Power and the Punishments of History)
JUS	444	Environment and Justice	Explores issues of environment and justice. Topics include justice and environmental racism, future generations, nonhuman life, global/non-Western societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	445	Surveillance and Society	Explore how surveillance technologies alter social life; the complex ways that they interact to produce security, fear, control, and/or vulnerability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	452	Justice Issues in Israel and Palestine: The Political is Personal	Explores the justice issues related to the symbolic, historical, geographic, political, economic, religious, social, and cultural meanings of Israel and Palestine. Focuses on how and why the "political" is felt so very personally in everyday life in Israel and Palestine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	456	Human Rights and Sustainability	Addresses the connections between human rights and environmental sustainability. Legal and scholarly approaches linking these areas present new perspectives for addressing some of the greatest challenges of our time, given the important resource dimensions of economic and social rights and the human dimensions of sustainability. Yet human rights demands and environmental concerns are not always in harmony. Explores these tensions and opportunities by examining three substantive areas: urban ecology and human rights, the human right to food, and the human rights implications of extractive industries such as oil and mining. Following an introduction to the key concepts of human rights and sustainability, explores the substantive areas through theoretical and empirical readings on each; grassroots accounts of struggles over environment-related human rights; and selections from literature and film that illustrate the environmental justice issues at stake.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & G	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 36 hours. Credit is allowed for only JUS 456, SOS 456, JUS 394 (Human Rights & Sustainability), or JUS 497 (Seminar in Human Rights)
JUS	460	Feminism and Justice	Explores feminist thought and critiques traditional political theories. Examines issues of racism, sexuality, and the law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA

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JUS	463	Discretionary Justice	Use/abuse, key issues/manifestations of discretion in legal system and other societal institutions. Theoretical/empirical linkages between discretion and discrimination, based on race, ethnicity, and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	465	Death Penalty in the United States	Focuses on capital punishment in the United States; explores negotiation of law, politics, morality, public policy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	467	Terrorism, War, and Justice	Examines the relationship among terrorism, war, and justice. Analyzes terrorism within the larger study of deviance and social control, comparative politics, hegemony, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	468	Protest, Justice, Law and the Media	Examines research on protests, political deviance, trials/law and justice, and critiques some of the media representations of related ideas. Investigates global social movements, political protests and nascent political trials. Analyzes varied justifications for defining action as diversity, deviance or crime and the reasons for using criminal, civil or alternative (positive) sanctions (especially via indigenous peoples). Explores the encompassing meaning of a political trial. Many people throughout the world find everyday life to be a trial, especially those placed on the margins of globalization. Expands the research on media and trials that usually have been examined narrowly by legal institutions in North America and reinforced by hegemony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 2.00 GPA; minimum 36 hours; Credit is allowed for only JUS 468 or 494 (Protest, Justice and the Media)
JUS	469	Political Deviance and the Law	Examines the controversies created by political and deviant behavior, including a critical view of law as an agent of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	470	Alternative Dispute Resolution	Critical examination of the tenets of alternative dispute resolution movement; exposure to the programs of ADR, including community and court based.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	473	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Non-Justice Studies majors with minimum 56 hours and 2.50 GPA OR Prof/capstone undergrad or Justice Studies graduate; Credit is allowed for only REL 482, POS 473, or JUS 473
JUS	474	Legislation of Morality	Addresses historical and contemporary issues related to social justice movements, law, and morality in a pluralistic society. Issues include AIDS, burial rights, homosexuality, poverty, prostitution, and racial discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	477	Youth and Justice	Critical examination of youth-related justice issues, including economic justice, violence against youth, delinquency, and the juvenile justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	479	Law and Disputing	Critical analysis of the controversies created by disputes, law, and other forms of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
JUS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
JUS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
JUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7		

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JUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
JUS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Social and Cultural Pedagogy MA student, Justice Studies MS or PHD student
JUS	501	Justice Theory	Theories and philosophies of social, economic, political, and criminal justice. Applies theories to contemporary justice issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student
JUS	509	Statistical Problems in Justice Research	Methodological problems of research design and statistical methods specific to justice studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student
JUS	521	Qualitative Data Analysis and Evaluation	Analyzes qualitative data, e.g., field notes, in-depth interview transcripts, document analysis, coding, and retrieval with a microcomputer; qualitative evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student
JUS	542	American Indian Justice	Provides a broad overview of American Indian and Alaskan Native issues of justice and injustice in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	550	Gender, Race, and Economic Justice	Provides a critical social scientific perspective on economic issues particularly as they relate to gender, race, and class equality. Examines issues of economic inequalities as they are distributed along the lines of gender and race. Components converge to identify the social justice ramifications of economic policy and economic conditions.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	555	Migration/Immigration and Justice	Explores the causes and consequences of immigration to the United States and the incorporation of immigrants into the American economy and society.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	560	Women, Law, and Social Control	Gender issues in the exercise of formal and informal mechanisms of social control, including economic, social, legal factors, both violent and nonviolent.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	570	Juvenile Delinquency	Study of delinquency, including causation theories. Alternative definitions of delinquency, official statistics, and the critique and analysis of the interaction between social institutions and youth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	575	Race, Gender, and the Law	Explores the law and social sciences literature on race, ethnicity, gender, and the legal order. Critically assesses the major contemporary theoretical and policy debates and controversies in the field from a variety of disciplinary and interdisciplinary lenses, setting these debates in their historical contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	588	Justice and the Mass Media	Analyzes the nature and impact of mass media messages about justice concerns for social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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JUS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	610	Law and the Social Sciences	Analyzes the theoretical grounds underlying diverse studies of law and society; creation and administration of law; and jurisprudence and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	620	Justice Research Methodology	Covers the epistemology of knowledge and method in justice research, history, and philosophy of social science and critical inquiry, as well as perspectives that link these concerns to research strategies. Explores the strengths and weaknesses of introduced methodologies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student; JUS 500 with C or better
JUS	630	Data Analysis for Justice Research	Bivariate and multivariate techniques of data analysis and hypothesis testing for justice-related research and use of information and statistical programs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student; JUS 509 with C or better
JUS	633	Community Research	Focuses on epistemology, methodology, and the production of knowledge about community and seeks to link theory, methodology, specific research strategies, and social criticism about the conduct of community research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	640	Theoretical Perspectives on Justice	Analyzes philosophical perspectives of justice; linkages between social science theory and justice constructs; application of justice to social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student; JUS 501 with C or better
JUS	650	Advanced Qualitative Data Analysis	Advanced qualitative data collection and analysis techniques, including ethnography, in-depth interviews, field notes, coding, transcribing, content analysis, textual analysis.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student
JUS	656	Human Rights and Sustainability	Addresses the connections between human rights and environmental sustainability. Legal and scholarly approaches linking these areas present new perspectives for addressing some of the greatest challenges of our time, given the important resource dimensions of economic and social rights and the human dimensions of sustainability. Yet human rights demands and environmental concerns are not always in harmony. Explores these tensions and opportunities by examining three substantive areas: urban ecology and human rights, the human right to food, and the human rights implications of extractive industries such as oil and mining. Following an introduction to the key concepts of human rights and sustainability, explores the substantive areas through theoretical and empirical readings on each; grassroots accounts of struggles over environment-related human rights; and selections from literature and film that illustrate the environmental justice issues at stake.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only JUS 656 or SOS 656 or JUS 691 (Human Rights & Sustainability)
JUS	660	Globalization and Economic Justice	Explores the political economy of globalization from a theoretical as well as practical standpoint. Sources used come from a variety of disciplines--sociology, political science, international relations, geography, and economics--all of which contribute unique theoretical and normative tools for analyzing the effect of global forces on economic justice.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Graduate student
JUS	669	Political Trials and Indigenous Justice	Focuses upon research on political trials, deviance, and conceptions of indigenous and contemporary justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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JUS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	100	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Credit is allowed for only EXW, HSC or KIN 100
KIN	101	Introduction to Kinesiology	Introduces the disciplines and professions associated with kinesiology, including an overview of historical and philosophical foundations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		
KIN	102	Forager to Couch Potato: The Obesity & Diabetes Epidemics	Overview of factors leading to the global surge in obesity and type 2 diabetes; the historical, cultural, environmental, and anthropological factors impacting genotypes related to the development of obesity and diabetes; social forces leading to a sedentary lifestyle; and options for reengineering environmental and social institutions to increase physical activity.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		
KIN	105	Physical Education Activity	Beginning instruction in a wide variety of sports such as aerobics, aquatics, racquet sports, physical conditioning, and golf. 3 hours per week. Y grade only.	Y	LEC	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		
KIN	110	Research Analysis Laboratory	Introduces basic research areas in the discipline of kinesiology. Topics may include the following: developmental learning, exercise physiology, exercise psychology, exercise testing, metabolic physiology, motor control, motor learning, research journals and societies, research methods, research writing.	N	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-2		Pre-requisite: Pre Sec Ed - Physical Ed, Exercise Sci/Phys Educ or Kinesiology major
KIN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-3		Prerequisite: maximum 25 hours
KIN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
KIN	205	Physical Education Activity	Intermediate levels. Continuation of KIN 105. 3 hours per week.	Y	LEC	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		
KIN	290	Introduction to Evidence-Based Practice	Introduces best practices for gathering, interpreting, analyzing, synthesizing and evaluating research within the disciplines in the College of Health Solutions.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Prerequisite(s): College of Health Solutions student; ENG 101, 105, or 107 with C or better; ECN 221, HCD 300, JUS 302, PBH 300, POS 401, PSY 230, SOC 390, or STP 226 with C or better; Credit allowed for KIN 290 or 294 (Intro to Evidence Based Practice)
KIN	290	Introduction to Evidence-Based Practice	Introduces best practices for gathering, interpreting, analyzing, synthesizing and evaluating research within the disciplines in the College of Health Solutions.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Prerequisite(s): College of Health Solutions student; ENG 101, 105, or 107 with C or better; ECN 221, HCD 300, JUS 302, PBH 300, POS 401, PSY 230, SOC 390, or STP 226 with C or better; Credit allowed for KIN 290 or 294 (Intro to Evidence Based Practice)
KIN	290	Introduction to Evidence-Based Practice	Introduces best practices for gathering, interpreting, analyzing, synthesizing and evaluating research within the disciplines in the College of Health Solutions.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Prerequisite(s): College of Health Solutions student; ENG 101, 105, or 107 with C or better; ECN 221, HCD 300, JUS 302, PBH 300, POS 401, PSY 230, SOC 390, or STP 226 with C or better; Credit allowed for KIN 290 or 294 (Intro to Evidence Based Practice)
KIN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
KIN	310	Collegiate Sports	Participation in men's or women's intercollegiate competition. May be repeated for 4 hours 1 per year. Y/E grade.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		
KIN	334	Functional Anatomy and Kinesiology	Muscles, bones, joints, and nerves and how they produce movement. Emphasizes muscle origins, insertions, actions, and innervations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 201 (ZOL 201) with C or better; BIO 202 with C or better
KIN	335	Biomechanics	Basic anatomical and mechanical principles applied to human movement. Emphasizes kinematic and kinetic concepts.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: KIN 101 (KIN 200) with B or better; BIO 201 (ZOL 201) and BIO 202 (ZOL 202), PHY 111 with C or better; One of the following courses: MAT 170, 210, 251, 270, 271, or 272 with C or better
KIN	340	Physiology of Exercise	Physiological mechanisms of acute responses and chronic adaptations to exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: KIN 101 (KIN 200) with B or better, BIO 201 (ZOL 201) and BIO 202 (ZOL 202) with C or better; one of the following courses: CHM 101, 113, 114, 115, 116, 117, or 118 with C or better
KIN	345	Motor and Developmental Learning	Principles of motor skill acquisition across the life span, focusing on the learner and the learning environment.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: KIN 101 (KIN 200) with B or better; PGS 101 (PGS 101) with C or better; BIO 201 (ZOL 201) with C or better
KIN	348	Psychological Skills for Optimal Performance	Applies psychological techniques and their use to improve effectiveness and performance in sport and related areas.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	
KIN	352	Psychosocial Aspects of Physical Activity	Interrelationships between physical activity and psychosocial variables, including socialization, cultural values, aggression, and motivation. Includes the psychological benefits of physical activity and exercise adherence.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB & C	Pre-requisites: KIN 101 (KIN 200) with B or better; PGS 101 (PGS 100) with C or better
KIN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
KIN	412	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discussion of injury mechanisms.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 335 with C or better; Credit is allowed for only KIN 412 or 512
KIN	413	Qualitative Analysis in Sport Biomechanics	Develops systematic approach for detecting and correcting errors in human performance using anatomical and mechanical principles.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 335 (EPE 335) with C or better
KIN	414	Electromyographic Kinesiology	Muscular contributions to human movement, muscle mechanics, electrophysiological basis, and practical application of electromyography.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisites: KIN 335 (EPE 335 or PED 335) with C or better; KIN 340 (EPE 340 or PED 340) with C or better
KIN	418	Experimental Neuromechanics	Students experience different quantitative techniques to analyze human movement from a motor control and biomechanical perspective.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): KIN 290; KIN 335; KIN 345; Credit is allowed for only KIN 418 or KIN 494 (Experimental Neuromechanics)
KIN	421	Human Motor Control	Focuses on understanding how the human central nervous system controls, regulates, and learns movements.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 345 (EPE 345) with C or better
KIN	422	Motor Control in Special Populations	Discusses principles of motor control theories and related practical applications for certain special developmental populations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 345 (EPE 345) with C or better
KIN	423	Motor Control and Aging	Functional and behavioral changes to the motor control system as humans age, how specifically it impacts motor control and learning.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 345 (EPE 345) with C or better
KIN	437	Comparative Biomechanics and Motor Control	Guides students to critically evaluate how the physical and mechanical properties of organisms and their environment affect biological tissues, structures, and motor control.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 181; MAT 170 and PHY 111 with C or better; Credit is allowed for only BIO 437, 537, KIN 437 or 537; Credit is allowed for only KIN 437 for KIN 494 or 598 (Comparative Biomechanics and Motor Control)
KIN	440	Exercise Biochemistry	Study of bioenergetics and metabolism of cellular (skeletal muscle, heart, and liver) organelles and proteins during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 (EPE 340 or PED 340); Credit is allowed for only KIN 440 or 532

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KIN	441	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 340 (EPE 340 or PED 340); Credit is allowed for only KIN 441 or 531
KIN	442	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 (EPE 340) with C or better; Credit is allowed for only KIN 442 or 536
KIN	443	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 340 (EPE 340 or PED 340) with C or better; Credit is allowed for only KIN 443 or 533
KIN	444	Metabolic Adaptations to Exercise Training	Examines physiologic adaptations to exercise training as they relate to metabolism and tissue functions.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 (EPE 340 or PED 340) with C or better
KIN	445	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 (EPE 340) with a C or better; Credit is allowed for only KIN 445 or 535
KIN	446	Pediatric Obesity	Covers a variety of aspects related to pediatric obesity including the causes and consequences in terms of physiologic, genetic, psychosocial, environmental and economic. Also discusses potential interventions such as behavioral, pharmacologic, surgical and public health and policy. Evidenced-based course where research guides class lectures and discussions.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 315 or KIN 340; Credit is allowed for only EXW 412 or KIN 446 or EXW 494 (Pediatric Obesity) or KIN 494 (Pediatric Obesity)
KIN	447	ECG Interpretation	Using ECG data, this course comprehensively investigates cardiac arrhythmias and interactions with therapeutic drugs and exercise.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 with C or better; Credit is allowed for only KIN 447 or 547 (or 598 (ECG Interpretation))
KIN	450	Biopsychosocial Perspectives on Physical Activity and Health	Uses a biopsychosocial perspective to examine the interrelationships on physical activity and health (physical and mental).	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 352 (EPE 352) with C or better
KIN	452	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Pre-requisite: KIN 352 (EPE 352 or PED 352) with C or better; Credit is allowed for only KIN 452 or 522
KIN	454	Motivational Theory in Exercise and Health	Assesses motivational theories relevant to the field of exercise and health psychology. Evaluates research and utilizes the findings to create applied public service announcements targeted toward a specific health issue (e.g., exercise, nutrition, smoking) and a specific population. Assesses students on four group public service announcements and "mini exams" for each unit. Taught in class, online and in a hybrid format.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): KIN 352 with C or better. Credit is allowed for only KIN 454 or KIN 494 (Motivational Theory in Exercise & Health)
KIN	460	Theory of Strength Training	Research and theories on developing muscular strength; programs for developing muscular strength.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 340 (EPE 340 or PED 340) with C or better
KIN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): minimum 2.00 GPA; Corequisite(s): junior or senior standing
KIN	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6		Prerequisite(s): Barrett Honors student
KIN	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6	L	Prerequisite(s): Barrett Honors student
KIN	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6	L	Prerequisite(s): Barrett Honors student
KIN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Pre-requisite: Minimum 25 hours
KIN	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-7	L	Prerequisite(s): Kinesiology BS major; senior standing
KIN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
KIN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	512	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discusses injury mechanisms.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 412 or 512
KIN	520	Applied Sport Psychology	Psychological theories and techniques applied to a sport to enhance the performance and personal growth of athletes and coaches.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 448 or 520
KIN	522	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 452 or 522
KIN	523	Motor Control and Aging	Focuses on the functional and behavioral changes to the motor system as humans age and how specifically it impacts motor control and learning.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	530	Exercise Physiology	Immediate and long-term adaptations to exercise with special reference to training and the role of exercise in cardiovascular health.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	531	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 441 or 531
KIN	532	Exercise Biochemistry	Understanding the basic biochemical principles and enzyme pathways involved in energy transduction during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 440 or 532
KIN	533	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 443 or 533
KIN	535	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 445 or 535
KIN	536	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 442 or 536

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
KIN	537	Comparative Biomechanics and Motor Control	Guides students to critically evaluate how the physical and mechanical properties of organisms and their environment affect biological tissues, structures, and motor control.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only BIO 437, 537, KIN 437, 494 (Comparative Biomechanics and Motor Control), 537 or 598 (Comparative Biomechanics and Motor Control)
KIN	547	ECG Interpretation	Comprehensive investigation of the heart rhythm disturbances that occur within the chambers and conducting tissue of the heart. Partitioned into three sections allowing the systematic review of arrhythmias that occur in the atria, AV junction and ventricles of the heart. The material is designed to maximize understanding by analyzing electrocardiogram rhythm strips to reinforce applying the theoretical component of the course. Also uses the application of these theories through laboratory experiences allowing hands-on experience with electrode placement and 12 lead ECG interpretations.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): Clinical Exercise Physiology MS or Exercise and Wellness MS student; Credit is allowed for only KIN 447 or KIN 547 or KIN 598 (ECG Interpretation)
KIN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	598	Special Topics	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	621	Motor Learning/Control	Discussion of contemporary research issues in motor learning and control. Includes behavioral and neurophysiological issues.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
KIN	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
KOR	101	First-Year Korean I	Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills, including Han'gul. Lecture, recitation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
KOR	102	First-Year Korean II	Continuation of KOR 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		Pre-requisite: KOR 101
KOR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	201	Second-Year Korean I	Continual development of communication skills. Increased emphasis on reading and writing, vocabulary building, and review of fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: KOR 102
KOR	202	Second-Year Korean II	Continuation of KOR 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: KOR 201
KOR	250	Korean Culture and Society	Surveys Korean culture and society, covering history, religious traditions, gender, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	
KOR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	313	Third-Year Korean I	Continued development of ability to communicate orally and in writing. Exposure to a variety of Korean written styles.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: KOR 202
KOR	314	Third-Year Korean II	Continuation of KOR 313.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: KOR 313
KOR	321	Korean Literature in Translation	Introduces various genres of Korean literature written from the seventeenth century to the present in English translation. Aims to help students to understand the history of modern Korean literature in transnational and transdisciplinary contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only KOR 294 (Korean Lit in Translation), 321, 394 (Korean Lit in Translation) or SLC 321
KOR	347	Korean Film and Literature	Introduces aspects of Korean history, culture, and society through Korean film and literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	
KOR	350	Women of Korea	Examines the changing role and status of women in modern Korea in relation to political and cultural changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	H	
KOR	354	Religions of Korea	Explores major religious traditions and folk religions in Korea. Covers diverse topics such as mythology, indigenous practices, doctrinal and meditation Buddhism, early and Neo-Confucianism and Christianity as well as the new religions of modern times. Discusses the development of religious ideas and practices in light of the political, cultural and social milieus. Focuses on cultural importation and adaptation as well as interaction and conflict among the different religious traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 24 hours; Credit is allowed for only KOR 354 or REL 354
KOR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
KOR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
KOR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
KOR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
KOR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
KOR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LAA	345	Professional Practice Seminar	Landscape architecture practice including contracts, project and office management, liability, licensing, and professional development.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	1		Pre-requisites: Landscape Architecture student; Co-requisite: LDE 362
LAA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAP	332	GIS Applications in Environmental Design	Addresses fundamentals of geographic information systems (GIS), especially as they relate to applications by environmental planners and designers (including architects, landscape architects, urban designers and related professionals). Focuses on using GIS as tools. Explores the techniques and procedures for acquiring, displaying, editing, analyzing and modeling spatial information.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Landscape Architecture BS major; minimum junior standing; ALA 235
LAP	352	Ecosystems and Sustainable Design	Increases awareness and understanding of the biotic and abiotic systems, processes and factors of our biosphere in order to facilitate sustainable landscape architectural design and applications.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Landscape Architecture major; Credit is allowed for only LAP 352 or LTC 294 (Natural Systems)
LAP	354	Plant Materials	Plants as landscape architectural elements. Emphasizes plant identification and the uses of particular plants in landscape architecture.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Landscape Architecture major. Co-requisites: LAA 345; LDE 362; Credit is allowed for only LAP 345 or LTC 494 (Plant Materials)
LAP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Landscape Architecture BSLA plan; Co-requisite: LDE 461
LAP	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-6		Pre-requisite: Junior standing; Credit is allowed for only GCU 485 or GPH 485 or LAP 485 or POR 485 or PUP 485 or 585
LAP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
LAP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
LAP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
LAP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAP	585	International Field Studies	Organized field study in specified international locations.	N	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only GCU 485 or 586 or GPH 485 or 585 or LAP 485 or 585 or POR 485 or PUP 485 or 585
LAP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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LAP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	CNV	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
LAS	205	Deep Roots: Latin America	Introduces the diversity of Latin-American traditions through its cultural production. The approach is interdisciplinary (art, architecture, literature, film, theater, business and anthropology). Studies the history and culture of Latin America and its concept of identity and nation through a variety of genres. Focuses on aspects that reveal the complexity of Latin America and in turn provides insights into Latin American culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	206	Locating Latin America: Interdisciplinary Methods	Methodologies course designed to provide exposure to academic fields and research approaches that intersect in Latin American studies	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
LAS	330	From the Inside: The Latin American Journey	Journeys through a wide variety of genres and critical scholarship in Spanish. Provides a broad exposure to different types of reading and writing. Because the Latin American Studies program is flexible, students must be able to engage with many different types of texts across disciplines. Covers Latin American cultural history from pre-Colombian to the post-modern by exploring different formats and genres around major central themes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	340	Latin American Women Writers	In the 20th and 21st centuries, Latin America has seen a proliferation of literature published by women authors. While this explosion of the written word owes in part to changing socioeconomic factors and the opening of the international markets, Latin American women's literary history is often ignored in the canon. Examines the concepts of feminism through a Mexican framework, starting from the point of view of Mexican women theorizing about their own. This is not a history of feminism, but it does aim to highlight certain fundamental texts and key concepts of Mexico's history from the position of women writers, including feminism's critique of social structures beyond the bounds of gender relations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only LAS 340 or WST 341
LAS	350	The Construction of a Nation: Chile in the 20th/21st Century	Examines Chilean history, politics and cultural production through its historical development and explores a multiplicity of cultural issues. Develops knowledge and appreciation of cultural and visual production of Chile and Latin America as well as acquired skills for critically analyzing texts in their applicability to modern-day society. Considers the variety of cultural and artistic productions (novel, poetry, short story, film, music, pop culture, presidential speeches) as sources of social commentary in which observations of national identities are constructed.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; Credit is allowed for only LAS 350, ENG 494 (Construction/Nation:Chile in the 20th/21st Cen) or SPA 494 (Construction/Nation:Chile in the 20th/21st Cen)
LAS	351	Cityscapes: Urban Mexican Literature and Culture	Examines major developments in contemporary Mexican literature. Begins at mid-20th century as the novel turns away from the rural novel of the Revolution, toward a more urban setting. Mexico City serves as a cultural and political center, and the novels mark social and political changes across different literary currents.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	355	Contemporary Mexican Cinema: Changing Cartographies	Examines major themes and auteurs in contemporary film as their work intersects with larger cultural phenomena, expanding students' cultural knowledge as well as critical communication skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
LAS	419	20th Century Chicano/a History	Historical development of the Chicano community in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only HST 419 or LAS 419

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
LAS	428	Chicano Cultures in the Southwest	Examines the history and cultures of people of Mexican descent in the Southwestern region of the United States through exploration of "cultural citizenship" and "belonging" as they relate to the pursuit of civil rights, equality, justice and cultural production.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AMS 428 or ETH 428 or LAS 428 or MAS 598 (Chicano Cultures in Southwest)
LAS	430	Gender on the Borderlands	Examines women's status in the U.S.-Mexico borderlands through key issues such as migration, labor, violence, education, and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours OR WST 100 or 300 with C or better; Credit is allowed for only ETH 430 or LAS 430 or WST 430 or JHR 598 (Gender on the Borderlands)
LAS	450	Latina/os, Schooling and Social Inequality	Advanced interdisciplinary understanding of the issues facing Chicano, Mexican American and Latino communities in relation to K-16 schooling in the southwestern United States. Examines various schools of thought that have shaped social discourse and policies, develops a critical perspective on the social and political issues affecting education, and identifies issues--both historical and contemporary--affecting Chicanos in public education.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only AMS 450 or ETH 450 or LAS 450 or AMS 429 (Latino/a School & Social Inequty)
LAS	471	Treaties and Cultural Production in Spain and the Americas	Emphasizes sociocultural values associated with national, transborder and transatlantic identities providing a panoramic view of treaties, agreements, constitutions and cultural production by Americans and Spaniards from 1812 to 2012 with particular focus on the themes of nations, borders, citizenship and identity.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	473	Indigenous and Latina/Chicana Representation	Examines from an interdisciplinary perspective contemporary issues experienced by Indigenous and Chicana/Latina women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 45 hours; Credit is allowed for only ETH 473 or LAS 473 or WST 473
LAS	480	Current Trends in Theatre and New Media in Latin America and Spain	Overview of the transatlantic cultural interrelationships between Latin American and Spanish theatre and performance in the 20th and 21st centuries. Explores topics such as cyber-theatre, Internet theatre and multimedia theatre.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	481	Dictatorships and Dirty Wars: Latin American Cinema from Resistance to Reconciliation	Examines aspects of Latin American politics and culture of and through the optic of social unrest. Examines films focusing on the period(s) of recent Latin American history in which there have been social upheavals, dictatorships and state repression, "dirty wars": understood as clandestine wars waged on the citizenry by the government, social movements from below.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s) with C or better: LAS 205, 206, 330. Credit is allowed for only LAS 481 or SPA 481 or ENG 494 (Dictatorships/Dirty Wars:Lat Am Cinema) or SPA 494 (Dictatorships/Dirty Wars:Lat Am Cinema)
LAS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
LAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
LAS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
LAS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
LAT	101	Elementary Latin	Basic Latin grammar with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
LAT	102	Elementary Latin	Continuation of LAT 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Pre-requisites: LAT 101
LAT	140	Greek and Latin Roots in Bioscientific Terminology	Introduces students to the ancient Greek and Latin root words most commonly used in biological, medical, and other scientific terminology, and gives practice identifying them in context. The knowledge of these root words enables students to memorize with greater ease and increased retention the bioscientific terminology they encounter in other coursework as well as in their medical or scientific profession.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
LAT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
LAT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	201	Intermediate Latin I	Final semester of grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	HU	Pre-requisites: LAT 102
LAT	202	Intermediate Latin II	Beginning reading of Latin authors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	HU	Pre-requisites: LAT 201
LAT	222	Survey of Roman Literature	Introductory survey of Roman literature. Familiarizes students with the literary genres, texts and authors of the Romans from the origins of the Latin language to the Silver age. All readings in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only LAT 222, SLC 222, LAT 294 (Roman Literature in Translation) or SLC 294 (Roman Literature in Translation)
LAT	223	Introduction to Greek and Roman Mythology	Familiarizes students with the characters and events of ancient Greek and Roman myths through their literary manifestations, and moves beyond mere narrative to consider the possible interpretations and functions of these myths, thus revealing the central concerns of ancient society and giving insights into the working of our own society and its literary and artistic traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only GRK 223, LAT 223, SLC 223, GRK 294 (Greek and Roman Mythology)
LAT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	301	Roman Authors	Intermediate Latin reading class that introduces Roman prose authors such as Livy, Cicero and Pliny and explores the variety of genres within Latin prose, such as historical accounts, personal letters and political oratory.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): LAT 201 with C or better; Credit is allowed for only LAT 301 or LAT 394 (Introduction to Latin Authors)
LAT	322	Medieval Latin	Surveys Late Antique and medieval Latin authors and texts, both prose and poetry. Some review of grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: LAT 201 with C or better
LAT	344	Classics and Comics	Explores the connections between the classical tradition of Ancient Greek and Roman literature and the modern American superhero comic book tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GRK 344 or LAT 344 or SLC 344 or GRK/LAT/SLC 394 (Classics and Comics) or SLC 494 (Classics and Comics)
LAT	360	Greece and Rome at War		N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 360, HST 397, LAT 360, SLC 360 or SLC 394 (Greece and Rome at War)
LAT	361	Roman Religion	Roman religion was never static, despite the best efforts of the Roman state to make it so. Understands the artifacts and procedures of Roman state cult from its earliest origins to the late empire, using ancient literary sources, archaeology throughout the ages and modern scholarly theories. Clarifies the forces that influenced development and change in Roman religion, both internal and external.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only LAT 361, REL 361, SLC 361 or SLC 394 (Roman Religion)
LAT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	421	Roman Literature	Readings in the Latin masterpieces. Authors read change each year in accordance with needs of the class. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: LAT 202
LAT	422	Roman Literature	See LAT 421.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: LAT 202
LAT	444	Heroes, Ancient and Modern	Explores the heroic literature of the ancient Greeks and Romans, then traces the classical tradition and reception of the classical hero in medieval and modern texts. Incorporates history, art history and material culture from the relevant societies to supplement study of the texts involved.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 444, LAT 444, SLC 444 or SLC 494 (Heroes: Ancient and Modern)
LAT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
LAT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
LAT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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LAT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
LAT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LAT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LAW	105	The Structure and Methodology of the American Legal System	What is law? What is the structure of the American legal system? What does it mean to understand law in the context of that system? How is this system effective and problematic and how does its evolution over time change our perceptions of and relationships with those who are part of it? Provides answers to these and other questions while simultaneously developing a working understanding of American law, its practicalities, and externalities. Takes the form of a comprehensive inquiry into the legal system, its origins, structures, applications, success, failure, and decision-making processes. In asking probing questions about the system and its nature, explores the values and philosophies that inform our American conception of the law and its role in society.	N	LEC	N	OPT	College of Law	College of Law Dean's Office	3		
LAW	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1		Pre-requisites: Freshman standing
LAW	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	College of Law Dean's Office	1-4		Pre-requisites: JD students may not enroll.
LAW	210	Law, Culture and Community	Considers how law constructs meaning from the world around us. Explores not only what law is, but why law is, and where law shows up in American public and private life. Examines the roles of law in facilitating cooperation and resolving conflict with an interdisciplinary lens of history, philosophy, religious studies, political and legal theory.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Credit is allowed for only LAW 210 or 294 (Law, Culture & Community)
LAW	215	Business, Law, and Society	Examines the philosophical and legal framework of business--the basic concepts of business entities, contracts, accountability, and relationships with an emphasis on the social context in which these concepts operate. Emphasizes the concepts of law and ethics throughout the course.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisites: Undergraduate student; Credit is allowed for only LAW 215 or 294 (Business, Law, and Society)
LAW	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	310	The Global Legal Community	Introduces the building blocks of the developing "global legal community," global governance institutions, both public and private, international law and transnational legal regimes. Examines how dynamic area of law is influenced by, and influences the conduct of the international and domestic relations.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: Junior or Senior standing; Credit is allowed for only LAW 310 or 394 (The Global Legal Community)
LAW	315	Foundations in American Business Law	Explores the foundations of American business law. Topics covered include: the structure and processes of the U.S. legal system, a comparison of transactional law and business litigation concepts and processes, and the role of regulation in the free market. Students read law cases and other legal texts such as legislation, professional and academic legal writing.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): minimum 45 hours
LAW	316	Introduction to Corporate Tax Law and Policy	Hands-on introduction to the basics of U.S. Federal and Arizona state corporate tax law. Explores the economic and social policy foundations of the tax codes. Students use the tax code to address various business scenarios they may face.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Credit is allowed for only LAW 316 or 394 (Intro Corporate Tax Law&Policy)

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LAW	322	Consumer Protection Law	Since the "Progressive Era" at the turn of the last Century, many new consumer protection agencies were created: The Food and Drug Administration, The Public Health Service, The Federal Trade Commission, Agencies to Control Narcotics, and fifty years later the Consumer Product Safety Commission, the Environmental Protection Agency and the Radiation Health programs, Nuclear Regulatory Commission. Focusing mostly on health products, look at these efforts and their effects on the products we use, the choices we make and the assurances we have as consumers that these products are well manufactured and deliver the goods.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: Junior or Senior standing; Credit is allowed for only LAW 322 or 394 (Consumer Protection Law)
LAW	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	480	Business, Law and Society	What would a legal system that is pro-business look like? Explores the role law plays in American business. Considers what it means to have business relations generally governed by the rule of law, and specifically in the United States legal system. Draws on legal theory, political theory, and American legal history to guide us. Examines some of the legal tools of the trade from property law and contract law that are fundamental to the conduct of American business. Discovers that the development of legal doctrines promoting free enterprise are at times tempered by social justice concerns rooted in conceptions of equality and fairness. Considers how the current legal regulatory climate promoting corporate social responsibility impacts business decisionmaking.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): LAW 210, LAW 215 or 294 [Business, Law and Society]); junior or senior standing. Credit is allowed for only LAW 480 or LAW 494 (Business, Law and Society)
LAW	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	515	Contracts	Explores common law legal method and the structure of Article 2 of the U.C.C. in the context of issues of contract formation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	516	Criminal Law	Substantive law of crimes.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		
LAW	517	Torts	Legal protections of personality, property, and relational interests against physical, economic, and emotional harms.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	518	Civil Procedure	Explores the structure of a lawsuit and techniques of alternative dispute resolution. Specific topics include commencement of suit, joinder of parties, discovery, pretrial motions, subject matter and personal jurisdiction, res judicata, collateral estoppel, and choice of law under the Erie doctrine.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	519	Legal Method and Writing	Examines methods used to analyze legal problems. Reviews precedent statutory construction and basic res judicata problems. Use of basic legal writing formats.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	522	Constitutional Law I	Role of courts in the federal system, distribution of powers between state and federal governments, and the role of procedure in litigation of constitutional questions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		
LAW	523	Property	Indicia of ownership, found property, estates in land, landlord tenant, nonpossessory interests in property, nuisance, land use planning, and transfers of interests in property.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	524	Legal Advocacy	Continuation of LAW 519.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2		
LAW	530	Fundamentals of Contract Law	Explores the fundamental principles of contract law under the common-law and Uniform Commercial Code statutory provisions. Focuses on issues of contract formation and interpretation, defenses to enforcement, warranties and conditions, and remedies for breach of contract.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): Master of Legal Studies major; Credit is allowed for only LAW 530 or LAW 598, Fundamentals of Contract Law
LAW	581	U.S. Law and Legal Analysis	Introduces non-JD students to the U.S. legal system and to the types of legal reasoning used by U.S. lawyers and judges. Provides the necessary instruction to use legal reasoning in work, including reading and understanding cases and statutes and applying existing law to the issue presented. Extensive written legal analysis exercises.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): Laws (Global Legal Studies) or Legal Studies or Master of Sports Law and Business student
LAW	582	Patent Drafting	Prepares students to draft patent applications on behalf of clients. Additionally, students learn the techniques and language necessary to reply to Offices Actions issued by the United States Patent and Trademark Office (USPTO). Provides significant drafting experience, requiring three separate writing submissions and revisions based on instructor feedback throughout the course. Students create work product examples that can be shared with potential employers and/or prospective clients.	N	LEL	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): Master of Legal Studies major
LAW	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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LAW	585	Comprehensive Patent Practice	Prepares students for the patent prosecution process, as administered by the United States Patent and Trademark Office (USPTO). Uses a "cradle to grave" approach, beginning with the earliest steps taken when preparing to draft a patent application for a client and ending with post-decision options and activities available to those awarded with an issued patent or denied an issued patent.	N	LEL	N	GNA	College of Law	Sandra Day O'Connor College of Law	5		Prerequisite(s): Master of Legal Studies major
LAW	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAW	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	596	Professional Legal Writing	Teaches non-JD students how to organize a legal research project by analyzing the facts and identifying the issues involved, determining the research tools needed to correctly investigate the legal problem, and systematically using these tools to strengthen and support the desired legal argument.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: Laws (USLaw&Global Legal Pract) or Legal Studies students
LAW	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	601	Antitrust Law	Legislation and its implementation to prevent monopoly and business practices in restraint of trade, including restrictive agreements involving price-fixing, trade association activities, and resale price maintenance.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: College of Law student
LAW	602	Civil Procedure II	Focuses on the Rules of Civil Procedure and how lawyers use the Rules in litigating civil cases from initiation through the pre-trial stages.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		
LAW	603	Conflict of Laws	Problems arising when the operative facts of a case are connected with more than one state or nation. Choice of law, bases of jurisdiction, effect of foreign judgments, and underlying federal and constitutional issues.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Prerequisite(s): degree- or nondegree-seeking graduate student
LAW	604	Criminal Procedure	Nature of the criminal procedural system with special focus on constitutional protections for the accused.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisites: College of Law student
LAW	605	Evidence	Principles and practice governing the competency of witnesses and presentation of evidence, including the rules of exclusion and roles of lawyer, judge, and jury under the adversary system.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student
LAW	606	Federal Income Taxation	Federal income tax in relation to concepts of income, property arrangement, business activity, and current tax problems, with focus on the process of tax legislation and administration.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student
LAW	607	Nanotechnology Law and Policy	Provides an overview of the legal and policy issues relating to nanotechnology, including risk management, national and international regulations, intellectual property, privacy issues, and liability issues.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	610	Advanced Criminal Procedure	Topics in criminal procedure, with emphasis on legal constraints on grand jury investigations, police practices, pretrial release, preliminary hearings, prosecutorial discretion, and plea bargaining.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	611	Estate and Gift Tax	Tax laws relating to transfer of wealth both at death and during lifetime, including federal estate tax, gift tax, and income taxation of estates and trusts.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student; LAW 606
LAW	612	Family Law	Legal and nonlegal problems that an individual may encounter because of a situation as a family member.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	613	Federal Courts	Federal judicial system; relationship of federal and state law; jurisdiction of federal courts and their relation to state courts.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	614	International Contracts	Explores the laws applicable to international contractual relations, focusing heavily on the United Nations Convention on Contracts for the International Sale of Goods. One of several offerings in the field of International Business Transactions, touches on choice of law rules and a comparison of selected UCC with CISG provisions; a comparison of the contract law of selected foreign nations with the UCC; and the law of contracts in the United States. The casebook is heavily oriented toward a problem method of study.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	615	Public International Law	Role of law in international disputes. Considers drafting and interpretation of treaties and multilateral conventions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	616	Jurisprudence	Introduces legal philosophy, with readings on the nature of law and legal reasoning, the relationship between law and morality and equality and social justice.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student

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LAW	617	Genetics and the Law	Provides background on genetics and recent genetic advances; addresses the legal consequences and issues associated with such advances.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Prerequisite(s): College of Law major or MS in Biomedical Diagnostics major. Credit is allowed for only BMD 617 or LAW 617
LAW	618	Decedent's Estates	Substantive concepts involved in transmitting wealth, including interstate succession, wills and will substitutes, the modern trust as a family protective device, creation of future interests in a planned estate, social restrictions of a nontax nature, and methods of devoting property to charitable purposes.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	620	Civil Rights Legislation	Coverage of the rights and remedies provided by federal civil rights legislation, principally, the key provisions of the Reconstruction Era Civil Rights Acts, portions of the employment discrimination legislation, and voting rights legislation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	621	Sales	Advanced issues involving the formation and interpretation of sales and lease contracts. Focuses primarily on Articles 2 and 2A of the Uniform Commercial Code.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	622	Secured Transactions	Secured transactions under Article 9 of the Uniform Commercial Code and other relevant sections. Overview of the creation, perfection, and priority effects of security interests. Financing of business enterprise and consumer credit.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	624	Community Property	Property rights of husband and wife; the Arizona community property system; homestead.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	1-2		Pre-requisite: College of Law student
LAW	625	Constitutional Law II	Fundamental protection for person, property, political, and social rights.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	626	Writing for Law Practice	Helps students attain an advanced level of writing proficiency by exposing them to a broad range of legal documents.	N	SEM	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: Juris Doctor Candidate; Credit is allowed for only LAW 626 or 665
LAW	627	Corporate Taxation	Problems in taxability of the corporation, corporate distributions, and corporate reorganizations.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	628	Creditor-Debtor Relations	Creditors' remedies in satisfaction of claims and debtors' protection and relief under bankruptcy, other laws.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	629	Employment Law	Employment law topics including testing, privacy, OSHA, FLSA, benefits, worker's compensation, rights to compensation, workplace emotional injuries, termination, and sexual harassment.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	630	Employment Discrimination	Focuses primarily on Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act, and the Americans with Disabilities Act.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	631	Environmental Law	Litigation, administrative law, and legislation relating to problems of environmental quality. Topics covered may include air and water pollution, toxic substances, pesticides, and radiation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	632	Federal Indian Law I	Inquiry into legal problems special to American Indians and tribes.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	633	Law, Litigation, and Science	Fills a gap in the education of most lawyers, namely, how to effectively think about and use empirical evidence.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	635	Juvenile Law	Special problems in the juvenile system.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	636	Land Use Regulation	Legal problems in the regulation and control of land development by state and local governments. Administration of zoning, subdivision, and other planning controls; issues of fairness and procedure in the utilization of such controls.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	637	Lawyering Theory and Practice	Issues of competency and professionalism in the practice of law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	4		Pre-requisite: College of Law student
LAW	638	Professional Responsibility	Emphasizes the Model Rules and Model Code that govern the professional responsibility of lawyers and their interpretation and application.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	639	Natural Resource Law	Examines the constitutional basis for federal land management and the different kinds of public lands management schemes (e.g., parks, forests, wildlife refuges), emphasizing acquisition of right to, and regulation of, the different uses of public lands and resources (e.g., mining, grazing, timber, wildlife habitat, recreation).	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	640	Securities Regulation	Selected problems arising under the major statutes concerned with regulating the securities market.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	642	White Collar Crime	Examines the ways in which white collar crime is prosecuted, principally in the federal system.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	643	Water Law	Acquisition of water rights; water use controls; interstate conflicts.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	645	Patent Law	In-depth examination of substantive patent law as it applies to the commercialization and enforcement of patent rights.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	646	Copyright Law	Legal rights in original forms of human expression.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student

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LAW	647	Mass Tort Litigation	Examines unique procedural and substantive issues that arise in mass tort litigation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	648	International Intellectual Property	Considers patents, copyrights, and trademarks under international law and the major international treaties.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	649	Scientific Evidence	Examines the use of scientists and scientific tests or studies in criminal and civil litigation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	650	Health Law	Introduces health law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	651	Public Health Law	Addresses the relationship between the state and the population's health.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	652	Bioethics and the Law	Covers a range of issues relating primarily to human reproduction and life and death decisions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	653	Bankruptcy	Covers basic bankruptcy law and practices.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	654	Business Organizations	Covers the primary forms of business organizations: partnerships, limited partnerships, limited liability companies, and corporations.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	655	Chapter 11	Covers the law and practice of reorganizing business entities under Chapter 11 of the United States Bankruptcy Code.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	656	Valuing Real Estate and Closely-Held Businesses	Focuses on the valuation of interests in real property and closely-held businesses.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	657	Private Property Rights	Explores the conflict between property rights and the right of the government to acquire private property for public use.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	658	Arizona Constitutional Law	Examines the basic provisions of the Arizona Constitution and the judicial decisions interpreting those provisions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student; LAW 522; Pre/Co-requisite: LAW 625
LAW	660	Advanced Estate Planning	Covers advanced estate planning and estate administration issues.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	661	Constitutional Literacy	Academic complement to the Marshall-Brennan Constitutional Literacy Program where law students teach constitutional law to high school students.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	662	Alternative Dispute Resolution and Employment Law	The use of alternative dispute resolution has been most extensive in the area of employment law. Mediation and arbitration are widely used not only in the collective bargaining setting, but also in virtually every aspect of the employment relationship. Offers a comprehensive review of the subject with special emphasis on the extensive body of law that has developed in regulating employer-imposed arbitration. Discussion of mediation includes use of simulations to enable the students to understand how mediation can effectively resolve employment disputes. Opportunities to observe real mediations of employment disputes. Experienced attorneys discuss the "real world" use of employment ADR from a plaintiff's and a defendant's perspective.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	664	Intellectual Property	Surveys the laws conventionally grouped as intellectual property, with a focus on patents, copyrights, and trademarks. Explores the policy rationales for each body of law. Particularly relevant for two types of students: (a) those who are unsure if they want to specialize in IP and want a general introduction, and (b) those who do not have room in the schedules to take all of the upper-level offerings here at ASU. Not appropriate for students who have already taken the upper-level courses in copyright, trademark, and patents; students who have taken these offerings may be withdrawn.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	665	Fundamentals of Legal Drafting	Fundamental writing skills applicable to drafting normative legal documents.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	667	FDA Regulation	Examines the regulation of drugs, medical devices, and biologics (e.g. vaccines) by the Food and Drug Administration.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Prerequisite(s): degree- or nondegree-seeking graduate
LAW	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	697	Visiting Student Program		N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	0		
LAW	701	Arbitration	Examines the Federal Arbitration Act and the Uniform Arbitration Act as it has been adopted in Arizona.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	702	Alternative Dispute Resolution	Broad exposure to methods of settling disputes in our society such as mediation, arbitration/conciliation, and negotiation, including examination of the current litigation model.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	703	Law, Science, and Technology	Legal mechanisms used in dealing with various issues raised by contemporary science and technology. Explores current legal responses to science and technology.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	704	Federal Indian Law II	Surveys the federal legal doctrines surrounding Indian ownership and exploration of resources.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	705	Media Law	Examines First Amendment principles and statutory and regulatory requirements with respect to the conventional print and broadcast media, as well as recent technologies such as cable.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student

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LAW	706	Immigration Law	Explores political, economic, social, and legal issues concerning immigration. Specific topics covered include citizenship and naturalization, denaturalization, deportation, and refugee rights and asylum.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	707	Elder Law	Looks at legal and policy questions related to aging individuals and an older society.	N	SEM	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	709	International Human Rights	International rules and procedures governing the protection of human rights.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	710	Real Estate Tax Planning	Discusses topics, including but not limited to real estate investments as tax shelters, alternative acquisition finance devices, refinancing techniques, and nontaxable exchanges.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	712	Religion and the Constitution	In-depth study of the establishment and free exercise clauses of the First Amendment to the U.S. Constitution.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	713	Tribal Law and Government	Analyzes particular problems in tribal law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	715	Sports Law	Unique legal problems relating to professional sports, including their relationship to antitrust laws, the nature of player contracts, and associated tax problems.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	718	Economic Development in Indian Country	Focuses on the unique legal, economic, and political issues confronting tribal governments in developing diversified reservation economies.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: Law major; Credit is allowed for only LAW 718 or PUP 718
LAW	719	International Indigenous Rights	Examines the developments in recognizing indigenous rights in people's systems of international law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	720	Indian Gaming Law	Surveys the law surrounding the Indian gaming industry.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	721	Education and the Law	Current legal problems affecting institutions of higher education, faculty, students, and governing boards.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	723	Cultural Resources Law	Focuses on the protection of Native American cultural resources and religions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	724	Privacy	Traces the development of privacy law with special attention to contemporary challenges.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	725	Critical Race Theory	Focuses on the idea of "race" as a social/political construct and examines the impact of American law on the construction of race. Provide historical and legal background necessary to understand the significance of race within American law and policy. Evaluate a number of legal frameworks that address issues of race and ethnicity in various contexts (e.g. segregation laws, civil rights law, federal Indian law, international human rights law). Assesses various jurisprudential accounts evaluating the ethical and moral underpinnings of the law. Critical race theory is known as a jurisprudential framework that is often critical of standard liberal approaches. Evaluates the critiques of liberalism and the scholarship of both liberal and critical theorists.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	733	Negotiation	Explores alternative models of negotiated dispute resolution, as well as the roles of lawyer and client in the negotiation process. Extensive use of simulation exercises.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	734	Products Liability	Traces the development of products liability law; analyzes the major issues currently confronting the courts in this area.	N	SEM	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	735	Teaching Assistant	Legal writing teaching assistants assist a writing professor with various tasks throughout the semester.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	736	Advanced Legal Research Seminar	Focuses on a rigorous review of basic print and electronic resources and strategies for conducting legal research, federal/state.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	737	Cults and Alternative Religions	Provides opportunity to study laws and policies governing cults. While the definition of a "cult" will be a topic of initial study in the seminar, it may be conceived of loosely as a group with a charismatic leader whose members are persuaded to relinquish their self-identities and material possessions in furtherance of the group's goals. In addition to analyzing the definition of a cult, the first part of the seminar discusses the various types of cults, studying particular cults, and learning about cultic activities. The remainder covers domestic and foreign legal and policy issues generated by cults, including the legal rights of cultic organizations, anti-cult organizations, cult members, and cult members' families. Covers conventional religions that are conceptually similar to cults, to the degree that religious movements fall outside the mainstream.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	738	Trial Advocacy	Confronts issues of trial advocacy through simulation of a variety of aspects of trial practice in a mock court setting.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: LAW 605
LAW	739	Economics and the Law	Explores premises of the law and economics movements and their applications to property, contract, and tort law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	745	The Supreme Court	Intensive examination of selected current decisions of the U.S. Supreme Court.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	768	International Business Transactions	Introduction to U.S., foreign, and international law regulating cross-border business transactions and to the structure of cross-border business deals.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: LAW 515 and 654

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LAW	770	Law Journal	Academic credit for successful completion of editorial work by a member of the staff of Arizona State Law Journal.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	771	Jurimetrics Journal	Academic credit for successful completion of editorial work by a member of the staff of the Jurimetrics Journal of Law, Science, and Technology.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	772	Defender Clinic	Placement in the Public Defender Clinic and related classroom component.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		Pre-requisite: College of Law student
LAW	773	Civil Justice Clinic	Placement in the Civil Practice Clinic and related classroom component.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	774	Criminal Practice Clinic	Placement with various prosecutor offices in the Phoenix area and related classroom component.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		Pre-requisite: College of Law student; LAW 605
LAW	775	Mediation Clinic	Study of the mediation process and experience as mediators in cases pending before the justice courts and administrative agencies.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	776	Indian Legal Clinic	Provides law students the opportunity to participate in cases dealing with native peoples and Indian issues.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	777	Innovation Advancement Legal Clinic	Allows students to gain real-world experience in legal areas such as patentability of inventions, patent drafting, and technology valuation.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		Pre-requisite: College of Law student
LAW	778	Immigration Law and Policy Clinic	Live-client clinic where students represent Latinos, particularly children, in immigration proceedings and the immigration courts.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		Pre-requisite: College of Law student
LAW	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	781	Independent Study	With the approval of a faculty member, a student may research a legal subject of special interest and prepare a paper suitable for publication.	Y	IND	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	782	Independent Study	See LAW 781.	N	IND	N	OP6	College of Law	Sandra Day O'Connor College of Law	2		
LAW	783	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	785	Externship	Supervised, practical lawyering in an external placement proposed by the student or established by a sponsoring agency and approved by the Sandra Day O'Connor College of Law. In addition, an associated academic component is established by the student with a member of the faculty.	Y	PRA	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	795	Cont Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	College of Law	Sandra Day O'Connor College of Law	1		
LAW	797	Visiting Student Program		N	LEC	N	Z3	College of Law	Sandra Day O'Connor College of Law	0		
LDE	261	Landscape Architecture Design Fundamentals III	Applies design fundamentals with an emphasis on landscape architectural issues.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	4		Prerequisite(s): Landscape Architecture major; passed milestone; ALA 122 with C or better; Corequisite(s): ALA 235
LDE	262	Landscape Architecture Design Fundamentals IV	Applies design fundamentals to landscape architectural design with emphasis given to human factors.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	4		Prerequisite(s): Landscape Architecture major; LDE 261 with C or better
LDE	361	Landscape Architecture I	Site planning: analysis of natural and cultural features; site systems and implications for plan making and design.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): Landscape Architecture major; LDE 262 with C or better; Corequisite(s): LTC 343
LDE	362	Landscape Architecture II	Site design: site-specific design of configured space by the creative development of form.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Landscape Architecture student; LDE 361 (or PLA 361) with C or better
LDE	363	Landscape Planting Design	Functional and aesthetic use of plants in arid-region landscape design. Explores design philosophies through planting design problems.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Landscape Architecture student; Co-requisites: LTC 344, LDE 461
LDE	461	Landscape Architecture III	Landscape ecological planning: collection and application of ecological data relevant to planning and design at landscape scale.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Landscape Architecture student; LDE 362 with C or better; Co-requisites: LTC 344; LDE 363

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
LDE	462	Landscape Architecture IV	Advanced landscape architecture: integrative capstone studio with multifaceted design problems.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Landscape Architecture student; LDE 461 with C or better; Co-requisite: LTC 446; LPH 411
LDE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
LDE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
LDE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LDE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
LDE	521	Advanced Landscape Architectural Studio I	Explores landscape architecture and design with emphasis on the urban landscape and the significance ecology plays in the design process. Studio-based course includes reading, presentations by faculty and students, discussion, design research, conceptual design practice, and the public exhibition/presentation of this work in multiple formats.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): Master of Landscape Architecture student; Credit is allowed for only LDE 521 or LDE 590 (Advanced Landscape Architecture Studio I) or LDE 590 (Applied Landscape Architecture)
LDE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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LDE	621	Advanced Landscape Architectural Studio III	Structured around the Design School's "traveling studio" model and provides an opportunity for graduate-level students to refine their talents while also contributing to a better future. Challenges students to work in a multidisciplinary environment to identify new design concepts that improve society and the natural environment. For approximately one week during the semester, students travel to an off-campus location (either in the U.S. or abroad) to examine a local condition there for which new design solutions are needed. Students return to ASU and continue working on the project for the semester. Studio-based course includes reading, presentations by faculty and students, discussion, design research, conceptual design practice, and the public exhibition/presentation of this work in multiple formats.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): LDE 522 with C or better; Credit is allowed for only LDE 621 or LDE 690 (Advanced Landscape Architecture Studio III)
LDE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		
LES	305	Business Law and Ethics for Managers	Legal theories, ethical issues, and regulatory climate affecting business policies and decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): W.P. Carey student, or non-business student with minimum 2.5 ASU cum GPA and minimum 56 earned hours, or non-degree student with minimum 2.5 ASU cum GPA, or graduate student
LES	306	Business Law	Legal and ethical aspects of contracts, sales, commercial paper, secured transactions, documents of title, letters of credit, and bank deposits and collections.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-Requisites: Student in Accountancy; Global Management student in Conditional or Professional Business status
LES	380	Consumer Perspective of Business Law	Role of law as it affects society. Uses case studies to present principles that govern business and consumers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: Must have a minimum GPA of 2.00 ASU Cum GPA and a minimum total earned hours of 56, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
LES	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		Pre-requisites: Minimum 2.00 GPA; Minimum 56 hours OR Non-degree seeking student

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LES	411	Real Estate Law	Legal and ethical aspects of land ownerships, interests, transfer, finance development, and regulations of the real estate industry.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s) with C or better: FIN 300 or 302 or 303 or REA 380; W.P. Carey BA or BS Business major OR non-business student with minimum 56 hours and 2.50 ASU and business GPA OR non-degree graduate student. Credit is allowed for only LES or REA 411
LES	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-6	L	Prerequisite(s): Barrett Honors student
LES	581	Essentials of Law for Managers	Studies legal components of business decisions, multiple aspects of law affecting business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1.5-3		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	582	Ethical Issues for Managers	Studies ethical decisions; the role of business in society.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1.5-3		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIA	101	Student Success in the College of Liberal Arts and Sciences	Introduces students to resources that help them succeed in the College of Liberal Arts and Sciences.	N	SEM	N	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1		Pre-requisite: Freshman standing; Credit is allowed for only LIA 101 or 194 (Intro Liberal Arts & Sciences)
LIA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
LIA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		Prerequisite(s): Barrett Honors student
LIA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		
LIA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		Prerequisite(s): Barrett Honors student
LIA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6	L	Prerequisite(s): Barrett Honors student
LIA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-14		
LIA	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		Prerequisite(s): Barrett Honors student
LIA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
LIA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
LIA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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LIN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	501	Approaches to Research	Theories, methods and/or methodologies as well as qualitative and/or quantitative approaches to the specific discipline. Also serves as an introduction to the profession.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ENG 501 or LIN 501
LIN	510	Linguistics	Overview of linguistics, its subfields, and some of its applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Students who have credit for BLE 537, may not enroll in LIN 510
LIN	511	Phonetics and Phonology	Current trends in phonological theory and its basis in acoustic and articulatory phonetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	513	Semantics	Current approaches to linguistic meaning with particular attention to English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	514	Syntax	Analyzes syntactic structures using a generative theoretical model with a focus on English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	515	American English	Development of the English language in America, including regional and social varieties, and its relationship to other immigrant and native languages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	516	Pragmatics and Discourse Analysis	Studies language use in context and language structures in spoken and written texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	516	Pragmatics and Discourse Analysis	Studies language use in context and language structures in spoken and written texts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	517	History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Students who have credit for ENG 413, many not enroll in LIN 517
LIN	517	History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Students who have credit for ENG 413, many not enroll in LIN 517
LIN	520	Second-Language Acquisition Theories	Theories of second-language acquisition, including the linguistic, cognitive, and sociocultural aspects.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	521	Methods of Teaching English as a Second Language	Methods of teaching English as a second language, language teaching trends, practical applications, and the teaching of different skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	522	Grammar for TESL	Surveys major grammatical structures in English and how they can be taught to ESL speakers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	523	Language Testing and Assessment	Introduces the theory and practice of language test construction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	524	Curriculum Design and Materials Development	Practical guide to curriculum and materials development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	525	Teaching Second Language Writing	Provides a critical introduction to the field of second language writing as well as issues and strategies in the teaching of second language writing in a wide variety of contexts. After exploring various instructional contexts as well as the characteristics of different types of students and their texts, considers various instructional practices and strategies, focusing on course and assignment designs, reading-writing connection, teacher and peer feedback, grammar instruction, classroom assessment, plagiarism and text borrowing strategies, and negotiating language differences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only LIN 525, 591 (Teaching 2nd Language Writing) or ENG 525
LIN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
LIN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	610	Advanced Studies in Linguistics	Different topics such as morphology, semantics, typology, history of linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	614	Advanced Studies in Syntax	Focuses on morphosyntactic feature checking, movement, phrase structure, and their crosslinguistic differences.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	615	Advanced Studies in Sociolinguistics	Language in its social setting, e.g., social variation among native speakers, sociolinguistics aspects of second-language acquisition, and language policy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	616	Advanced Studies in Discourse Analysis	Advanced analysis of spoken and written discourse emphasizing different methodological and theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	617	Advanced Studies in Historical Linguistics	Overview of theories on language change, the history of languages, and of methods in historical linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	620	Advanced Studies in Second-Language Acquisition	Selected topics in second-language acquisition, such as phonetics and phonology, morphology, syntax, and discourse.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	625	Advanced Studies in Second Language Writing	Provides opportunities to explore advanced research topics as well as current issues and controversies in the field of second language writing--an interdisciplinary field of inquiry simultaneously situated in applied linguistics, rhetoric and composition, and teachers of English to Speakers of Other Languages.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ENG or LIN 625
LIN	655	Disciplinary Discourses	Investigation of professional and disciplinary issues related to linguistics and applied linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ENG 655 or LIN 655
LIN	656	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
LIN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
LIS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
LIS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LNP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LNP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LNP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		

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LNP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LNP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LNP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LNP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LPH	310	History of Landscape Architecture	Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Pre-requisites: Landscape architecture majors; ALA 100 or ALA 102; passed the degree milestone review, or non-majors with sophomore standing
LPH	311	20th-Century Landscape Architecture	Explores concerns, projects, and movements in landscape architecture of late 20th-century understanding; social, ecological, regional, and historical influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	Pre-requisites: Landscape architecture majors; ALA 100 or 102; passed the degree milestone review, or non-majors with junior standing
LPH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LPH	411	Landscape Architecture Theory and Criticism	Critically analyzes landscape architecture theories and projects to evaluate validity of design and contribution to society.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	L	Pre-requisites: Landscape Architecture; LDE 461 and LPH 311 with C or better; Co-requisites: LDE 462 and LTC 446
LPH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
LPH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
LPH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LPH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
LPH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
LPH	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
LSC	322	Fundamentals of Ecology Laboratory	Investigational field course on fundamental concepts in ecology.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre/Co-requisites: LSC 320 or BIO 320 (with C or better if completed)
LSC	347	Fundamentals of Genetics	Science of genetics, gene flow, and genetic engineering in humans and other organisms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) and CHM 116 with C or better
LSC	348	Fundamentals of Genetics Laboratory	Investigational lab using modern molecular techniques to analyze various genetic phenomena.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187) with C or better; CHM 113 with C or better; CHM 116 with C or better; Pre or Co-requisites: LSC 347 (with C or better if completed)
LSC	359	Animal Physiology Laboratory	Investigative lab experience using animals (including humans) and models.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre/Co-requisites: LSC 358 or BIO 360 (with C or better if completed)
LSC	362	The Human Environment	Evolution of humans' physiological, ecological, and behavioral interaction with their environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		
LSC	363	Genes, Race, Gender, and Society	Examines biological events and theories on race and gender and their interface with societal views.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Prerequisite(s): BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187) with C or better; BIO 340 or LSC 347 with C or better; BIO 353 (or LSC 353) with C or better; CHM 234 with C or better
LSC	365	The Human Organism	Analyzes human anatomy, physiology, and behavior in an ecological and evolutionary context with the methods of comparative biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	
LSC	375	Analytical Chemistry for Life Sciences	Presents an analysis of chemicals, including the theoretical and practical considerations regarding the separation, detection and quantitative determination of chemicals. Illustrates the application of different analytical procedures using some of the common chemicals of concern in the forensics and environmental fields.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 234 and 238 with C or better; Credit is allowed for only FOR or LSC 375
LSC	376	Analytical Chemistry for Life Sciences Lab	Provides hands-on experience with sample extraction, sample clean-up, and instrumental analysis of common chemicals. Largely focuses on the application of analytical chemistry methods to the fields of forensics and the life sciences. Mainly uses the solvent and solid-phase analyte extraction methods; gas chromatography-mass spectrometry, FTIR and NMR, generally determines analyte identification.	N	LAB	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	2		Prerequisite(s): CHM 234 with C or better; CHM 238 with C or better; Corequisite(s): FOR 375 or LSC 375; Credit is allowed for only FOR 376 or LSC 376
LSC	388	Research Fundamentals for the Natural Sciences	Teaches research skills in the natural sciences. Topics covered include the basic research techniques of the study organism and system, experimental design, literature searches, statistical analysis and preparation of scientific papers and posters.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	L	Prerequisite(s): BIO 181; BIO 182; Credit is allowed for only LSC 388 or LSC 498 (Research Fundamentals for the Natural Sciences)
LSC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
LSC	430	Environmental and Human Toxicology	Lecture/fieldwork course investigating toxic substances in the environment and their effect on the health of organisms, including humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 181 (or BIO 188), BIO 182 (or BIO 187), and CHM 116/115 with C or better
LSC	432	Fundamentals of Pharmacology	Aspects of pharmacology using an integrated approach to familiarize students with natural and synthetic therapeutic agents used in medicine.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BCH 361 or 371 or 461; BIO 340 or LSC 347; BIO 353; CHM 231 or 234

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LSC	434	Marine Ecology	Examines ecological processes in oceans, seas, and estuaries that emphasizes species- and community-level phenomena.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187) with C or better; LSC 320 or BIO 320 with C or better
LSC	447	Molecular Genetics Laboratory	Investigative lab involving DNA isolation, PCR, gel electrophoresis, enzyme digestion and ligation, transformation, and hybridization analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): minimum 45 hours; Credit is allowed for only FOR 447 or LSC 447
LSC	475	Principles of Toxicology	Presents the fundamental principles of toxicology and its application to both human and environmental situations. Starts with the means of defining and quantifying toxic effects through dose response curves (e.g. LD50, EC50, LOEL, NOEL). Then focuses on absorption pathways for toxicants as well as the degradation metabolism pathways for toxicants. Finally focuses on the mechanism of toxic action for common poisons and environmental pollutants. Emphasizes toxicants that students are likely to encounter in forensics and environmental fields.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: BCH 361 (or BCH 371 or LSC 394: Modern Concepts in Biochemistry) and BIO 353. Credit is allowed for only FOR or LSC 475
LSC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
LSC	486	Peer Mentoring in the Life Sciences	Advanced students learn and apply mentoring skills in teaching labs.	N	SEM	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): minimum 45 hours
LSC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
LSC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
LSC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
LSC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7	L	
LSC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
LSC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LAB	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LAB	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	540	Theoretical Views of Learning in the Learning Sciences	Theoretical perspectives that inform learning scientists. Examines affordances and limitations of theories for designing productive learning environments.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EDP 540 or LSE 540

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
LSE	571	History of the Learning Sciences	Examines the history of the interdisciplinary field of the learning sciences in relation to the various disciplinary traditions from which it derives.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		
LSE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
LSE	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LTC	343	Landscape Construction I	Landscape constructions focusing on landform transformations. Topics include landform analysis, grading, and earthwork.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Co-requisites: LDE 361
LTC	344	Landscape Construction II	Characteristics of materials and methods used in landscape architectural construction.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Landscape Architecture student; LTC 343 with a C or better; Co-requisites: LDE 363 and 461
LTC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LTC	446	Landscape Construction III	Landscape construction focusing on low-technology, biotechnical, regional, and experimental techniques or systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Landscape Architecture student; LTC 344 with a C or better; Co-requisites: LDE 462 and LPH 411
LTC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LTC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
LTC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LTC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		Pre-requisites: MAE Freshman student
MAE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	212	Engineering Mechanics	Force systems, resultants, moments and equilibrium. Kinematics and kinetics of particles, systems of particles and rigid bodies. Energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Mechanical or Aerospace Engineering student; PHY 121 C or better; Pre- or Corequisite(s): MAT 274 or 275 (with C or better if completed) or Non-Mech/Aero student; PHY 121; Pre- or Corequisite(s): : MAT 274 or 275
MAE	213	Solid Mechanics	Equilibrium, strain-displacement relations, and stress-strain-temperature relations. Applications to force transmission and deformations in axial, torsional, and bending of bars. Combined loadings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): CEE 210 (or CEE 211) or MAE 212 with C or better; MAT 274 or 275 with C or better; PHY 122 with C or better
MAE	214	Computer-Aided Engineering I	Introduces geometry and construction techniques in CAD, technical drawing conventions, generating drawings from CAD models.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Pre-requisites: Mechanical & Aerospace Engineering student; MAE 212 (or ECE 212 or ECE 214) with C or better or Co-requisite: MAE 212
MAE	215	Introduction to Programming in MATLAB	Introduces basic topics and concepts of computer programming in MATLAB.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Mechanical and Aerospace engineering BSE student; MAT 265 (or 270); Credit is allowed for only MAE 215 or 294 (Introduction to Programming)
MAE	240	Thermofluids I	Introductory concepts in thermodynamics and fluid mechanics. Conservation of mass, momentum and energy. First and second laws of thermodynamics; application to nozzles, turbines, compressors, heat exchangers. Introduction to thermodynamic cycles. Bernoulli equation. Fluid statics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Mechanical and Aerospace Engineering majors: CHM 114 or CHM 116 with C or better; MAE 212 with C or better; MAT 274 or MAT 275 with C or better OR all other students: CEE 212 or CNE 212 or MAE 212 with C or better
MAE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		Prerequisite(s): Barrett Honors student

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MAE	301	Applied Experimental Statistics	Introduces key concepts in probability and statistics with engineering applications. Emphasizes modeling variation in observations, characterizing its distribution, and making inferences with regard to quality assurance and control. Develops critical skills such as fitting multivariate models, experimental design, and hypothesis testing, utilizing data from engineering projects, simulations, and laboratory experiences.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Aerospace or Mechanical Engineering BSE major; With C or better; CSE 100, CSE 110, or MAE 215; MAE 384; MAT 242, 342, or 343; MAT 274 or 275; MAT 267 or 272; Credit is allowed for only MAE 301 or MAE 394 (Applied Experimental Statistics)
MAE	318	System Dynamics and Control	Dynamics of physical systems, system modelling, feedback control, computer simulations and real-time experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	5		Prerequisite(s): Aerospace or Mechanical Engr BSE major; EEE 202 with C or better; MAE 212 & 384 with C or better; MAT 267 or 272 with C or better; PHY 131 & 132 with C or better; Pre- or corequisite(s): MAE 301 or 394 (Applied Experimental Statistics)
MAE	341	Mechanism Analysis and Design	Positions, velocities, and accelerations of machine parts; cams, gears, flexible connectors, and rolling contact; introduces synthesis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 212 with a C or better
MAE	345	Structures in a Space Environment	Space mission environment; mechanical behavior of materials and structures for space; analysis and design of space structures; finite element procedures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Fulton Engineering undergraduate student; MAE 213 and 214 and 384 with C or better; Pre- or corequisite(s): MAE 318 and 384 with C or better if completed
MAE	351	Manufacturing Processes	Production technique and equipment. Casting and molding, forming, machining, joining and assembly, computer-integrated manufacturing, rapid prototyping, and electronics manufacturing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MSE 250 with C or better; Credit is allowed for only IEE 360 or MAE 351
MAE	372	Fluid Mechanics	Applies basic principles of fluid mechanics to problems in viscous and compressible flow.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 (or MAE 360) or MEE 340 (or MAE 340) with C or better; MAE 384 with C or better
MAE	384	Advanced Mathematical Methods for Engineers	Methods for numerical solutions to engineering problems. Nonlinear equations, quadrature, ordinary differential equations. Analytical and numerical solutions to partial differential equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3	CS	Prerequisite(s): FSE undergraduate; With C or better; MAT 274 or 275; MAT 242 or 343 (or 342 if not MAE); MAE 215 (or MAE 294 Intro to Programming, CSE 100, or 110); Pre- or corequisite(s): MAT 267 or 272 with C or better; Credit for only CEE or MAE 384
MAE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Prerequisite(s): Fulton Engineering undergraduate student
MAE	400	Engineering Profession	Impact of mechanical and aerospace engineering in a global and societal context; effects of and on globalization, environment, sustainability, economy, politics; engineering ethics and business practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3	L	Prerequisite(s): Aerospace Engineering or Mechanical Engineering BSE majors; MEE 322, MAE 322, AEE 325, MAE 325, or MAE 394 (Aerospace Structures and Materials) with C or better

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MAE	404	Finite Elements in Engineering	Introduces ideas and methodology of finite element analysis. Applications to solid mechanics, heat transfer, fluid mechanics, and vibrations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 213 or ECE 313 with C or better; CEE 384 or MAE 384 or ECE 384 with C or better
MAE	406	Advanced CAE Simulation	Solution of advanced engineering problems with engineering software for structural, dynamic, nonlinear, contact and kinematic problems; selection of modeling parameters; reliability tests on software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: MAE 323; MAE 342 with C or better. Credit is allowed for only MAE 406 or MAE 546
MAE	417	Control System Design	Tools and methods of control system design and compensation, including simulation, response optimization, frequency domain techniques, state variable feedback, and sensitivity analysis. Introduces nonlinear and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 318 with C or better
MAE	436	Combustion	Thermochemical and reaction rate processes; combustion of gaseous and condensed-phase fuels. Applications to propulsion and heating systems. Pollutant formation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 340 with C or better; Credit is allowed for only MAE 436 or MAE 536
MAE	455	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): FSE undergrad or Materials minor; With C or better: CEE 213, MAE 213, or MSE 211; MAT 242, 342, or 343; MSE 250 or Aerospace major with MAE 325 (394); Credit is allowed for only MAE 455, 513, 598 (Polymers and Composites), MSE 470 or 513
MAE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		Prerequisite(s): Barrett Honors student
MAE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
MAE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Prerequisite(s): Fulton Engineering undergraduate student
MAE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-7		Prerequisite(s): Fulton Engineering undergraduate student
MAE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		
MAE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	501	Linear Algebra in Engineering	Development and solution of systems of linear algebraic equations. Applications from mechanical, structural, and electrical fields of engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite: graduate Engineering major except MS Electrical Engineering, MS Electrical Engineering (AME), MSE Electrical Engineering, PhD Electrical Engineering, or PhD Electrical Engineering (AME). Credit is allowed for only MAE 501 or MSE 501
MAE	502	Partial Differential Equations in Engineering	Development and solution of partial differential equations in engineering. Applications in solid mechanics, vibrations, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Graduate Engineering students; credit is allowed for only MSE 502 or MAE 502

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MAE	504	Experimental Methods for Thermal and Fluid Processes	Theory of analog and digital signal analysis as applied to fluid and thermal measurements; optical diagnostics and micro sensors for measuring fluid velocity, pressure and temperature in unsteady flows; particle image velocimetry and thermal anemometry. Experimental methods are applied in a weekly laboratory. Students should have familiarity with Matlab or some programming language and have completed an intermediate level course in fluid dynamics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Graduate Engineering major
MAE	505	Perturbation Methods	Nonlinear oscillations, strained coordinates, renormalization, multiple scales, boundary layers, matched asymptotic expansions, turning point problems, and WKBJ method.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering students; Credit is allowed for only APM 575 or MAE 505
MAE	506	Advanced System Modeling, Dynamics, and Control	Lumped-parameter modeling of physical systems with examples. State variable representations and dynamic response. Introduces modern control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major. Pre- or corequisite(s): APM 505 or MAE 501
MAE	507	Fundamentals of Control and Optimization	Optimal control of continuous-time dynamic systems. Linear systems and signal spaces, robust and LQR optimal control, optimization methods and LMIs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Graduate Engineering major; MAE 506 with C or better
MAE	508	Digital Control: Design and Implementation	Analysis and design of control systems in which the digital computer plays a major role. Review of continuous control and introduction to the key effects of sampling. Elements of discrete system analysis; z-transform; sampled-data systems; sampling theorem and combined discrete and continuous system and the phenomenon of aliasing. Deterministic design methods for digital control systems (root-locus, frequency response, pole placement and estimators). Multivariable, optimal control and Kalman filtering, followed by nonlinear control and system identification. Emphasizes digital control implementation topics and a case study on robot control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only MAE 508 or MAE 598 (Digital Control: Design and Implementation)
MAE	510	Dynamics and Vibrations	Lagrange's and Hamilton's equations, rigid body dynamics, gyroscopic motion, and small oscillation theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering students
MAE	512	Random Vibrations	Reviews probability theory, random processes, stationarity, power spectrum, white noise process, random response of single and multiple DOF systems, and Markov processes simulation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2-3		Pre-requisite: Graduate Engineering major
MAE	513	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering or Science & Engr of Materials student; Credit is allowed for only MAE or MSE 513
MAE	515	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 510 with C or better; Credit is allowed for only CEE 536, MAE 494 (Structural Dynamics) or 515
MAE	518	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Fulton Engineering Graduate students; Credit is allowed for only CHE 518, EEE 518, MSE 475, MSE 518 or MAE 518
MAE	520	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods; applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	521	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 501 with C or better; CEE 526 or MAE 527 with a C or better
MAE	523	Fracture Mechanics	Linear elastic fracture mechanics. Nonlinear problems. Fatigue fracture. Experimental methods in fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major; MAE 520 or MAE 598 (Continuum Mechanics) with C or better
MAE	524	Theory of Elasticity	Elastic behavior in two and three dimensions. Airy stress functions and displacement potentials. Elements of fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major; MAE 520 or MAE 598 (Continuum Mechanics)
MAE	525	Mechanics of Smart Materials and Structures	Modeling and analysis of smart materials and adaptive structures. Application areas include vibration and shape control and damage detection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student; MAE 520 or MAE 598 (Continuum Mechanics)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MAE	527	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student; APM 505 or MAE 501 with C or better; Credit is allowed for only CEE 526 or MAE 527
MAE	529	Continuum Mechanics	Tensors, Eulerian/Lagrangian strains, compatibility equations, Cauchy/nominal stresses, balance laws, Reynolds transport theorem, laws of thermodynamics for a continuum; equations of state, restrictions on constitutive laws, Newtonian fluids, inviscid flows, viscoelasticity.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Mechanical or Aerospace Engineering graduate student; Credit is allowed for only MAE 529 or MAE 598 (Continuum Mechanics)
MAE	533	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only BME 533 or CHE 533 or MAE 533
MAE	536	Combustion	Thermodynamics; chemical kinetics of combustion. Explosion and ignition theories. Reactive gas dynamics. Structure, propagation, and stability of flames. Experimental methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student. Credit is allowed for only MAE 436 or 536
MAE	540	Advanced Product Design Methodology	Surveys research in engineering design process, artifact and design, knowledge, formal and informal logic, heuristic and numerical searches, theory of structure and complexity.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: Mechanical or Aerospace Engineering graduate student
MAE	541	CADTools for Engineers	Elements of computer techniques required to develop CAD software. Data structures, including lists, trees, and graphs. Computer graphics, including 2- and 3-D algorithms and user interface techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	542	Design Geometry and Kinematics	Selected topics in geometry related to current potential applications in CAD/CAM, design theory, kinematics, and robotics. Euclidean isometrics, transformations; 4-D geometry; screw theory and its applications to robotics and assemblies. Differential geometry; curvature and torsional properties of curves and surfaces.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: Mechanical and Aerospace Engineering graduate student; Credit is allowed for only MAE 542 or 598 (Design Geometry & Kinematics)
MAE	544	Mechanical Design and Failure Prevention	Modes of mechanical failure; applies principles of elasticity and plasticity in multiaxial state of stress to design synthesis; failure theories; fatigue; creep; impact.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	546	Advanced CAE Simulation	Solution of advanced engineering problems with analysis software for structural, dynamic, nonlinear, contact and kinematic problems; selection of modeling parameters; reliability tests on software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only MAE 406 or 546
MAE	547	Modeling and Control of Robots	Homogeneous transformations, workspace, forward and inverse kinematics, differential kinematics, statics and dynamics, motion planning, motion and force control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major. Pre- or corequisite(s): APM 505 or MAE 501
MAE	557	Mechanics of Composite Materials	Analysis, design, and applications of laminated and chopped fiber reinforced composites. Micro- and macromechanical analysis of elastic constants, failure, and environmental degradation. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major; MAE 520 or MAE 598 (Continuum Mechanics)
MAE	561	Computational Fluid Dynamics	Finite-difference and finite-volume techniques for solving the subsonic, transonic, and supersonic flow equations. Method of characteristics. Numerical grid-generation techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Graduate Engineering students; Credit is allowed for only AEE 471 or MAE 471, 561
MAE	564	Advanced Aerodynamics	Advanced topics in aerodynamics with application to design. Slender body theory. Thin airfoil theory. Transonic and supersonic effects. Sweep theory. Wave drag. Post-stall (vortex) flows. Supersonic and hypersonic flows.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Aerospace Engineering major
MAE	565	Rocket Propulsion	Rocket flight performance, nozzle design, combustion of liquid and solid propellants, component design, advanced propulsion systems, interplanetary missions, testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Mechanical or Aerospace Engineering graduate student; Credit is allowed for only AEE 465 (or MAE 465) or MAE 565 or EGR 598 (Rocket Propulsion) or MAE 598 (Rocket Propulsion)
MAE	566	Rotary-Wing Aerodynamics	Introduces helicopter and propeller analysis techniques. Momentum and blade-element, helicopter trim. Hover and forward flight. Ground effect, autorotation and compressibility effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MAE 466 or 566

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MAE	570	Thermodynamics	Applied thermodynamics; gas mixtures, psychrometrics; property relationships, power and refrigeration cycles, and reactive systems. A basic knowledge of thermodynamics is required to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: Engineering Graduate student; Credit is allowed for only MAE 482, 570 or 598 (Thermodynamics), or MEE 482
MAE	571	Fluid Mechanics	Basic kinematic, dynamic, and thermodynamic equations of the fluid continuum and their application to basic fluid models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): MAE 502; MAE 529 or MAE 598 (Continuum Mechanics)
MAE	573	Advanced Fluid Mechanics	Mechanics of fluids flows where either the effects of inertia or viscosity are significant. Exact and approximate solutions of the Navier-Stokes equations, laminar flow and flow at low and high Reynolds numbers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	574	Multiphase Flow	Models for multiphase flows including dispersed and continuous phase flow models, particle-fluid and particle-particle interactions, droplet collision and coalescence, atomization, and numerical and experimental methods for analyzing multiphase flows.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): MAE 502; MAE 529; MAE 571; Credit is allowed for only MAE 574 or MAE 598 (Multiphase Flow)
MAE	575	Turbulence	Homogeneous, isotropic, and wall turbulence. Experimental results. Introduces turbulent-flow calculations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	577	Advanced Turbulence	Reynolds equations and their closure. Modeling of simple and complex turbulent flows, calculations of internal and external flows, and application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	578	Geophysical and Environmental Fluid Dynamics	Dynamics of large-scale flows under the influence of stratification and earth rotation. Thermally and mechanically driven flows in turbulent boundary layer. Waves and instability of geophysical flows. Global-scale circulation. Applications to environmental prediction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
MAE	581	Advanced Thermodynamics	Basic concepts and laws of classical equilibrium thermodynamics; applications to engineering systems; introduction and applications of statistical mechanics and kinetic theory; Boltzmann integro-differential equation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	585	Solar Thermal Engineering	Solar energy availability, flat-plate and concentrating solar thermal collectors, solar heating and cooling, concentrating solar power (CSP).	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Graduate Engineering student; credit is allowed for only MAE 585 or 598 (Solar Thermal Engineering)
MAE	586	Advanced Heat Transfer	Basic concepts and governing equations. Analysis of laminar and turbulent heat transfer for internal and external flows. Natural and mixed convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	587	Radiation Heat Transfer	Advanced concepts and solution methodologies for radiation heat transfer, including exchange of thermal radiation between surfaces, radiation in absorbing, emitting, and scattering media and radiation combined with conduction and convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	588	Solar Energy Colloquium	Discussion-oriented class focusing on topical issues in solar energy. Knowledge of thermodynamics or electric power systems is recommended to succeed in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisites: Graduate Engineering major; Credit is allowed for only MAE 588 or SEC 588
MAE	589	Heat Transfer	Basic concepts; physical and mathematical models for heat and mass transfer. Applications to conductive, convective, radiative, and combined mode heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; Credit is allowed for only MAE 494 topic (Heat and Mass Transfer) or 589
MAE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): graduate MAE major
MAE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisite(s): Mechanical or Aerospace Engineering graduate student
MAE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisite(s): Mechanical or Aerospace Engineering graduate student

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MAE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): graduate Engineering student
MAE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
MAE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Prerequisite(s): graduate Engineering student
MAE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Prerequisite(s): Mechanical or Aerospace Doctoral student
MAE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
MAE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Prerequisite(s): Mechanical or Aerospace Doctoral student
MAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MAS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Interdisciplinary Studies Masters student
MAS	501	Methods for Interdisciplinary Inquiry	Critical survey of current models of inquiry, tools, processes, and methods in different fields.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Interdisciplinary Studies Masters student
MAS	502	Perspectives in Interdisciplinary Studies	Introduces interdisciplinarity through explorations of epistemological and rhetorical practices that bridge traditional disciplines.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	505	Theories of Change, Culture, and Mind	Introduces graduate-level interdisciplinary study of key thinkers, movements, theories, and paradigms in 20th-century thought.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Interdisciplinary Studies Masters student
MAS	510	Science and Religion: Cosmologies and Worldviews	Examines science and religion, stressing modern scientific findings and philosophical and historical debates and dialogues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Credit is allowed for only IAS 430 or MAS 510
MAS	513	Sociology of Everyday Life	Examines institutional ethnography, a way of exploring the particular and generalized social relations that shape people's everyday experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	514	Continental Philosophy	Contemporary European thought emerges out of a crisis of the Enlightenment that unfolds throughout the nineteenth and twentieth centuries. Course dovetails with other fields like communication, cultural studies, law, political science, religious studies, literature and various social sciences.	N	SEM	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only MAS 514 or MAS 598 (Studies in Critical Theory) or MAS 598 (Continental Philosophy and Religion)

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MAS	550	Philosophical and Spiritual Issues in Death and Dying	From Plato to Maimonides to Heidegger to Kubler-Ross, scholars, clinicians, and spiritual writers have recognized that attitudes about death and dying contribute to understandings of human existence. Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to integration of body-mind-spirit, this course introduces basic concepts and practices of care ethics and spirituality. Focuses on relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. Theoretically, the course is inter-faith in approach, holistic in scope, and specialized in content. Practically, students examine real-life issues in care ethics and spirituality from multiple perspectives	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3-9		Prerequisite: Graduate (degree or nondegree) student; Credit is allowed for only MAS, PHI 550 or REL 585
MAS	573	Art and Politics	Explores issues and relationships between the arts and politics through historical examples, significant artists and works, key thinkers, and theoretical approaches. Considers topics such as: the arts and ideology, art and the politics of representation, propaganda, censorship, state-supported art, human rights, revolution and war, cultural change, and political aesthetics. Emphasizes interdisciplinary arts and period study, including the arts and The Russian Revolution, the art in the Weimar Republic and Nazi Germany, and, generally, the arts, art and social movements (e.g., U.S. Civil Rights era, Eastern Europe's solidarity movement and Velvet Revolutions), as well as the arts and politics in selected contemporary contexts (e.g., China, the Middle East).	N	LEC	N	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	585	Capstone Course	Assists students in preparing their capstone project, which represents the culmination of their study for the MA in Interdisciplinary Studies.	N	RSC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3-4		Pre-requisites: Interdisciplinary Studies Masters student
MAS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Interdisciplinary Studies Masters student
MAS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Interdisciplinary Studies Masters student
MAS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Interdisciplinary Studies Masters student
MAS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Pre-requisites: Interdisciplinary Studies Masters student
MAS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	106	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): Mathematics Placement Test
MAT	106	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): Mathematics Placement Test
MAT	106	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): Mathematics Placement Test

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	110	Enhanced Freshman Mathematics	Individually paced, computer-mediated course designed to prepare students for college-level mathematics. Students work on various modules in an online adaptive learning technology platform created to help students progress through the course material based on individual needs in preparation for enrollment in the next level math course required by the student's major (pre-MAT 117 "Track 1" or pre-MAT 142 "Track 2"). Upon completion of this course, students should see improvement of basic math skills, an increase in the confidence in mathematical abilities, and advancement in ability to relate math to real-life applications. Credit for this course does not count towards university graduation requirements	N	LEL	N	ELG	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0-3		Prerequisite(s): Mathematics Placement Test below 32% for majors that require MAT 142 OR Mathematics Placement Test 32-39.9% for majors that require MAT 117 or higher (consult your major map)
MAT	110	Enhanced Freshman Mathematics	Individually paced, computer-mediated course designed to prepare students for college-level mathematics. Students work on various modules in an online adaptive learning technology platform created to help students progress through the course material based on individual needs in preparation for enrollment in the next level math course required by the student's major (pre-MAT 117 "Track 1" or pre-MAT 142 "Track 2"). Upon completion of this course, students should see improvement of basic math skills, an increase in the confidence in mathematical abilities, and advancement in ability to relate math to real-life applications. Credit for this course does not count towards university graduation requirements	N	LEL	N	ELG	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	0-3		Prerequisite(s): Mathematics Placement Test below 32% for majors that require MAT 142 OR Mathematics Placement Test 32-39.9% for majors that require MAT 117 or higher (consult your major map)
MAT	110	Enhanced Freshman Mathematics	Individually paced, computer-mediated course designed to prepare students for college-level mathematics. Students work on various modules in an online adaptive learning technology platform created to help students progress through the course material based on individual needs in preparation for enrollment in the next level math course required by the student's major (pre-MAT 117 "Track 1" or pre-MAT 142 "Track 2"). Upon completion of this course, students should see improvement of basic math skills, an increase in the confidence in mathematical abilities, and advancement in ability to relate math to real-life applications. Credit for this course does not count towards university graduation requirements	N	LEL	N	ELG	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	0-3		Prerequisite(s): Mathematics Placement Test below 32% for majors that require MAT 142 OR Mathematics Placement Test 32-39.9% for majors that require MAT 117 or higher (consult your major map)
MAT	117	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics.	N	LEL	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 106 or MAT 110 or ASU Mathematics Placement Test with a score of 0-49.9% or higher
MAT	117	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics.	N	LEL	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 106 or MAT 110 or ASU Mathematics Placement Test with a score of 0-49.9% or higher
MAT	117	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics.	N	LEL	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 106 or MAT 110 or ASU Mathematics Placement Test with a score of 0-49.9% or higher
MAT	117S	College Algebra Stretch	For students who have an in-progress (Z) grade for MAT 117. The grade earned in MAT 117S replaces the Z grade for MAT 117. Course content is the same as MAT 117, which is intended to develop skills in linear functions, quadratic functions, general polynomial functions, rational functions, exponential functions and logarithmic functions. Also studies systems of linear equations. Emphasizes problem-solving techniques, specifically by means of discussing concepts in each of these topics.	N	LEL	N	NOG	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	0		Prerequisite(s): MAT 117 with grade of Z
MAT	119	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 117, 170, 210, or 270 with C or better or Mathematics Placement Test with a score of 50% or higher
MAT	119	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 117, 170, 210, or 270 with C or better or Mathematics Placement Test with a score of 50% or higher
MAT	119	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 117, 170, 210, or 270 with C or better or Mathematics Placement Test with a score of 50% or higher

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MAT	142	College Mathematics	Applies basic college-level mathematics to real-life problems. Topics include numerical reasoning, sets, counting techniques, probability, basic statistics and finance. Appropriate for students whose major does not require MAT 117 or 170.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 110 with skills mastered for MAT 142 if completed, or MAT 117 with C or better, or Mathematics Placement Test with a score of 0-39.9% or higher
MAT	142	College Mathematics	Applies basic college-level mathematics to real-life problems. Topics include numerical reasoning, sets, counting techniques, probability, basic statistics and finance. Appropriate for students whose major does not require MAT 117 or 170.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 110 with skills mastered for MAT 142 if completed, or MAT 117 with C or better, or Mathematics Placement Test with a score of 0-39.9% or higher
MAT	142	College Mathematics	Applies basic college-level mathematics to real-life problems. Topics include numerical reasoning, sets, counting techniques, probability, basic statistics and finance. Appropriate for students whose major does not require MAT 117 or 170.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 110 with skills mastered for MAT 142 if completed, or MAT 117 with C or better, or Mathematics Placement Test with a score of 0-39.9% or higher
MAT	170	Precalculus	Intensive preparation for calculus. Topics include functions (including trigonometric), vectors and complex numbers.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 117 with C or better or completed the Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only MAT 170 or 171
MAT	170	Precalculus	Intensive preparation for calculus. Topics include functions (including trigonometric), vectors and complex numbers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 117 with C or better or completed the Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only MAT 170 or 171
MAT	170	Precalculus	Intensive preparation for calculus. Topics include functions (including trigonometric), vectors and complex numbers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 117 with C or better or completed the Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only MAT 170 or 171
MAT	171	Precalculus: Science, Technology, Engineering and Mathematics (STEM)	Robust treatment of advanced algebraic skills and trigonometry that are vital in calculus. Algebra topics include functions, compositions, inverses, transformations, complex numbers, roots of polynomial functions, rational functions, exponential and logarithmic functions and their properties. Trigonometry is approached via the unit circle as well as the right triangle. Topics include the trigonometric functions, their graphs and identities, inverse trigonometry, the laws of sine and cosine, vectors and the dot product with an application toward work, and polar coordinates and roots of complex numbers (deMoivre's theorem).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4	MA	Prerequisite(s): MAT 117 with C or better or completed the Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only MAT 170 or MAT 171
MAT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
MAT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0-5		
MAT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	0-5		
MAT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	0-5		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MAT	207	Algebra and Geometry in the High School	Provides a conceptually rigorous treatment of the central ideas of algebra and geometry in high school. Explores and develops familiar mathematical content from a very different perspective. Focuses squarely on creating meaning for concepts and on building coherence of meaning across concepts and various representations of them. As such, course activities and assessments (class/lab activities, homework assignments, and exams) reflect these expectations, focusing on both doing high school mathematics with meaning and on expressing and communicating that meaning accurately and coherently in verbal and written form. Prior to enrolling in this course, students should have experience with algebra/geometry to at least the high school level.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Co-requisite: MTE 210
MAT	208	Discrete Mathematics for Secondary Teachers	Potential secondary teachers of mathematics should master the Math Standards proposed by the National Council of Teachers of Mathematics for college-intending students. Focuses on those aspects of these standards that apply to discrete mathematics with particular emphasis on: mathematical problem solving, mathematics as communication, mathematical reasoning, and discrete mathematics. Taking a broader view, introduces mathematics as a discipline that uses known methods to discover and verify new conclusions through the study of discrete mathematics.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		
MAT	210	Brief Calculus	Differential and integral calculus of elementary functions with applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 117, 119, 170, or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT	210	Brief Calculus	Differential and integral calculus of elementary functions with applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 117, 119, 170, or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT	210	Brief Calculus	Differential and integral calculus of elementary functions with applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 117, 119, 170, or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT	211	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	211	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	211	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	242	Elementary Linear Algebra	Introduces matrices, systems of linear equations, determinants, vector spaces, linear transformations, and eigenvalues. Emphasizes development of computational skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	2		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	243	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: Minimum Sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	243	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: Minimum Sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	243	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: Minimum Sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MAT	251	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT	251	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT	265	Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 170 or 171 with C or better OR Mathematics Placement Test with a score of 60% or higher and the Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or MAT 270
MAT	265	Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 170 or 171 with C or better OR Mathematics Placement Test with a score of 60% or higher and the Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or MAT 270
MAT	266	Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT	266	Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT	267	Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 267 or 272
MAT	267	Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 267 or 272
MAT	270	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 60% or higher and Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or 270
MAT	270	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 60% or higher and Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or 270

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	270	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 60% or higher; and Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or 270
MAT	271	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences and series.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	MA	Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT	271	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences and series.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4	MA	Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT	271	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences and series.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	MA	Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT	272	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	MA	Prerequisite(s): MAT 266 or MAT 271 with C or better; Credit is allowed for only MAT 267 or MAT 272
MAT	272	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4	MA	Prerequisite(s): MAT 266 or MAT 271 with C or better; Credit is allowed for only MAT 267 or MAT 272
MAT	272	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	MA	Prerequisite(s): MAT 266 or MAT 271 with C or better; Credit is allowed for only MAT 267 or MAT 272
MAT	274	Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Pre-requisites: MAT 266 or MAT 271 with C or better; Credit is allowed for only MAT 274 or 275
MAT	274	Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Pre-requisites: MAT 266 or MAT 271 with C or better; Credit is allowed for only MAT 274 or 275
MAT	275	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better; Credit is allowed for only MAT 274 or 275
MAT	275	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better; Credit is allowed for only MAT 274 or 275
MAT	275	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better; Credit is allowed for only MAT 274 or 275
MAT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
MAT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
MAT	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
MAT	300	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): MAT 210, 251, 265, or 270 with C or better
MAT	300	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	L	Prerequisite(s): MAT 210, 251, 265, or 270 with C or better
MAT	300	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Prerequisite(s): MAT 210, 251, 265, or 270 with C or better
MAT	310	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): MAT 267 or 272 with C or better
MAT	310	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 267 or 272 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MAT	310	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): MAT 267 or 272 with C or better
MAT	340	Theory of Interest	Compound interest, discount rates, annuities, present values, depreciation, and bond valuations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 210, 251, 265 or 270 with C or better; Credit is allowed for only ACT 310 or MAT 340
MAT	342	Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 267 or 272 with C or better; Credit is allowed for only MAT 342 or 343
MAT	342	Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 267 or 272 with C or better; Credit is allowed for only MAT 342 or 343
MAT	343	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB.4	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 342 or 343
MAT	343	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB.4	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 342 or 343
MAT	343	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB.4	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 342 or 343
MAT	350	Techniques and Applications of Applied Mathematics	Mathematical techniques and applications representative of the range of applied mathematics used in operations research, biology, economics, finance, and sociology. In depth exploration of these techniques in detail by focusing on selected applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): MAT 274 or 275; MAT 342 or 343; Corequisite(s): STP 420
MAT	350	Techniques and Applications of Applied Mathematics	Mathematical techniques and applications representative of the range of applied mathematics used in operations research, biology, economics, finance, and sociology. In depth exploration of these techniques in detail by focusing on selected applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): MAT 274 or 275; MAT 342 or 343; Corequisite(s): STP 420
MAT	351	Mathematical Methods for Genetic Analysis	Discrete mathematics, probability, statistics, and associated computer packages. Applications to genomics, bioinformatics, forensics, and DNA/protein sequence patterns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 270 (or MAT 251 or 265) with C or better
MAT	355	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 119, 210, 243, 251, 265, 270 or STP 220, 231 or 226 with C or better; Credit is allowed for only BIO 355, CPI 480, MAT 355 or MBB 355
MAT	362	Advanced Mathematics for Engineers and Scientists	Vector analysis, Fourier analysis, and partial differential equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 272 (or 267) with C or better; MAT 274 (or 275) with C or better
MAT	370	Intermediate Calculus	Theory behind basic 1-variable calculus: continuity, derivative, Riemann integral, sequences, and series.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 272 (or 267) with C or better; MAT 300 (or 243) with C or better; Credit is allowed for only MAT 371 (with C or better) or MAT 370
MAT	371	Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 267 or 272 with C or better; MAT 300 with C or better
MAT	371	Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): MAT 267 or 272 with C or better; MAT 300 with C or better
MAT	372	Advanced Calculus II	Open, closed, compact sets in R^n continuity, differentiation, partial differentiation, integration in R^n Inverse/implicit function theorems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 371 with C or better; Pre/Co-requisite: MAT 342 or 343 (with C or better if completed); Credit is allowed for only MAT 372 or MAT 460
MAT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
MAT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
MAT	410	Introduction to General Topology	Topological spaces, metric spaces, compactness, connectedness, and product spaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 300 with C or better
MAT	411	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	HU & H	Credit is allowed for only IAS 411 or MAT 411
MAT	415	Introduction to Combinatorics	Enumerating permutations and combinations of sets and multisets, inclusion-exclusion, recurrence relations, generating functions, Pólya theory and combinatorial structures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 300 (or 243) with C or better; MAT 342 (or 242 or 343) with C or better; Credit is allowed for only MAT 415 or 512
MAT	416	Introduction to Graph Theory	Trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 300 (or 243) with C or better; MAT 342 (or 242 or 343) with C or better; Credit is allowed for only MAT 416 or 513
MAT	419	Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Prerequisite(s) with C or better: ACO 101 (or ACO 102 or CSE 100 or 110 or 205); MAT 242 (or MAT 342 or 343), 300
MAT	419	Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s) with C or better: ACO 101 (or ACO 102 or CSE 100 or 110 or 205); MAT 242 (or MAT 342 or 343), 300
MAT	420	Scientific Computing	Surveys and applies programming languages, libraries, and scientific visualization tools. Programming assignments emphasize software development skills. Completion of advanced calculus recommended prior to this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: CSE 205; MAT 274 (or MAT 275), 342 (or MAT 343)
MAT	421	Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 272 (or 267) with C or better
MAT	421	Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisites: MAT 272 (or 267) with C or better
MAT	423	Numerical Analysis I	Solution of systems of linear and nonlinear equations, optimization, eigenvalues, round-off error, and floating point arithmetic. Fluency in computer programming is required for enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 342 (or 343) with C or better
MAT	425	Numerical Analysis II	Analysis of and algorithms for numerical interpolation, integration, and differentiation. Numerical solution of ordinary and partial differential equations, introductory level. Applications. Fluency in computer programming is required for success in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 274 (or 275) with C or better; MAT 371 recommended
MAT	429	Optimization	A variety of optimization models and their applications to management, economics, engineering, and science. Topics include linear programming, integer programming, nonlinear programming, and stochastic programming. Stresses formulation and modeling as well as numerous applications and solving algorithms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 343 with C or better; MAT 350 or 419 with C or better
MAT	440	Group Theory	Covers basic group theory. Students learn about the concept of a "group," related structures, their underlying theory and examples of how they arise in mathematics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 300; MAT 342 or 343
MAT	441	Ring Theory	Covers basic ring theory. Students learn about the concept of a "ring," related structures, their underlying theory, and examples of how they arise in mathematics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 300; MAT 342 or 343
MAT	442	Advanced Linear Algebra	Fundamentals of linear algebra, dual spaces, invariant subspaces, canonical forms, bilinear and quadratic forms, and multilinear algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: MAT 300; MAT 342 or 343
MAT	443	Introduction to Abstract Algebra	Introduces concepts of abstract algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: MAT 300; MAT 342 or 343. Students may not enroll in MAT 443 if credit earned in MAT 444.
MAT	443	Introduction to Abstract Algebra	Introduces concepts of abstract algebra.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: MAT 300; MAT 342 or 343. Students may not enroll in MAT 443 if credit earned in MAT 444.
MAT	444	Intermediate Abstract Algebra	Basic theory of groups, rings, and fields, including an introduction to Galois theory. Appropriate as preparation for MAT 543.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 300 or 440 or 441 or 442 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MAT	445	Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: MAT 300, 342 (or MAT 343)
MAT	445	Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: MAT 300, 342 (or MAT 343)
MAT	447	Cryptography I	Block ciphers, stream ciphers, congruence arithmetic, information theory, public key cryptosystems, key exchange, electronic signatures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: CSE 100 (or CSE 110 or 205); MAT 242 (or MAT 342 or 343), 300
MAT	448	Cryptography II	Mathematical underpinnings of contemporary cryptosystems, electronic signatures, key exchange, primality testing and factorization algorithms.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 447. Credit is allowed for only MAT 448 or MAT 494. Cryptography II
MAT	450	Mathematical Models in Biology	Introduces mathematical models in biological systems. Applications range from the cellular level to systems level and may include applications from areas such as physiology, ecology, epidemiology, population biology, computational and systems biology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): MAT 342 or 343 with C or better; MAT 274 or 275 with C or better
MAT	450	Mathematical Models in Biology	Introduces mathematical models in biological systems. Applications range from the cellular level to systems level and may include applications from areas such as physiology, ecology, epidemiology, population biology, computational and systems biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): MAT 342 or 343 with C or better; MAT 274 or 275 with C or better
MAT	451	Mathematical Modeling	Detailed study of 1 or more mathematical models that occur in the physical or biological sciences. May be repeated for credit with instructor approval.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 274 or 275 with C or better; MAT 242, 342 or 343 with C or better
MAT	452	Introduction to Chaos and Nonlinear Dynamics	Properties of nonlinear dynamical systems; dependence on initial conditions; strange attractors; period doubling; bifurcations; symbolic dynamics; Smale-Birkhoff theorem; and applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): MAT 274 or 275 with C or better; MAT 242, 342, or 343 with C or better; MAT 371 is recommended
MAT	452	Introduction to Chaos and Nonlinear Dynamics	Properties of nonlinear dynamical systems; dependence on initial conditions; strange attractors; period doubling; bifurcations; symbolic dynamics; Smale-Birkhoff theorem; and applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 274 or 275 with C or better; MAT 242, 342, or 343 with C or better; MAT 371 is recommended
MAT	452	Introduction to Chaos and Nonlinear Dynamics	Properties of nonlinear dynamical systems; dependence on initial conditions; strange attractors; period doubling; bifurcations; symbolic dynamics; Smale-Birkhoff theorem; and applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): MAT 274 or 275 with C or better; MAT 242, 342, or 343 with C or better; MAT 371 is recommended
MAT	460	Vector Calculus	Vectors, curvilinear coordinates, Jacobians, implicit function theorem, line and surface integrals, Green's, Stokes', and divergence theorems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 274 or 275 with C or better; MAT 242, 342 or 343 with C or better; MAT 371 is recommended; Credit is allowed for only MAT 372 or 460
MAT	461	Applied Complex Analysis	Analytic functions, complex integration, Taylor and Laurent series, residue theorem, conformal mapping, and harmonic functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 267 or 272 with C or better
MAT	462	Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 274 or 275 with C or better; MAT 242, 342 or 343 with C or better
MAT	462	Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 274 or 275 with C or better; MAT 242, 342 or 343 with C or better
MAT	472	Intermediate Real Analysis I	Introduces analysis in metric spaces with emphasis on the real line.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 371 with C or better
MAT	472	Intermediate Real Analysis I	Introduces analysis in metric spaces with emphasis on the real line.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): MAT 371 with C or better
MAT	473	Intermediate Real Analysis II	Analysis in R^n : implicit function theorem, introduction to manifolds, Lebesgue integration, change of variables formula, convergence theorems for integrals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 472 with C or better
MAT	475	Differential Equations	Linear and nonlinear ordinary differential equations, asymptotic behavior of solutions, stability, existence and uniqueness, limit sets, Poincaré-Bendixson theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 242, 342 or 343 with C or better; MAT 274 or 275 with C or better; MAT 370 or 371 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	476	Partial Differential Equations	First-order quasilinear, second-order linear (wave, Laplace, heat). Characteristics, harmonic functions, maximum principles, Fourier series, separation of variables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 242, 342 or 343 with C or better; MAT 274, 275 or 475 with C or better; MAT 370 or 371 with C or better
MAT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): Minimum 45 hours
MAT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): Minimum 45 hours
MAT	485	History of Mathematics	Topics from the history of the origin and development of mathematical ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 267 or 272 with C or better
MAT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
MAT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
MAT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MAT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MAT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
MAT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
MAT	495	Supervised research in mathematical sciences	Supervised research in mathematical sciences.	N	RSC	Y	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): minimum 45 hours. Credit is allowed for only MAT 494 (UG Research in Math) or MAT 495
MAT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
MAT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
MAT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
MAT	501	Geometry and Topology of Manifolds I	Brief review of general topology, cell complexes, topological manifolds, fundamental groups, covering spaces, homology.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only MAT 501 or MAT 598 (Geometry and Topology of Manifolds)
MAT	502	Geometry and Topology of Manifolds II	Differentiable manifolds, vector and tensor fields, differential forms, flows, Lie groups, homogeneous spaces, de Rham cohomology, Riemannian metrics and curvature.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 501; Credit is allowed for only MAT 502 or MAT 598 (Geometry Topology of Manifolds II)
MAT	512	Introduction to Combinatorics	Enumerating permutations and combinations of sets and multisets, inclusion-exclusion, recurrence relations, generating functions, Polya theory and combinatorial structures. Same topics as MAT 415; mastery at much higher level required. Students with MAT 415 (even as undergraduates) may not enroll.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: Graduate student; Credit is allowed for only MAT 415 or 512
MAT	513	Introduction to Graph Theory	Rigorous introduction to graph theory. High-level mastery in topics such as trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MAT 416 or 513
MAT	514	Enumerative Combinatorics I	First semester of a systematic development of enumerative combinatorics, including elementary counting techniques, sieve methods, and partially ordered sets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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MAT	515	Enumerative Combinatorics II	Second semester of a systematic development of enumerative combinatorics, including lattices, exponential structures, symmetric functions, and selected special topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	516	Graph Theory I	First semester of a systematic development of graph theory, including matchings, connectivity, arboricity, planarity, coloring, network flows.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	517	Graph Theory II	Second semester of a systematic development of graph theory, including dense and sparse graphs, Ramsey theory, hamiltonicity, random graphs, minors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	541	"p"-Adic Numbers	Introduces "p"-Adic numbers and analysis. Topics include valuations, completions of number fields, extensions of the field of "p"-adic numbers and "p"-adic analysis. Students should have previously taken courses in analysis and algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	542	Elliptic Curves	Geometry and arithmetic of elliptic curves, points of finite order, the group of rational points, curves over finite fields, complex multiplication. Students should have previously taken a senior-level course in abstract algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	543	Abstract Algebra I	Groups, modules, rings and fields, Galois theory, homological algebra, and the representation theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	544	Abstract Algebra II	Continuation of groups, modules, rings and fields, Galois theory, homological algebra, and the representation theory	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 543
MAT	545	Abstract Algebra III	Covers modules, Galois theory, and preparation for advanced study in algebraic parts of mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 544
MAT	547	Algebraic Number Theory	Algebraic properties of number fields and their completions. Topics include rings of integers, ramification, finiteness of the class group, and Dirichlet's unit theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 544
MAT	561	Ecological Modeling	Mathematical modeling of animal populations, food-web structural and ecological processes in space and time. May use modeling tools on computer clusters.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ABS, BIO 560 or MAT 561
MAT	570	Real Analysis I	Lebesgue integration, selected function spaces, differentiation, abstract measure theory, and elements of functional analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	571	Real Analysis II	Continuation of Lebesgue integration, selected function spaces, differentiation, abstract measure theory, and elements of functional analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 570
MAT	572	Complex Analysis I	Analytic functions, series and product representations, entire and meromorphic functions, normal families, Riemann mapping theorem, harmonic functions, and Riemann surfaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	573	Complex Analysis II	Continuation of analytic functions, series and product representations, entire and meromorphic functions, normal families, Riemann mapping theorem, harmonic functions, and Riemann surfaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 572
MAT	578	Functional Analysis I	Locally convex, normed, and Hilbert spaces. Linear operators, spectral theory, and application to classical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	579	Functional Analysis II	Continuation of locally convex, normed, and Hilbert spaces. Linear operators, spectral theory, and application to classical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 578
MAT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MBB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	343	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	L	Pre-requisites: MBB 347 or BIO 340 with a C or better; Credit is allowed for only BIO 343 or MBB 343
MBB	347	Molecular Genetics: From Genes to Proteins	Emphasizes molecular and cell biology and gene technology, both at the basic and applied research levels, in the growing areas of biotechnology and the molecular biosciences; focuses on molecular processes that allow genetic information to be expressed and regulated and by introducing applications to real-world situations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 282 (or BIO 181 and 182); CHM 116. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
MBB	350	Applied Genetics	Introduces molecular genetics with emphasis on application of genetics to solve biological questions and to engineer organisms for biotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 340 or MBB 247 or MBB 347 with C or better; Credit is allowed for only MBB 350 or PLB 350
MBB	355	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 or STP 231 or STP 226 with C or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
MBB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	440	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better; Credit is allowed for only BIO 440 or CBS 540 or MBB 440 or MCB 540
MBB	444	Techniques in Functional Genomics	Practical introduction to modern functional genomics techniques, including microarray analysis and DNA sequencing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 440 or MBB 440 (with C or better if completed)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MBB	445	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation, immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or MBB 347 with C or better; MBB 247 or MIC 302 with C or better; Credit is allowed for only MBB 445 or MIC 445
MBB	446	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutageneses; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB or MIC 446
MBB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Minimum 3.3 GPA; Molecular Biology student
MBB	490	Capstone: Issues in Biotechnology	Integrates science and biotechnology industry issues dealing with intellectual property, regulatory issues, business practices, and commercialization. Both MBB 490 and MBB 491 for L General Studies credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	2	L	Prerequisite(s): MBB 343 with C or better
MBB	491	Capstone: Issues in Molecular Biosciences	Integrates molecular science and societal issues dealing with ethics, regulatory issues, and societal needs that pertain to molecular biosciences. Both MBB 490 and MBB 491 for L General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2	L	Prerequisite(s): BIO 340 or MBB 347 with C or better
MBB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
MBB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MBB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
MBB	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Junior or senior standing; Credit is allowed for only BIO, MBB, MIC, HPS or PLB 496
MBB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Minimum 3.0 GPA; Molecular Bioscience/Biotechnology student
MBB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
MCB	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	501	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	503	Bioimaging Lab	Provides a fundamental understanding of light-based microscopy through the training and use of instruments contained within the SOLS Keck Bioimaging laboratory. Examines the use of bright field, contrast, epifluorescent, total internal reflective fluorescence (TIRF), confocal, multiphoton and atomic force microscopy and how they are applied to various research applications. Additional focus given toward image ethics, analysis, and presentation using programs such as Adobe Photoshop and ImageJ. During the second half of the semester, students propose and develop an experimental project, based on their graduate research, in which they collect data, do analysis, and prepare results for a final project presentation.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisites: BIO 504, MCB 504, or BIO 598 (Bioimaging Current Techniques); Credit is allowed for only BIO or MCB 503
MCB	504	Bioimaging	Lecture survey of modern techniques for imaging tissues, cells, and macromolecules, including light microscopy (e.g. video, fluorescence, confocal, multiphoton, single molecule), electron microscopy (e.g. transmission, scanning, cryogenic, tomographic) and ancillary techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO or MCB 504
MCB	506	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6		Credit is allowed for only ASM, BIO or MCB 506

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MCB	540	Functional Genomics	Functional relevance of genomic sequences; DNA arrays, proteomics, analysis of genomic information for metabolic physiology of organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 440 or CBS 540 or MBB 440 or MCB 540
MCB	555	Advanced Molecular and Cellular Sciences	Study of structural and functional organization of biomolecules and cells, based on current literature.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MCB or NEU 555
MCB	556	Advanced Molecular and Cellular Biology II	Continuation of MCB 555.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	701	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MCB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MCE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
MCE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MCE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MCE	447	Diversity in Families and Communities in Multicultural Settings	Diversity and the changing role of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
MCE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
MCE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
MCE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
MCE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MCE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
MCE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
MCE	548	Multicultural Perspectives on Teaching and Learning	Facilitates understanding of key components related to cultural diversity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MCE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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MCE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCO	120	Media and Society	Covers the role of newspapers, magazines, radio, television and motion pictures in American society.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB	Credit is allowed for only JMC 110 or MCO 110 or MCO 120
MCO	120	Media and Society	Covers the role of newspapers, magazines, radio, television and motion pictures in American society.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Credit is allowed for only JMC 110 or MCO 110 or MCO 120
MCO	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	240	Media Issues in American Pop Culture	Examines the production and consumption of popular culture as disseminated by the mass media with emphasis on the societal implications.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		
MCO	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	302	Media Research Methods	Surveys research methods used in the social sciences, with a focus on mass communication.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major with minimum cumulative 2.50 GPA OR nonmajor with minimum cumulative 2.00 GPA OR graduate Mass Communications major OR ASU Online student with minimum cumulative 2.00 GPA
MCO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MCO	418	History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB & H	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR a non-Journalism & Mass Comm student with minimum 2.0 GPA OR ASU Online student with minimum 2.00 GPA OR Graduate Mass Communications student
MCO	418	History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR a non-Journalism & Mass Comm student with minimum 2.0 GPA OR ASU Online student with minimum 2.00 GPA OR Graduate Mass Communications student
MCO	420	Strategic Sports Communication	Covers the wide-ranging field of strategic sports communication. Prepares students for an entry-level position in the strategic sports communication field.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism or W.P. Carey major; minimum 45 hours
MCO	425	Digital Media Literacy	Helps students begin to navigate the 21st-century media, starting by becoming active users of media, not just passive consumers. The Internet-fueled democratization of media creation has enabled anyone to be a publisher, and given audiences' almost infinite choices, with both great and questionable effects. In a world of information abundance, it can be difficult to discern fact from opinion and truth from fiction. We need to know how to wade through this barrage of information with a critical eye, to be better informed, and ultimately become creators of media ourselves.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism & Mass Communication major; minimum 2.50 GPA OR non-Journalism & Mass Communication major; min 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate MCO 425 or MCO 494 (Digital Media Literacy)
MCO	430	International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	G	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR a non-Journalism & Mass Comm student with minimum 2.0 GPA OR ASU Online student with minimum 2.00 GPA OR Graduate Mass Communications student
MCO	430	International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	G	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR a non-Journalism & Mass Comm student with minimum 2.0 GPA OR ASU Online student with minimum 2.00 GPA OR Graduate Mass Communications student
MCO	435	Social Media	Explores and critically analyzes the social, cultural, legal, ethical, economic, and technological dimensions of social media tools from Facebook to Foursquare, Twitter to Flickr and beyond.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	450	Visual Communication	Theory and tradition of communication through the visual media with emphasis on the continuity of traditions common to modern visual media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	HU	Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	455	War and Mass Media	Provides a better understanding of the role and impact of the mass media in shaping public perceptions about one of humanity's most monumental undertakings, the act of war. Through a combination of lectures, readings, documentaries, and motion pictures, examines and critically analyzes media portrayals, real and fictional, of issues, events, and the changing dynamic among: the government, the military, and public opinion as shaped by the media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	456	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate, and image creation.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB	Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	460	Race, Gender, and Media	Readings seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	C	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR non-JMC student with minimum 2.0 GPA OR ASU Online student with a minimum 2.00 GPA OR Graduate Mass Communications student; Credit for AFR or MCO 460
MCO	465	Sports and Media	Designed for aspiring journalists and media users, explores why great sports journalism is essential to our society. Establishes the goals, dreams, and expectations for sports journalism and introduces ethical philosophy and popular ethical models and decision-making tools. Students then apply these tools to sports journalism.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	473	Sex, Love, and Romance in the Mass Media	The role of the mass media in constructing and/or reinforcing unrealistic mythic and stereotypic images of sex, love, and romance.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB	Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		Prerequisite(s): Barrett Honors student
MCO	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6	L	Prerequisite(s): Barrett Honors student
MCO	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MCO	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		Prerequisite(s): Barrett Honors student
MCO	498	Pro Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-7		
MCO	502	Journalism Skills	Teaches basic journalism skills for print, digital and broadcast. Students get significant hands-on practice writing and reporting stories on deadline as well as an immersion in the principles and practices of good journalism.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	8		Prerequisite(s): Master of Mass Communication or Sports Journalism MA major
MCO	503	Media Law	Examines philosophical and legal aspects of press freedom. Emphasizes First Amendment theory evolution from 1791 to present.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student
MCO	505	Depth Reporting	Teaches in-depth and investigative reporting and writing techniques. Students produce long-form, deeply sourced articles with the goal of publication.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication or Sports Journalism MA major
MCO	510	Data Journalism	Uses data to tell stories, negotiates with government officials for public records and uses the Internet and other online sources to find information and sources for stories. Uses computer spreadsheets, database software, mapping programs and statistical techniques and explores how these tools can be used across a wide variety of beats and stories.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student
MCO	515	Advanced Online Media	Covers online trends, Web design and usability, and copyright; legal, and ethical issues facing online journalists. Students critically examine journalistic Web sites and recognize excellence as well as mediocrity. Hands-on experience in using Photoshop, Dreamweaver, CSS, Soundslides, Final Cut, and Flash to produce original, compelling multimedia stories as well as an online magazine.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student
MCO	525	21st-Century Media Organization and Entrepreneurship	Focuses on the future of journalism, the future of journalism business organizations and entrepreneurship, new media experiences, online solutions to popular media problems, financial realities of the media, and media innovation.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication student
MCO	526	Advanced Issues in 21st-Century Sports and Media	Through critical analyses of major contemporary issues in sports and media, provides tools and information needed to more fully engage in and become fluent with the main conversations about the business, technology and the future of sports journalism.	N	SEM	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism MA major
MCO	529	Ethics and Diversity in Sports Journalism	Explores the connection among sports media, journalism and society in an ethical and issue-oriented context. Students gain an understanding of the issues and ethics of the sports journalism profession while becoming better and more informed consumers of sports media. At the end of the course students have a better understanding of the importance of sports in our society and how that is reflected in coverage by local and national media outlets.	N	SEM	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism MA major; MCO 502
MCO	530	History, Philosophy, and Ethics of Journalism	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student
MCO	531	Advanced Broadcast Reporting	Teaches news and information practices of networks and local television stations. Students report, write and edit broadcast packages with an emphasis on video.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication or Sports Journalism MA major
MCO	535	Latino and Transnational Issues	Provides background and understanding of some of the most pressing and controversial issues of the day that are taking place in the Southwest borderlands. Successful students move on to the Borderlands Initiative depth reporting project in the spring semester that includes an international reporting experience.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication or Sports Journalism MA major
MCO	536	Public Relations Research	Learns about the importance of research in communications, conducts research using qualitative and quantitative methods, and analyzes data to understand implications within a specific communications context. Critically evaluates published academic and professional research and exposes types of research and their application in the field of public relations.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Master of Mass Communication major. Credit is allowed for only MCO 536 or 598 (PR Research)
MCO	540	Sports Reporting	Sports reporting, writing, scriptwriting and video production. Fast-paced and demanding. Students report and write/produce professional-level, clear, well-reported, accurate stories and video packages about athletes and sports stories newsworthy in the Valley and beyond.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism MA major; MCO 502
MCO	550	Issues in Coverage of Business and the Economy	Exposes the basics of business and economic reporting, one of the fastest-growing areas of journalism. Students learn what skills are needed to cover business and economic stories as well as the basics of how private companies operate and the factors that drive the economy. They also learn about opportunities in the field and hear from leaders in business journalism.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): ASU graduate online student OR Masters of Mass Communication major

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MCO	553	Reporting on Business and the Economy	Trains students in the basics of reporting about business and the economy. Helps students tell the stories behind companies, people and money, while improving competence in using numbers in stories. Offers the opportunity to have stories appear in print, online or broadcast.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication major; MCO 502; Credit is allowed for only MCO 553 or 598 (Reporting on Business and the Economy)
MCO	555	Digital Media Entrepreneurship	Students identify a marketable idea and transform it into a product and/or company. In the process, they learn about key concepts of entrepreneurship and practice skills that they can employ as entrepreneurs themselves. Students are exposed to a range of national and regional entrepreneurs and emerge with a deeper understanding of entrepreneurship's importance within the media and communications landscape.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): graduate Mass Communication major. Credit is allowed for only JMC 455, JMC 494 (Digital Media Entrepreneurship), MCO 555, or MCO 598 (Digital Media Entrepreneurship)
MCO	560	Arizona Media Law	Case study approach to first amendment issues, media access, libel, confidentiality, and invasion of privacy as applied to media organizations in Arizona.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student
MCO	570	Master of Mass Communication Capstone	Master's degree hands-on culminating experience. Students may specialize in the various areas, i.e. print, broadcast, online, digital media, or public relations.	Y	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Master of Mass Communication student
MCO	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Pre-requisite: Masters of Mass Communication student
MCO	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisite: Masters of Mass Communication student
MCO	710	Research Methodology in Mass Communication	Identifies research problems in mass communication and provides an overview of questionnaire construction as well as attention to survey, historical, content analysis, experimental and legal research methods.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism Mass Communication PHD students
MCO	711	Critical, Historical, Legal Research Methods in Mass Communication	Critical, legal and historical methods necessary to conduct qualitative mass communication research.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Journalism Mass Communication PhD student
MCO	712	Freedom of Expression Theory	Examines philosophical and legal aspects of press freedom; emphasizes First Amendment theory evolution from 1791 to present.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Journalism Mass Communication PhD student
MCO	720	Mass Communication Theory	Analyzes various theoretic models of mass communication with emphasis on the applications of these theories to professional communication.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism and Mass Communication PhD student
MCO	722	Philosophy of Mass Communication	Mass media as social institutions, particularly interaction with government and public; emphasizes criticism and normative statements. Seminar. Prerequisite: Journalism and Mass Communication PhD student.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism and Mass Communication PhD student
MCO	755	Research Apprenticeship	Students and faculty work on a research project with the expected outcome of a scholarly publication.	N	RSC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Pre-requisite: Journalism and Mass Communication PhD student
MCO	765	Teaching Apprenticeship	Assists PhD students with the transition from the industry to the classroom in order to become better university instructors.	N	REC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-2		Pre-requisites: Journalism and Mass Communication PhD student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MDC	211	Introduction to Digital Sound	Examines how technology is used as listeners, creators, critics, remixers, and a wide variety of other roles to participate in and gain a deeper understanding of music and its role in our lives.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Credit is allowed for MDC 211 or MUE 294 Open Minds, Digital Ears
MDC	311	Composing and Performing for Hybrid Ensembles	Provides opportunities to perform music in a variety of digital and hybrid contexts using both physical and digital instruments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only MDC 311 or MUE 394 (Performing in Digital and Hybrid Music Groups)
MDC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MDC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MDC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MDL	410	Laboratory Leadership	Clinical lab leadership and management. Applies the principles of personnel management and supervision, allocation of resources, and staff communication.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite: Admission to Medical Laboratory Science program
MDL	420	Advanced Clinical Urinalysis and Body Fluids	Theory and applications of principles in urinalysis with emphasis on the etiology, pathophysiology, and clinical manifestations of renal and other metabolic defects as reflected by the analysis of urine and other body fluids.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	2		Pre-requisites: BIO 182; Admission to Medical Laboratory Science program
MDL	421	Advanced Practicum in Clinical Urinalysis and Body Fluids	Correlation and application of theory in a supervised clinical laboratory. Processing, analysis, and evaluation of urine and body fluids, emphasizing manual and automated techniques of specimen analysis.	N	PRA	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisites: Medical Laboratory Sciences BAS major; MDL 420 with C or better
MDL	430	Advanced Hematology and Hemostasis	Theory and application of principles in hematology, with emphasis on techniques to evaluate blood dyscrasias and analyze body fluids. Etiology, pathophysiology, clinical manifestations, and treatment of blood dyscrasias/hemostatic defects.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 182; Admission to Medical Laboratory Science program
MDL	431	Advanced Practicum in Hematology and Hemostasis	Correlation and application of theory in a supervised clinical laboratory. Processing, analysis, and evaluation of blood samples, emphasizing manual and automated techniques of specimen analysis.	N	PRA	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		
MDL	440	Advanced Immunohematology and Immunology	Theoretical and practical application of clinical immunology and immunohematology. Emphasizes serological techniques that aid disease diagnosis and blood donor selection.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 182; MIC 205; Admission to Medical Laboratory Science program
MDL	441	Advanced Practicum in Immunohematology and Immunology	Correlation and application of theory in a supervised clinical laboratory. Processing, analysis, and evaluation of samples, emphasizing manual and automated techniques of specimen analysis.	N	PRA	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Pre-requisites: Medical Laboratory Sciences BAS major; MDL 440 with C or better
MDL	450	Advanced Clinical Microbiology	Theoretical and practical application of clinical microbiology. Emphasizes identification of pathogenic organisms, molecular techniques, mycology, virology, and parasitology.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: MDL 410; 420; 421; 430; 431; 440; 441
MDL	451	Advanced Practicum: Clinical Microbiology	Introduces instructional strategies appropriate for the teaching of group exercise classes in secondary school settings.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisite: MDL 450 with C or better
MDL	460	Advanced Clinical Chemistry	Theoretical and practical applications of clinical chemistry with particular emphasis on correlation of test results to disease status, statistical analysis, pre-analytical testing, critical values, calibration, and trending and tracking of quality control results.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: MDL 410; 420; 421; 430; 431; 440; 441

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MDL	461	Advanced Practicum: Clinical Chemistry	Correlation and application of theory in a supervised clinical laboratory. Processing, analysis, and evaluation of samples, emphasizing manual and automated techniques of specimen analysis routinely used clinical chemistry testing.	N	LAB	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisites: MDL 460 with C or better
MDL	470	Research Paper	Focuses on the creation of a research paper, written in a scientific fashion, on a relevant topic in the clinical laboratory field.	N	RSC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisite: MDL 460
MDL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
MED	100	Introduction to Medical Studies	Presents basic concepts related to sciences, social sciences, humanities, statistics and other topics related to medical and health studies. Solidifies concepts through the use of assignments, exams and discussions.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	1		
MED	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-3		
MED	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
MED	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
MED	300	Historical and Contemporary Issues in Health	History of medicine in the modern world and its relationship to contemporary issues in medicine with emphasis on the broader context of ways in which technology, personalized medicine, genomics, ethical issues and shared decision making between patients and providers have evolved.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3	L	Prerequisite(s): HSC 320
MED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
MED	417	Impact of Violence on Health	Approaches violence from a public health perspective, using the Centers for Disease Control, National Center for Injury Prevention and Control, as a benchmark. Applies an interprofessional approach to violence, to include medicine, nursing, law, law enforcement, social work, psychology, economics and education, among others. Discusses principles of epidemiology, underlying etiologies and sequelae and evidence-based strategies for prevention throughout the course.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours
MED	445	Science of Helping in Health	One of the strongest weapons in the health care arsenal is helping people make healthier lifestyle choices. But this weapon is only effective when it results in sustained behavior change. Explores the complex interactions among genetics, biology, psychology and society that drive lifestyle choices and the science surrounding motivation and compliance in facilitating behavioral change.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): Minimum 45 hours
MED	450	Leadership and Professionalism	Leadership, leadership theory and inter-professionalism in practice. Applies didactic content to case studies and activities designed to promote critical thinking and effective teamwork. Solidifies concepts through the use of assignments, exams and discussions.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only HCD 401 or MED 450
MED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	YGB	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): minimum 3.00 GPA
MED	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	College of Health Solutions	1-6		Prerequisite(s): Barrett Honors student
MED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	College of Health Solutions	College of Health Solutions	1-6	L	Prerequisite(s): Barrett Honors student
MED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
MED	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-7	L	
MED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Health Solutions	College of Health Solutions	1-3		
MEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		
MEE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MEE	322	Structural Mechanics	Three-dimensional stress and strain analysis, generalized Hooke's Law, failure theories for ductile and brittle materials, combined loading, stress concentrations, energy methods, mechanical vibrations and structural dynamics, fatigue.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Mechanical Engineering BSE student; MAE 213 and 384 with C or better; MAT 267 or 272 with C or better; Credit is allowed for only AEE 325 (or MAE 325), MEE 322, or MAE 394 (Structural Materials in Aerospace)
MEE	323	Computer-Aided Engineering II	Introduces finite-element analysis, pre- and postprocessing, solving problems with FEA.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2		Prerequisite(s) with C or better: Aerospace Engineering BSE major: AEE 325 (or MAE 325 or 394 - Aerospace Structures and Materials); MAE 214 or Mechanical Engineering BSE major: MAE 214; MEE 322 (or MAE 322)
MEE	340	Thermofluids II	Intermediate concepts of thermodynamics, fluid mechanics, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 240 with C or better; MAT 267 or 272 with C or better; Pre- or corequisite(s): MAE 384 with C or better if completed
MEE	342	Principles of Mechanical Design	The design process; conceptual and embodiment design of mechanical elements; form synthesis; material selection, failure modes, manufacturability tolerances, common mechanisms and machine elements.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MEE 322 with C or better; MSE 250 with C or better; Pre- or corequisite(s): MAE 318 and MEE 323 with C or better if completed
MEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MEE	434	Internal Combustion Engines	Performance characteristics, combustion, carburetion and fuel-injection, and the cooling and control of internal combustion engines. Computer modeling.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MEE 340 or MEE 482 with C or better; Credit is allowed for only MEE 434 or MAE 598 (Internal Combustion Engines)
MEE	446	Energy Systems Design	Applies mechanical engineering principles and techniques to modeling, analysis, and synthesis of energy systems and components. Design optimization. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Mechanical Engineering (Energy and Environment) BSE major; MAE 301 and 400 with C or better; MEE 340 and 342 and 482 with C or better
MEE	482	Thermodynamics	Applied thermodynamics; gas mixtures, psychrometrics, property relationships, power and refrigeration cycles, and reactive systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 240 with C or better; Credit is allowed for only MAE 382 or MAE 570 or MAE 598 (Thermodynamics) or MEE 482
MEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MEE	488	Mechanical Engineering Design I	Conceptual and embodiment design; modeling; rapid prototyping. Team project. MEE 488 and 489 must be taken in consecutive semesters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Mechanical Engineering major; MAE 301 and 318 and 384 with C or better; MEE 340 and 342 with C or better; Pre- or corequisites(s): MAE 400 with C or better if completed
MEE	489	Mechanical Engineering Design II	Detail design; fabrication and testing. Team project. MAE 488 and 489 must be taken in consecutive semesters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MEE 488 with C or better
MEE	491	Experimental Mechanical Engineering	Experimental and analytical studies of phenomena and performance of fluid flow, heat transfer, thermodynamics, refrigeration, and mechanical power systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3	L	Prerequisite(s): Fulton Engineering undergraduate student; MAE 301 and 318 with C or better; MEE 340 with C or better
MEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		Prerequisite(s): Barrett Honors student
MEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
MEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-7		
MEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		Prerequisite(s): minimum 45 hours
MET	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-3		
MET	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
MET	211	Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia. May be repeated for credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre/Co-requisites: PHY 121 (or PHY 111 as pre-requisite); MAT 265 or MAT 270
MET	212	Applied Engineering Mechanics: Dynamics	Masses; motion kinematics; dynamics of machinery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 211 (or CON 221 or MAE 212); MAT 266 (or MAT 271)
MET	213	Applied Mechanics of Materials	Stress, strain, stress-strain relations. Axial, shear, bending, torsional and combined loads and deflections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: MET 211 or CEE 210, or MAE 212
MET	214	Applied Mechanics of Materials Laboratory	Measurements of loads and deformations relating stress and strain in axial, shear, bending, torsional, and combined loading configurations.	N	LAB	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1		Pre-requisites: MET 213, MAE 213, MSE 211, CON 223, CEE 213 OR be co-enrolled in MET 213
MET	230	Introduction to Engineering Materials	Introduces materials and their properties, emphasizing basic concepts and structures and how these properties relate to manufacturing and design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	2		
MET	231	Manufacturing Processes	Design documentation and material processes on plastics, ferrous and nonferrous materials, emphasizing orthographic projection, geometric dimensioning and tolerances.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 160 and MET 230
MET	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
MET	300	Applied Material Science	Principles of materials science emphasizing concepts relevant to design, manufacturing, and use. Covers metals, polymers, ceramics, and composites.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR MSE 250 OR Applied Science (Manufacturing Technology & Management) major; MET 230

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MET	302	Welding Survey	Theory and application of industrial welding processes; introductory welding metallurgy and weldment design; SMAW, GTAW, GMAW, oxyacetylene, and brazing experiences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Fulton Schools of Engineering student
MET	309	Nondestructive Testing and Quality Assurance	Part and material inspection using metrology and nondestructive inspection tools and techniques. Theory and application with use of pertinent standards.	N	LAB	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR Applied Science (Manufacturing Technology & Management) major
MET	321	Introduction to Automotive Engineering	Engineering principles and the design of ground vehicles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MET 212. Pre- or corequisite(s): MET 213, 340
MET	331	Machine Design I	Applies mechanics to design of machine elements and structures. Stress analysis, failure modes, tolerances, cylindrical fits, and shaft design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 213 (or CON 223 or MAE 213)
MET	340	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli's equation, applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MAT 266 or 271 with C or better; PHY 121 with C or better; Credit is allowed for only EGR 340 or MET 340
MET	341	Manufacturing Analysis	Organizational and functional requirements for effective production. Analysis of industrial specifications, geometric dimensioning and tolerancing, costs, and group technology. Writing assembly production plans.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR Applied Science (Manufacturing Technology & Management) major
MET	341	Manufacturing Analysis	Organizational and functional requirements for effective production. Analysis of industrial specifications, geometric dimensioning and tolerancing, costs, and group technology. Writing assembly production plans.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR Applied Science (Manufacturing Technology & Management) major
MET	344	Casting and Forming Processes	Analyzes various forming processes to determine load requirements necessary for a particular metal-forming operation. Information used to select equipment and design tooling. Metal casting processes and design of castings. Introduces powder metallurgy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR Applied Science (Manufacturing Technology & Management) major
MET	345	Advanced Manufacturing Processes	Material removal processes emphasizing advanced turning, milling, and machinability studies using cutting tools. CNC programming for machining and turning centers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR Applied Science (Manufacturing Technology & Management) major
MET	351	Introduction to Automation	Introduces automation. Topics include assembly techniques, fixed and flexible automation systems, robots, material-handling systems, sensors, and controls.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 210
MET	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
MET	396	Professional Orientation	Topics related to a successful career in engineering technology industry. Includes safety, life-long learning, ethics, and career planning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1		Pre-requisite: Junior or Senior standing
MET	401	Quality Assurance	Statistical quality control methods, design of experiments, sampling, gauge requirements and specifications, use of quality assurance tools.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: STP 420 (or APM 301); Credit is allowed for only MET 401 or 501
MET	409	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Junior or Senior standing; Credit is allowed for only MET 409 or 509
MET	410	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: MET 341; Credit is allowed for only MET 410 or 510
MET	415	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 341; STP 420; Credit is allowed for only MET 415 or 515
MET	416	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3	CS	Pre-requisite: MET 341; Credit is allowed for only MET 416 or 516

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MET	418	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 300 or MSE 250. Credit is allowed for only MET 418 or 518
MET	421	Vehicle Powertrains	Internal combustion engine design, performance and operation, and power transmission systems within vehicles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 321
MET	423	Vehicle Chassis and Running Gear Design	Design and manufacture of chassis, structures, steering and braking systems and components, wheels and tires, suspension systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 321; MET 331
MET	424	Vehicle Electrical Systems	Vehicle electrical power and signal systems, computer control and analog control systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 210; MET 321; MET 421
MET	426	Vehicle Thermal Design	Heat management in vehicle systems, including thermal design of engine and transmission cooling systems, cabin heating, and air conditioning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 421; Pre/Co-requisite: MET 434
MET	427	Vehicle System Integration and Testing	Systems engineering principles. Design of the interfaces between vehicle subsystems. Testing of integrated systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 423; MET 424
MET	432	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 340 with C or better; Credit is allowed for only EGR 432 or MET 432
MET	434	Engineering Thermo-Fluids III	Transient conduction, convection and radiation heat transfer, heat exchangers, thermo-fluid systems engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 340
MET	435	Alternate Energy Sources	Alternate energy systems, energy use and its impact on the environment, and demonstrating practical alternative energy sources to fossil fuels.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 340
MET	438	Machine Design II	Applies mechanics to the design of machine elements and structures. Emphasizes basics of gears, springs, brakes, clutches, and bearings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisites: MET 331 OR Fulton Schools of Engineering graduate student
MET	440	Finite Element Analysis	Analyzes machine elements, frames, and aerospace structures employing finite element analysis and software. Includes sensitivity analysis and estimating accuracy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 331
MET	442	Specialized Production Processes	Nontraditional manufacturing processes, emphasizing EDM, ECM, ECG, CM, PM, HERF, EBW, and LBW.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218 (or EGR 294 [Engineering Materials & Manufacturing] or MET 231). Credit is allowed for only MET 442 or MET 502
MET	443	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 345; Credit is allowed for only MET 443 or 514
MET	444	Production Tooling	Design and fabrication of jigs, fixtures, and special industrial tooling related to manufacturing methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre- or corequisite(s): MET 309. Credit is allowed for only MET 444 or MET 504
MET	455	Automation Systems Integration	Applies sensors and devices and their integration with PLCs and computers into automated devices and systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 351
MET	460	Capstone Project I	Group project designing, evaluating, and analyzing components, assemblies, and systems. Develop products/manufacturing techniques demonstrating state-of-the-art technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 300; 331; 340; 345
MET	461	Capstone Project II	Small-group projects applying manufacturing techniques, with emphasis on demonstrating state-of-the-art technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 460
MET	461	Capstone Project II	Small-group projects applying manufacturing techniques, with emphasis on demonstrating state-of-the-art technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 460
MET	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		
MET	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
MET	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student
MET	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisites: Fulton Schools of Engineering student; Minimum Junior status
MET	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-7	L	Prerequisites: Fulton Schools of Engineering student; Minimum Junior status
MET	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-7	L	Prerequisites: Fulton Schools of Engineering student; Minimum Junior status

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MET	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-3		
MET	501	Statistical Quality Control Applications	SPC problem-solving techniques for implementation in industrial setting; design and analysis of experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 401 or 501
MET	502	Specialized Production Processes	Specialized production processes including lasers, electronic beam, abrasive and water jet, and chemical and thermal processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 442 or 502
MET	504	Applications of Production Tooling	Design and fabrication of fixtures, jigs, templates, and specialized industrial tooling for manufacturing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 444 or 504
MET	509	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate; credit is allowed for only MET 409 or 509
MET	510	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 410 or 510
MET	514	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 443 or 514
MET	515	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 415 or 515
MET	516	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 416 or 516
MET	518	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 418 or 518
MET	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		
MET	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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MET	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MFG	308	Manufacturing System Project I	Focuses on design for product realization in a manufacturing environment. Projects are industry driven and applicable to low-volume product development.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 217 with C or better; EGR 218 with C or better
MFG	318	Manufacturing Systems Project II	Focuses on process development for high-volume manufacturing in the competitive global economy. Uses discrete event simulation software to model and study the manufacturing environments.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 219 with C or better; MFG 382 with C or better
MFG	381	Manufacturing Processes and Validation Lab	Theory of basic manufacturing processes accompanied by the fundamental skills; safety practices while working with engineering drawings, machine tools and metrology equipment related to manufacturing.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 217 with C or better; EGR 218 with C or better
MFG	382	Modeling of Manufacturing Systems I	Modeling of manufacturing systems using discrete event simulation. Introduces basic manufacturing-related data and system configurations. Uses commercial simulation software to build and analyze model output data.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 219 with C or better; EGR 280 with C or better
MFG	383	Communications in a Production Environment	Effective communication is essential in all production environments for efficiency, yield and safety. Covers the major applications within a company and the expectations for the individual's capabilities.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 or EGR 240 with C or better
MFG	385	Design for Manufacturing	Introduces the methods employed to design and produce products that can compete in the global marketplace. Topics include design for manufacturability and assembly, product life-cycle, economics of design and reliability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218 with C or better
MFG	386	Integrated Circuit Manufacturing	Integrated circuit manufacturing combines judicious selection of materials with nano-meter features to create complex digital and analog circuits. The process demonstrates extreme applications of design, control and resource organization.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216 with C or better; EGR 280 with C or better
MFG	387	Industrial Automation	Introduces concepts and application of industrial automation systems. Topics include PLC control systems, embedded control systems, sensing technologies, robotics and material-handling systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 219 with C or better
MFG	461	Manufacturing Enterprise Operations	Covers the role of engineers in the manufacturing environment. Aspects of this role include troubleshooting, performance control, risk mitigation and financial planning. Provides tools and approaches for understanding and representing costs and making decisions based on these costs.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 280; MAT 343
MFG	472	Additive Manufacturing	Additive Manufacturing (AM) is driving a paradigm shift in design and manufacturing. Provides a comprehensive overview of AM, from process physics and material chemistry to process and technology development. Explores new engineering and product design degrees of freedom enabled by AM. Topics include fundamentals of polymer, metal and composite AM processes; process capabilities such as rate and resolution; material properties and their dependence on material characteristics, process parameters and machine designs; existing and new applications of AM; and a perspective on current and future technical challenges in AM.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218
MFG	480	Advanced Statistical Approaches for Manufacturing	Applies experimental design and statistical process control in the manufacturing environment. Uses engineering statistical software to formulate and solve problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 280 with C or better
MFG	481	Enterprise Economics	All manufacturing is about cost. Considers the components of these costs and presents a number of mathematical tools and approaches for representing, understanding and making decisions based on them.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 280 with C or better
MFG	482	Materials Science in Manufacturing	High-technology manufacturing combines and exploits the properties of a wide range of materials. Provides a science-based view of materials selection and optimization for product manufacturability and reliability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	4		Prerequisite(s): EGR 218 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MFG	483	Manufacturing Systems Operations	Introduces key factory management strategies, lean and six sigma philosophies, and global manufacturing supply chains. Software and computer model-based analysis and observation of factory and supply chain performance.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MFG 382 with C or better
MFG	485	Engineering Internship	Experiential education. Local company oversees a student project experience at their facility.	N	PRA	N	GNA	Ira A. Fulton Engineering	Engineering Programs	1-3		Prerequisite(s): MFG 308 with C or better
MFG	486	CNC Computer Programming	Theory and applications of NC languages using CAM software and CNC machine tools. Overview of advanced manufacturing processes including production CNC part programming ranging from current design to inspection standards.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MFG 381 with C or better
MFG	487	Casting and Forming Processes	Theory and practice of metal casting processes and design of castings. Analysis of various forming processes to determine load requirements. Theory and practice of tooling design for stamping operations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218 with C or better
MFG	488	Plasma Processing	Plasma processing is widely used in advanced technology manufacturing. Combines the principles of chemistry, materials, RF power and control to demonstrate key applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216 with C or better; EGR 218 with C or better; EGR 280 with C or better
MFG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
MFG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student
MFG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
MGT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		
MGT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		
MGT	290	My Life Venture	Interdisciplinary course that engages students in aspects of self-discovery and entrepreneurship. Students learn about themselves, their decisions, and their goals, and see how entrepreneurship could play a role in their lives. Introduces students to concepts in entrepreneurship and personal finance in the context of not-for-profit, business, political, and artistic realms. Includes both individual and team activities and is open to any ASU student.	N	LEL	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Credit is allowed for only MGT 290 or MGT 294 (My Life Venture) or WPC 294 (My Life Venture)
MGT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		
MGT	300	Organization and Management Leadership	Analyzes strategic, behavioral, and human resource management perspectives, including principles of strategic management and leadership of human resources.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s) with C or better: ACC 231, 232 or 261; ECN 221 or ECN 231 or IEE 380 or STP 280; MAT 211, 266 or 271; WP Carey, Engr Mgmt, Sec Ed (Bus) major or Business minor; Pre- or corequisite(s): ACC 240, 241, 242 or 271 with C or better if complete
MGT	302	Principles of International Business	Multidisciplinary analysis of international economic and financial environment. Operations of multinational firms and their interaction with home and host societies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3	G	Pre-requisites: W. P. Carey BS or BA student (or non-business student with minimum 2.5 GPA and minimum 56 hours); ECN 212 or 214 with C or better; Credit is allowed for only AGB 302 or MGT 302 or BUA 394 Perspectives in Global Business
MGT	303	Honors Organizational Strategies, Leadership, and Behavior	Overview of business strategy principles, management processes, motivation, and leadership.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisites: W.P. Carey School of Business Honors student; PSY 101 (or PGS 101) or PSY 304 (or PGS 304) or SOC 101 or SOC 301 with C or better; ECN 221 or 231 with C or better. Pre- or corequisite: ACC 241 or 242 or 271 with C or better if completed

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MGT	310	Collaborative Team Skills	Development of skills in managing and working in collaborative environments. Theories and applications in small group dynamics and team facilitation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BS or BA student OR Non-business student with min 3.5 ASU cum GPA and min 56 earned hours.
MGT	320	Organizational Behavior	Management processes, fundamentals of business-level strategy, individual difference issues, motivation and leadership of people in organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites with C or better: ACC 241 (or ACC 242 or 271); ECN 221 (or ECN 231); MGT 300 (or MGT 303); PSY 101 (or PGS 101) or PSY 304 (or PGS 304) or SOC 101 (or SOC 301); BS Business Entrepreneurship or Management major
MGT	340	Creativity and Innovation	Teaches key concepts and useful tools and techniques of creativity and innovation to students in order to encourage development of creative skills and habits that can propel them in their career or guide them down a path to start a new venture of their own. Coursework and activities involve complex problem solving activities and relevant trend and environmental analysis in order to explore alternative approaches to challenges. Coursework includes both individual and team activities.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3	L or HU	Pre-requisite: W. P. Carey BS or BA student OR non-business student with min 2.50 ASU cum GPA and min 56 earned hours and Pre/Co-requisite: MGT 290 or 294 My Life Venture; Credit is allowed for only MGT 340 or MGT or WPC 394 (Creativity and Innovation)
MGT	360	Entrepreneurship and Value Creation	In-depth application of entrepreneurial concepts including opportunity recognition, value creation and new business management. Identifies the needs of a market and problem solves to meet those needs through innovation. Covers common mistakes made in the new venture process and how to work to avoid these mistakes.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): Business undergrad; ACC 241 or 242 w/ C or better OR Engineering junior OR non-business junior; min 2.50 cum ASU GPA; MGT 290 w/ C or better; Pre- or coreq(s): MGT 340 w/ C or better if completed; Credit is allowed for only FSE 301 or MGT 360
MGT	380	Management and Strategy for Nonmajors	Introduces the functions and applications of management in organizations, including controlling, decision making, leadership, motivation, planning, and social responsibility. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
MGT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		Pre-requisites: W. P. Carey BS or BA student; Pre/Co-requisite: ACC 240 or ACC 241 or ACC 242 or ACC 271 with C or better
MGT	400	Cross-Cultural Management	Cultural role in international business relations; applied principles of cross-cultural communications, negotiations, and management; regional approaches to business relations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3	C & G	Pre-requisites: W/P Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better.
MGT	404	Chinese Language and Global Business Communication	Capstone course designed to synthesize the knowledge acquired from business, language and cultural coursework in the BA in Business: concentration in Chinese Language and Culture. Analyzes case studies in which Chinese language and cultural skills are used to develop communication strategies in doing business in China. Learn new tools and techniques of analysis to enhance communication with Chinese business counterparts. Applies language and cultural skills to a major project in which students demonstrate complex and integrated knowledge of negotiating with the Chinese and using global business skills. Integrates international business knowledge into presentations, research and the use of sophisticated tools of analysis to provide practical training for the global business environment. Students are proficient in communicating in Chinese prior to taking this course.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): W.P. Carey BA or BS major; CHI 302 with C or better; LES 305 with C or better; MGT 300 with C or better; SCM 300 with C or better

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MGT	405	Spanish Language and Global Business Communication	Synthesizes the knowledge acquired from business, language and cultural coursework in the BA in Business: concentration in Spanish Language and Culture. Students proficient in communicating in Spanish analyze case studies in which Spanish language and cultural skills are used to develop communication strategies in doing business in Spanish-speaking countries. Students learn new tools and techniques of analysis to enhance communication with their Spanish-speaking business counterparts. Applies language and cultural skills to a major project in which students demonstrate complex and integrated knowledge of negotiating with Spanish speakers and using global business skills. Integrates international business knowledge into presentations, research and the use of sophisticated tools of analysis to provide practical training for the global business environment.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): W.P. Carey BA or BS major; LES 305 with C or better; MGT 300 with C or better; SCM 300 with C or better; SPA 314 with C or better
MGT	410	Responsible Management	Values, core beliefs, legal and ethical mandates and cultural norms as they apply to the conduct of organizations; application through a Service Learning project.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BS or BA student, or non-business student with minimum 3.5 gpa and minimum 56 hours; MGT 300, 303, 320 or 380 with C or better
MGT	411	Leading Organizations	Comprehensive overview of leadership in organizations. Provides students with understanding of leadership research and its applications to global organizations and the development of leaders.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BS or BA student or non-business student with minimum 2.50 ASU cum GPA and minimum 56 earned hours; MGT 300, 303, 320 or 380 with C or better
MGT	420	Human Resource Management	Development of skills and knowledge to lead associates effectively: hiring, developing, evaluating, retaining, and rewarding employees. Preparation for leadership roles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BS or BA student, OR non-business student with min 3.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better
MGT	421	Compensation in Organizations	Develops knowledge of theory and research in motivation, compensation and rewards, and skill in applying such knowledge to important compensation and reward decisions. Discusses strategic compensation and reward systems issues. Explores in detail a variety of monetary and nonmonetary reward systems; the motivational impact these systems have on employees, teams, and CEOs; and the performance impact they have on organizations.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better
MGT	422	Staffing	Focuses on the effective management of the flow of talent into and through organizations. Covers human resource planning, recruiting and selection, career transitions and other workforce movement. Provides opportunities to develop hands-on skills that are relevant to effectively managing talent flow.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better
MGT	423	Training and Development in Organizations	Familiarizes students with the training and development function in organizations. Although tailored to students interested in human resources management, the course may also be relevant to students who may at some point be involved in training and development within an organizational context.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better
MGT	424	Employment Law	Provides an overview of U.S. employment law at both the federal and state levels. Reviews employment at will and wrongful discharge, employment torts, privacy, discrimination law, worker's compensation, occupational safety and health, unemployment, federal compensation laws, and the law of noncompetition and trade secrets. Designed for individuals preparing for careers in human resource management, labor relations or dispute resolution.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better
MGT	425	Global Human Resources	Explores the importance of international business management in the context of international human resource management, including topics on culture, compensation and benefits, international organizations and their structures, international assignment management and the legal and regulatory considerations that global organizations face. Identifies differences in operating a domestic versus international business and how business practices need to be adapted to operate successfully in foreign markets. Covers global strategy and structure; understanding and managing cultural differences; design and alignment of global HRM practices; and the global HR function.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better

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MGT	430	Negotiations	Improves student's understanding of and skills in the art of negotiation. For most managers, negotiation is a significant aspect of their day-to-day jobs, not to mention a major element of everyday life. Give students experience in bargaining and negotiation, as well as provide a foundation in the essential knowledge bases crucial to being an effective negotiator. Emphasizes experiential learning--students spend most of their time participating in exercises and negotiation simulations, as well as discussing negotiation-based cases involving issues that often arise in the workplace. Provides a fundamental understanding of what it takes to be an effective negotiator, as well as several experiences to draw upon in future negotiation situations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: MGT 300 or 303 or 310 with C or better; W.P. Carey BS or BA student or non-business student with minimum 3.00 ASU cum GPA and minimum 56 earned hrs; Students with credit for MGT 494 topic 187 may not take MGT 430
MGT	440	Entrepreneurship	Prepares students for the challenges of assembling and growing high-potential innovative ventures through the use of analytical frameworks that encompass uncertainty inherent in entrepreneurship (or in entrepreneurial activity). In-depth discussion of cases provides a strong empirical foundation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BS or BA student; FIN 300, 302 or 303 with C or better; MGT 300, 310 or 303 with C or better
MGT	445	Business Model Development	Develops a complete strategic business model emphasizing the planning process undertaken by successful small business owners and entrepreneurs.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BS or BA student; MGT 440 with C or better
MGT	446	Venture Capital Experience	Students learn the details of the startup funding process and available resources. Exposes the history of venture capital and other types of capital, current trends, and the trends that are anticipated in the future. Students learn due diligence process as performed by investors and applies these concepts to building and growing their own ventures. Coursework includes both individual and team activities and is open to students in any major of study with the required prerequisite.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisite: W. P. Carey BA or BS student; ACC 240, 241 or 242 with C or better OR Non-business student; Minimum 2.50 GPA, Minimum 56 hours; Credit is allowed for only MGT 446 or 494 (Venture Capital Experience)
MGT	447	Lean Launch	Students learn lean and customer development methodologies to test assumptions made about a new business concept that they wish to explore or launch. Teaches how to effectively utilize business models and critically assess the assumptions made through the testing of hypotheses to create innovative and market-ready ventures. Includes weekly presentations of learning points and team activities outside of the classroom. Open to students in any major of study with the required prerequisite.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): W.P. Carey BA or BS major; ACC 241 or 242 or 271 with C or better OR non-Business student with minimum ASU 2.50 GPA; minimum 56 hours. Credit is allowed for only HON 447 or MGT 447 or MGT 494 (Lean Launch)
MGT	450	Consulting Projects	Describes and analyzes business processes. Generates and evaluates alternatives. Creates improvement and implementation plans.	N	PRA	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3	L	Prerequisite(s): W.P. Carey BS or BA major; ENG 301 or 302 with C or better; MGT 300 or 303; MGT 411 with C or better; MKT 300, 302 or 303 with C or better; Pre- or Corequisite: FIN 300, 302 or 303 (with C or better if completed)
MGT	459	International Management	Concepts and practices of multinational and foreign firms. Objectives, strategies, policies, and organizational structures for operating in various environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3	G	Pre-requisites: WP Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA and min 56 earned hours; MGT 302 or ECN 306 with C or better
MGT	460	Strategic Management	Systems theory of organizations, strategy formulation and administration in organizations, creating organizational cohesiveness, and leading change within organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3	L	Pre-requisites: W.P. Carey Management BS student; MGT 303 or 320 with C or better; MGT 410 or 411 with C or better; FIN 300, 302 or 303 with C or better; MKT 300, 302 or 303 with C or better
MGT	464	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 464 or MGT 464 or SOS 474
MGT	465	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 465 or IND 465 or MGT 465 or SOS 475

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MGT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): W.P. Carey BA Human Resources or BS Business Entrepreneurship or BS Management major
MGT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-6		Prerequisite(s): Barrett Honors student
MGT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-6	L	Prerequisite(s): Barrett Honors student
MGT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		Pre-requisites: W.P. Carey BS or BA student OR non-business with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and min 56 earned hrs; MGT 300 or 302 or 303 or 310 or IBS 300 with C or better
MGT	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-6		Prerequisite(s): Barrett Honors student
MGT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-7		Pre-requisites: W.P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students
MGT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Pre-requisites: W.P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students
MGT	502	Leading People, Teams and Organizations: Organization Theory	Understands human side of organizations through management theories and applications. Develops knowledge and skills for successful management of self and others.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	2-4		Prerequisite(s): specific W.P. Carey students
MGT	513	Mindful Leadership	Provides a transformative experience that aids in developing skills associated with being a mindful leader. Focuses on introducing the concept of mindful leadership and explaining how to use it to achieve personal and professional goals. Then concentrates on using mindful leadership to lead individuals and teams. Specific learning goals include: (1) to enhance understanding of mindful leadership; (2) to improve skills in using mindful leadership to achieve personal goals; (3) to improve skills in using mindful leadership to lead individuals and teams; and (4) to propose a transformative plan aimed at increasing use of mindful leadership.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Prerequisite(s): W.P. Carey graduate student
MGT	520	High-Impact Leadership	Addresses the inherent ambiguity surrounding effective leadership by providing a toolkit of tangible behaviors to ensure leaders create "high impact" in all areas of their professional and personal lives. Emphasizes what high-impact leaders do differently and uniquely to achieve results while also inspiring loyalty in relationships. Covers core topics including building executive maturity and presence, developing and delivering compelling messages, inspiring those around you, building a strong relationship network, establishing credibility, and managing upward relationships. Includes peer dialogue, extensive presentation skills training, and assignments based on students' real-life leadership experiences.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Pre-requisite: W.P. Carey School of Business graduate student; Credit is allowed for only MGT 520 or 591 (High Impact Leadership)
MGT	525	Self-Transformation Through Executive Connections	A key objective of the W. P. Carey Full-Time MBA program is to develop each student's leadership competencies, which are essential competencies as the individual enters the workforce and advances through organizations. During the FT MBA program, each student participates in the Executive Connections program. This program gives each student an opportunity to enhance his or her understanding of key leadership competencies, apply an experiential process of leadership development, and meet one-on-one with an executive coach to deeply explore and reflect on personal leadership competencies and goals for development.	N	LEL	Y	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	0.5-2		Prerequisite(s): WPC MBA degree student; Credit is allowed for only MGT 525 or MGT 591 (Executive Connections)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MGT	530	Mastering the Art of Influence and Negotiation	Improves students' understanding of and skills in the art of negotiation. For most managers, negotiation is a significant aspect of their day-to-day jobs, not to mention a major element of everyday life. Gives students experience in bargaining and negotiation, as well as provides a foundation in the essential knowledge bases crucial to being an effective negotiator. Emphasizes experiential learning--students spend most of their time participating in exercises and negotiation simulations (including negotiating job offers), as well as discussing negotiation-based cases involving issues that often arise in the workplace. The goal is to provide students with a fundamental understanding of what it takes to be an effective negotiator, as well as several experiences to draw upon in future negotiation situations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Prerequisite(s): W.P. Carey School of Business graduate student; Credit is allowed for only MGT 530 or MGT 591 (Negotiations)
MGT	540	Going Out on Your Own: Entrepreneurship	Capstone case-based course covering all aspects of starting a business: opportunity identification, evaluation, concept development, identifying required resources, acquiring those resources, launching the entity, managing growth, and ultimately, harvesting the enterprise. Revolves around a series of cases, readings and class discussions designed to build a comfort level with understanding and solving problems faced every day, in real life, by a broad spectrum of entrepreneurs at various phases of venture development. Significant emphasis on understanding the valuation and financing of entrepreneurial ventures interwoven through discussions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Prerequisite(s): W.P. Carey School of Business graduate student; ACC 502 with C or better; FIN 502 with C or better; Credit is allowed for only MGT 540 or MGT 591 (Entrepreneurship)
MGT	545	Becoming Leaders Who Matter	Addresses core questions: What does it mean to be a leader who really matters? How can you become such a leader? Today's competitive and complex environment requires leaders who are equipped with not just the functional and technical skills necessary to run a business but, more significantly, the leadership skills that allow the business and the people involved in it to thrive. Provides an opportunity to reexamine thinking about leadership and assess current skills and competencies in this area. Highly interactive learning environment with case analyses, exercises, discussion, guided reflection activities, assessments and group work. Covers topics such as self awareness (motivations, values, and leadership style), developing perspective as leaders, the social context of leadership, the role of emotions in the workplace, using life experiences to extract leadership lessons.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Pre-requisite: W.P. Carey School of Business graduate student; Credit is allowed for only MGT 545 or 594 (Leading w/Authenticity & EI OR Becoming Leaders Who Matter)
MGT	550	Toxic Leadership and Dysfunctional Organizations	Examines origins and impact of bad behavior in the workplace. Identifies and investigates dysfunctional organizational policies and toxic leadership practices. Case studies and consultation reports provide students with detailed accounts of destructive leaders motivated by or responding to greed, questionable ethics, organizational and marketplace pressures, crisis and psychopathology. Students learn best practices for early detection of toxic leadership and organizational dysfunction and strategies for positive intervention and transformation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Pre-requisite: W.P. Carey School of Business graduate student; Credit is allowed for only MGT 550 or 591 (Toxic Leadership and Dysfunctional Organizations)
MGT	559	International Management	Studies international and cross-cultural influences on management processes and development of global leadership capabilities for experienced management professionals.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Pre-requisites: W.P. Carey Graduate student
MGT	565	Business Strategy and Public Policy	Takes a managerial perspective to examine the interface between businesses and their external political environments. Potential changes in public policy can affect current operations and future opportunities. Examines how managers can anticipate and affect the formation, modification and enforcement of public policy in various institutional environments.	N	LEL	Y	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		Prerequisite(s): W.P. Carey MBA Executive Program or W.P. Carey School of Business graduate student; Credit is allowed for only MGT 565 or MGT 591 (Business and Public Policy)
MGT	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	0-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	588	Sources of Competitive Advantage I	Explores the general manager as organizational leader. Focuses on competitive advantage and how each functional area contributes to it.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		Prerequisite(s): MBA degree student
MGT	589	Sources of Competitive Advantage II	Formulation of strategy and policy in the organization, emphasizing the integration of decisions in the functional areas.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	2-4		Prerequisite(s): MBA degree student
MGT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MGT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	0-12		Pre-requisites: Graduate W.P. Carey students
MGT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Pre-requisites: MBA degree student
MGT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	0-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management and Entrepreneurship	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MGT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	700	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
MGT	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management and Entrepreneurship	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	140	Music as Culture	Introduces a range of practical and intellectual challenges presented by encounters with various kinds of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & G	Pre-requisites: Music major
MHL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	201	Media Literacy for Musicians	Instruction in basic Macintosh computer literacy, including generic applications and music-specific programs with hands-on experience.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	CS	
MHL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MHL	339	Undergraduate Bibliography I	Research tools and methods in musicology, concentrating on resources pertinent to the study of music from Antiquity to the Baroque.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): MHL 140; Corequisite(s): MHL 341

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MHL	340	Undergraduate Bibliography II	Research tools and methods in musicology, concentrating on resources pertinent to the period 1750-present.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): MHL 140
MHL	341	Music History I	Western European art music from Antiquity through Baroque. Identification/analysis through listening; application of historical and analytical concepts; research project comprising fresh thesis, detailed musical research, personal reflection, fluent English writing, correct citation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Pre-requisites: Music Education, Music Therapy or BA major: MTC 221 with C or better OR Non-Music Education, Music Therapy or BA major: MTC 223 with C or better
MHL	342	Music History II	Western European, American art music from Classical period to present. Identification/analysis through listening; transfer/application of music/analytical concepts; research project comprising fresh thesis, insightful musical research/reflection, fluent English writing, correct citation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Pre-requisites: Music Education, Music Therapy or BA major: MTC 221 with C or better OR Non-Music Education, Music Therapy or BA major: MTC 223 with C or better
MHL	344	Music in World Cultures	Examines the relations among music, dance, theatre, religion, and social status in Asia, Africa, Oceania, Europe, and the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & G	
MHL	363	Survey of Russian Music	Examines music and musical life in Russia, the Soviet Union, and the post-Soviet C.I.S. from the Middle Ages to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Prerequisite(s): Music student; MHL 342 with C or better
MHL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	437	Music in the Baroque Era	Examines music, culture and aesthetics in the 17th and early 18th centuries.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): Music major or minor; minimum 45 hours. Credit is allowed for only MHL 437 or MHL 494 (Topics in Baroque Music) or MHL 494 (Music in the Baroque Era)
MHL	438	Topics in 18th-Century Music	Selected topics exploring the musical styles of the 18th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3	L & H	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with C or better
MHL	439	Topics in 19th-Century Music	Selected topics exploring the musical styles of the 19th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3	L & H	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with C or better
MHL	440	Topics in 20th-Century Music	Selected topics exploring the musical styles of the 20th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3	L or HU	Prerequisite(s): Music major; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with C or better
MHL	456	History of Opera	Development of opera from its creation ca. 1600 to present. Emphasis placed on major stylistic developments and representative works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	466	North American Indian Music	Various styles of Indian music in the United States, Canada, and Mexico. Open to Music majors and nonmajors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	(L or HU) & C	
MHL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	490	Capstone Project I: Undergraduate Thesis Research	Selection of topic and research toward the completion of an undergraduate thesis of no fewer than 50 pages.	N	RSC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): MHL 341; MHL 342
MHL	491	Capstone Project II: Undergraduate Thesis	Completion of an undergraduate thesis in musicology or ethnomusicology of no fewer than 50 pages.	N	RSC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): MHL 490
MHL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MHL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Prerequisite(s): Barrett Honors student
MHL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student

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MHL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7	L	
MHL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MHL	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	532	Music Bibliography	Major historical and analytical writings; systematic and historical collections of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Graduate Music student
MHL	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MHL	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Graduate Music student
MHL	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	632	Applied Musicology	Explores practice-oriented entrepreneurial opportunities and methods in musicology, acquires knowledge and develops skills in community engagement and outreach, explores pathways of professional publication and network building, and participates in organizing curated concert series and scholarly conferences.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): MHL 532
MHL	657	Topics in Symphonic Literature	Examines the evolution of the symphony and symphonic poem from the early classic era through the 19th century, with emphasis on the analysis of selected works.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	668	Introduction to Ethnomusicology	Experiencing theory and methodology by being ethnomusicologists through musical performance, primary writings on fieldwork, career structuring, the history of the discipline, its relationship with historical musicology, and the cultural theories which ethnomusicologists draw on.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	670	Area Studies in Ethnomusicology	Study of the music of a particular culture, country, or area (e.g., music of Mexico, Latin America, China, Africa).	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	675	History of Choral Music and Institutions	Examines the history of choral music through the lens of choral institutions: patronage, education, ritual, performing forces, status (professional vs. amateur), and locale.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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MHL	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	795	Cont Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	N	Z3	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	798	Research Colloquium	Interactive research forum featuring research presentations and discussion among musicology students, faculty and guest speakers from across campus and other institutions. Encourages students to engage in constructive dialogue with their peers as well as with faculty and guest speakers in a collegial environment conducive to exchange and collaboration. Supervised by a faculty panel from the musicology division.	N	RSC	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MSI 601 or 602
MHL	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIC	205	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SG	Prerequisite(s): CHM 101 or 113

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MIC	205	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	SG	Prerequisite(s): CHM 101 or 113
MIC	205	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SG	Prerequisite(s): CHM 101 or 113
MIC	206	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit.	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SG	Pre- or corequisite(s): MIC 205 or 220 with C or better if completed
MIC	206	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1	SG	Pre- or corequisite(s): MIC 205 or 220 with C or better if completed
MIC	206	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SG	Pre- or corequisite(s): MIC 205 or 220 with C or better if completed
MIC	220	Biology of Microorganisms	Introductory microbiology for students majoring in the life sciences. Detailed study of microbial cells, their structure, genetics, physiology, and taxonomy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 or 282; CHM 116
MIC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
MIC	302	Advanced Bacteriology Laboratory	Advanced lab techniques in bacterial growth, physiology, and genetics, with an emphasis on quantitative data and formal lab reports. Both MIC 302 and 401 must be taken to secure L General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2	L	Pre-requisite: MIC 206 with C or better; MIC 220 with C or better
MIC	314	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
MIC	314	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only MIC 314 or SSH 314
MIC	360	Bacterial Physiology	Mechanisms and control of cell metabolism, structures, and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 220 with C or better
MIC	379	Medical Bacteriology	Principles of medical bacteriology with emphasis on bacterial infections, diagnostic testing, clinical symptoms, pathogenesis, and treatments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 220
MIC	380	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 220 with C or better
MIC	380	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: MIC 220 with C or better
MIC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	401	Research Paper	Paper of 15 or more pages based on library or lab research in collaboration with a faculty member. Required of all Microbiology majors. Both MIC 302 and 401 must be taken to secure L General Studies credit.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1	L	Prerequisite(s): MIC 206, 220 with C or better; senior standing
MIC	420	Immunology: Molecular and Cellular Foundations	Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 353, BIO 360 or MIC 220 with C or better
MIC	420	Immunology: Molecular and Cellular Foundations	Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: BIO 353, BIO 360 or MIC 220 with C or better
MIC	421	Experimental Immunology	Introduces the basic techniques, methods, and assays used in immunology.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisite: MIC 220, MBB 247, BIO 353 or BIO 360 with C or better
MIC	425	Advanced Immunology	Surveys recent advances in immunology, including lymphocyte membranes, lymphokines/biochemistry, molecular genetics, theoretical immunology, immunoregulation, neuroimmunology, and immunologic diseases.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 420 with C or better
MIC	426	Medical Immunology	Concepts and clinical applications of medical immunology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 181 (or BIO 188 or MBB 247) and BIO 182 (or BIO 187 or MBB 245) and BIO 353 with C or better
MIC	427	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisite: MIC 420, PSY 325, PSY 425, BIO 353, BIO 462, or BIO 467 with C or better; Credit is allowed for only MIC 427 or PSY 427

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MIC	428	Immunophosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 420, PHI 317, HPS 314, or PHI 428 with C or better; Credit is allowed for only MIC 428 or PHI 428
MIC	441	Bacterial Genetics	Surveys genetic exchange and regulatory processes in bacteria and their viruses. Bacteria and viruses as tools in genetic engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or MBB 347 with C or better; MIC 220 with C or better
MIC	442	Bacterial Genetics Laboratory	Techniques of mutagenesis, mapping, and strain and genetic library construction.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Pre/Co-requisite: MIC 441
MIC	443	The Microbial Universe	Diversity and physiology of microorganisms with emphasis on recent advances in the biology of microorganisms of environmental and medical importance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: BIO 353 (LSC 353) with C or better; Pre/Co-requisite: MIC 444 (LSC 445) (with C or better if completed); Credit is allowed for only MIC 205 or 443
MIC	444	The Microbial Universe Laboratory	Techniques used to explore the microbial universe with emphasis on structural, metabolic, genetic, and growth characteristics relevant to the identification and characterization of microorganisms of environmental and medical importance. Not open to students with credit in MIC 206.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisite: LSC 444 or MIC 443 with C or better or co-enrolled in MIC 443
MIC	445	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutagenesis; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or MBB 347 with C or better; MBB 247 or MIC 302 with C or better; Credit is allowed for only MBB 445 or MIC 445
MIC	446	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutagenesis; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB 446 or MIC 446
MIC	461	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and metals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
MIC	470	Bacterial Diversity and Systematics	Biology, classification, and enrichment culture of the nonpathogenic bacteria.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: MIC 302 with C or better
MIC	475	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite with C or better: AST 112 (or BIO 182 or BIO 282 or GLG 102 or SES 122), one 300-level course in AST or BIO or CHM or GLG or MIC or PHY or SES. Credit is allowed for only AST 460 or GLG 460 or MIC 475
MIC	481	Bacterial Pathogenesis	Human host-bacterial interactions in infectious diseases with emphasis on pathogenesis and molecular mechanisms of bacterial virulence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 220 with C or better; MIC 360 or MIC 441 with C or better
MIC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	485	General Virology	Fundamental principles of viruses, their molecular biology, replication, genetics, and pathogenesis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: MIC 206 with C or better; MIC 220 with C or better
MIC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
MIC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MIC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
MIC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
MIC	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Junior or Senior standing; Credit is allowed for only BIO, MBB, MIC, HPS or PLB 496
MIC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
MIC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		

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MIC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
MIC	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	501	Foundations in Microbiology	Provides overview of the field of microbiology including: bacterial genetics and physiology, virology and host/pathogen interactions through lectures, reading, presentations and discussion of papers in the field of microbiology and immunology. Students read all papers, participate in class discussions and present papers during the semester.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only MIC 501 or MIC 591 (Milestones in Microbiology)
MIC	520	Evolution and Ecology of Emerging Infectious Diseases	Applying principles and concepts from Ecology, Evolution, and Epidemiology for studying emerging infectious diseases. Emphasizing the interplay of these areas. Intended for life sciences majors and first year graduate students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only EVO or MIC 520
MIC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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MIC	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MIS	101	Introduction to the Military I	Overview of mission, organization, and structure of the Army and its role in national defense; discussion of current military issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	102	Introduction to the Military II	Introduces problem-solving methods, critical thinking, decision making, and group cohesion as applied in a military environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	201	Introduction to Leadership Dynamics I	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	202	Introduction to Leadership Dynamics II	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	205	Leader's Training Course	6-week training program emphasizing practical hands-on skills and leadership development. Taken in lieu of MIS 101, 102, 201, 202. Conducted at Fort Knox, Kentucky.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4		
MIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	301	Advanced Military Science I	Theory and dynamics of the individual soldier and military units in offensive combat operations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3	L	
MIS	302	Advanced Military Science II	Theory and dynamics of military units in defensive combat operations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3	L	
MIS	303	National Advanced Leadership Camp	6-week training program emphasizing leadership development and advanced military skills, including tactics, land navigation, and physical training. Conducted at Fort Lewis, Washington.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4		
MIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	401	Advanced Military Science III	Military legal system; preparation and conduct of military training; leadership development; ethics and professionalism of the military officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	402	Advanced Military Science IV	Military correspondence; career planning and personal affairs in service; conduct of training; leadership development; ethics and professionalism of the military officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	410	American Defense Policy I	Evolution, organization, and execution of U.S. national security policy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3	SB & G & H	
MIS	412	American Defense Policy II	Contemporary problems and analytical issues in the formation and implementation of U.S. national security.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3	SB & G & H	
MIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-12		
MIS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Military Science	1-6	L	Prerequisite(s): Barrett Honors student
MIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-7		
MIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-3		
MIS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Military Science	0		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-3		

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MKT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		
MKT	300	Marketing and Business Performance	The dynamic role of marketing within society and organizations. Emphasizes frameworks and analytical tools that ensure customer focus and drive organizational performance.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Marketing W.P. Carey BA or BS or non-business major with minimum 2.50 ASU GPA and minimum 56 hours; ECN 211, 212, 213, or 214 with C or better; Credit is allowed for only MKT 300 or MKT 301 (Fundamentals of Marketing)
MKT	302	Applied Marketing Management and Leadership	Market planning, execution, and assessment. Emphasizes decision and communication skills related to market opportunity analyses and marketing program development as a core business function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3	L	Prerequisite(s): W.P. Carey Marketing BS major; ECN 221 or 231 with C or better; MAT 211 with C or better. Pre- or corequisite(s): ACC 241 or 242 or 271 with C or better if completed
MKT	303	Honors Marketing Theory and Practice	Covers basic applications of marketing concepts to problems that are common to marketing managers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3	L	Prerequisite(s): W.P. Carey Honors student; ECN 221 or 231 with C or better; MAT 211 with C or better; Pre- or corequisite(s): ACC 241 or 242 or 271 with C or better if completed; Credit is allowed for only MKT 300 or MKT 302 or MKT 303
MKT	311	Sports Business	Focuses attention on components ranging from professional sports to collegiate sports, as well as sports-related products.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BA major; minimum 56 hours
MKT	352	Marketing Research	Knowledge and skills to make intelligent decisions in the design, evaluation and application of marketing research and market data.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3	L	Prerequisite(s): W.P. Carey Marketing student; MKT 302 or MKT 303 with C or better
MKT	365	Advertising Management	Advertising as a communications tool in marketing and business. Consideration of market segmentation and positioning, creative strategy, media management, and metrics of effectiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BS student; MKT 300, 302 or 303 with C or better
MKT	370	Professional Sales and Relationship Management	Investigate the vital role of sales, its relationship to other functions within the firm, and its impact on customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): MKT 300 or 302 or 303 with C or better; W.P. Carey BA or BS major, or non-business major with minimum 2.50 ASU GPA and minimum 2.50 ASU business GPA and minimum 56 hours
MKT	390	Essentials of Marketing	Focuses on the nature and processes of marketing with an emphasis on practical application. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR Non-degree OR be a Graduate student (degree seeking or nondegree seeking)
MKT	391	Essentials of Selling	Focuses on the selling process and its practical applications within consumer and business markets. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-business student, and minimum ASU cumulative GPA of 2.00, and minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MKT	392	Essentials of Business Marketing	Provides the tools and specialized knowledge for developing and executing marketing strategy in the business-to-business market. Covers how to identify forces that drive buying behavior in organizations, measure market opportunity, identify profitable segments and develop strategy, particularly for turbulent, high-technology markets.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business major; Minimum 2.00 ASU cumulative GPA; Minimum 56 hours; MKT 390 with C or better; or Non-degree seeking undergraduate or Degree seeking or Non-degree seeking graduate student
MKT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): Non-business student, and minimum cumulative GPA of 2.00, and minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student
MKT	395	Essentials of Advertising and Marketing Communication	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Pre-requisite: W, P. Carey BA student or non-business student, and minimum ASU cumulative GPA of 2.00, and minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a Graduate student; Credit is allowed for only BUA 382 or MKT 394
MKT	396	Essentials of Services Marketing	Focuses on challenges of managing service brands and delivering quality service to customers across industry sectors. Emphasizes skills and knowledge needed to implement quality service and service strategies, frameworks for customer-focused management, and how to increase customer satisfaction and retention through service strategies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business major; Minimum 2.00 ASU cumulative GPA; Minimum 56 hours; MKT 390 with C or better; OR BA Business(Retail Management) major OR Nondegree-seeking student; OR Graduate student (degree seeking or nondegree seeking)
MKT	397	Essentials of Global Marketing	Introduces the concepts of globalization in markets and gives an appreciation and understanding of the differences between marketing in the student's home country and marketing globally. The rapid adoption of technology has fundamentally changed the dynamics of marketing and created new competitive paradigms that must be understood for firms to be successful.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business major; Minimum 2.00 ASU cumulative GPA; Minimum 56 hours; MKT 390 with C or better; or Non-degree seeking undergraduate or Degree seeking or Non-degree seeking graduate student
MKT	398	Essentials of Sports Business	Introduces the concepts of sports business. Builds knowledge, skills and understanding of the fundamentals of sports business. Develops an appreciation for and understanding of the multiple stakeholders and diverse interests in and around sports business, and how they impact sports business practice and performance.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business major; Minimum 2.00 ASU cumulative GPA; Minimum 56 hours; MKT 390 with C or better; or Non-degree seeking undergraduate or Degree seeking or Non-degree seeking graduate student
MKT	402	Consumer Behavior	Applies behavioral concepts in the analysis of consumer behavior and the use of behavioral analysis in marketing strategy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W. P. Carey Marketing student; MKT 352 with C or better
MKT	410	Sales Management	Constructive investigation of selling processes, their application in business and consumer contexts, and management of the sales function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W. P. Carey BA or BS major; MKT 300, 302, or 303 with C or better
MKT	420	Retail Management	The role of marketing in retailing and retail performance. Challenges and processes of retail management across various institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BA Business (Retail Management) major; MKT 300 or 302 or 303 with C or better

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MKT	421	Fan Behavior and Sports Marketing	Focuses on what it means to be a consumer in a sports marketing context society and what, as a marketer, you need to know to develop, evaluate and implement effective marketing strategies for fans.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BA or BS major; Pre- or corequisite(s): MKT 300 or 302 or 303 with C or better if completed
MKT	425	Global Marketing Management	Analyzes marketing strategies and practices developed by firms to compete in global markets and adapt to changing international environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3	G	Prerequisite(s): W.P. Carey BA or BS major, or non-business major with minimum 2.50 ASU cum GPA and minimum 2.50 ASU business GPA and 56 earned hours; MKT 300 or 302 or 303 with C or better
MKT	430	Sports Business	Builds knowledge, skills, and understanding of sports business; exposure to leading-edge thought, methods, and practices in sports business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W. P. Carey BS student; must have completed MKT 300, MKT 302 or MKT 303 with a grade of C or better.
MKT	431	Sports Events and Facility Management	Project-based course that encompasses the administration, coordination and evaluation of any type of event related to sports.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BA or BS major; Pre- or corequisite(s): MKT 300 or 302 or 303 with C or better if completed
MKT	435	Entrepreneurial Marketing	Identifies and evaluates marketing opportunities; motivates an appreciation of entrepreneurial marketing and its different environmental contexts for general marketing principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W. P. Carey BA or BS student; MKT 300, MKT 302, or MKT 303 with grade of C or better.
MKT	440	Digital Marketing in Practice	Puts digital marketing into practice, expanding on the foundations learned from other marketing courses. Covers strategy and planning but focuses on practical application. Designed to jump start the learning process for any student interested in marketing goods and services in contemporary society.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	1-3		Prerequisite(s): W. P. Carey major; MKT 302 (or 303) with C or better; Credit is allowed for only MKT 440 or 494 (Digital Marketing in Practice)
MKT	441	Sports Revenue Generation	Focuses on selling and how to create, maintain and build relationships within the sports context. Students gain knowledge and develop skills in choosing a sales career including attributes of a sales person, sales call preparation, value propositions, creating value for the client, team selling, questioning and listening techniques, negotiating, persuasion and closing techniques.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BA or BS major; Pre- or corequisite(s): MKT 300 or 302 or 303 with C or better if completed
MKT	442	Services Marketing Strategy	Concepts, skills, and strategies for addressing the imperative marketing challenges and opportunities involving service.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W.P. Carey Marketing major; Minimum 2.50 GPA; Minimum 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	450	Social Media and Content Marketing	Centers on how to effectively use social media and content marketing to build relationships between a company and its customers. Students learn to create content, how to deliver content through social media and community management, as well as how to optimize content for maximum effectiveness.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	1-3		Prerequisite(s): W. P. Carey Marketing major; MKT 302 (or 303) with C or better; Credit is allowed for only MKT 450 or 494 (Social Media Mktg and Com Mgmt)
MKT	452	Business-to-Business Marketing Strategy	Concepts, skills, and strategies for performing competitively in the business market where organizations rather than households are the customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): MKT 302 (or MKT 303), 352 with C or better; W.P. Carey Marketing major with minimum 2.50 ASU GPA, minimum 2.50 ASU business GPA and minimum 56 hours. Pre- or corequisite(s): MKT 402
MKT	455	Brand Management	Focuses on understanding brand management and the concepts associated with building brand equity and managing brand identity and positioning. Students learn how firms create a competitive advantage by incorporating consumer insight into an effective branding strategy. In addition, students gain an understanding of the role of branding on product portfolio management. Heavily features case discussion, projects and real brands. Applies brand management knowledge to an actual branding strategy project for a small firm.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W. P. Carey Marketing major; MKT 302 (or 303) with C or better; Credit is allowed for only MKT 455 or 494 (Brand Management)

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MKT	460	Sports Revenue Generation	Focuses on providing a sophisticated understanding of revenue generation in the context of sports. Students gain knowledge of key marketing, management and administrative functions that play a critical role in revenue-generation strategies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W.P. Carey BS major; MKT 300 (or 302 or 303) with C or better
MKT	462	Competitive Marketing Strategy	Strategy formulation and decision making by the marketing executive. Integrates marketing programs and considers competitive marketing issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W.P. Carey Marketing student; MKT 302 with C or better (or MKT 303 with C or better), MKT 352 with C or better; Pre/Co-requisite: MKT 402 with C or better if completed
MKT	465	Projects in Sports Business	Focuses on providing students with an innovative opportunity to work directly with sports business industry professionals to address real-world and real-time issues faced by these organizations. Students develop an appreciation for and understanding of the multiple stakeholders and diverse interests in and around sports business, and of their constantly changing and interactive impact on sports business practice and performance.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey Sports and Media Studies BA major or W.P. Carey BS major; MKT 300 or 302 or 303 with C or better; MKT 311 or 430 with C or better
MKT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): W.P. Carey BA or BS major; MKT 300 or 302 or 303 with C or better
MKT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-6		Prerequisite(s): Barrett Honors student
MKT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	W.P. Carey School of Business	Department of Marketing	1-6	L	Prerequisite(s): Barrett Honors student
MKT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W. P. Carey BS or BA student; MKT 300 (or 302 or 303) with C or better
MKT	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	IND	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-6		Prerequisite(s): Barrett Honors student
MKT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-7		Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours
MKT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-3		Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours
MKT	502	Create and Deliver Customer Value: Marketing Management	Managing the marketing function; market and environmental analysis; marketing planning, strategy, and control concepts. Development and management of marketing programs.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): specific W.P. Carey graduate students only
MKT	520	Services Marketing and Management	Focuses on challenges of managing service brands and delivering quality service to customers across industry sectors. Emphasizes skills and knowledge needed to implement quality service and service strategies, frameworks for customer-focused management, and how to increase customer satisfaction and retention through service strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	525	Excel in Services	Focuses on challenges of managing services and delivering quality service to customers. The attraction, retention, and building of strong customer relationships through quality service (and services) are at the heart of the course content. The course is equally applicable to organizations whose core product is service and to organizations that depend on services for competitive.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	530	Creativity and Innovation	Multidisciplinary approaches to theories and practices of inspiring and managing innovation and change for sustainable competitive advantage. Focuses on both the student's individual creativity and the planning and implementation of innovations, technologies, processes, or systems that pose significant uncertainty. Places special attention on the processes surrounding understanding the consumer, ideation and implementation. Inclusive in this are methods such as environmental scanning, scenario planning, contextual research, storytelling, concept testing and prototyping. Also includes the many aspects of the organization's structure and culture regarding innovation and creativity.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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MKT	535	Global Marketing Strategy	Introduces the concepts of globalization in markets and gives an appreciation and understanding of the differences between marketing in a home country and marketing globally.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	540	Consumer Markets and Brand Strategy	Provides an intensive examination of factors that drive consumer behavior. Covers topics such as understanding factors contributing to a superior value proposition, identifying elements associated with the stability of the existing alternative, specifying components linked to reducing the level of uncertainty associated with the new alternative; articulating independent influences (e.g., regulatory and social) operating in a particular change context, and comprehending biases that exist in the search and decision making process. Also places additional emphasis on brand development as well as on the role that social media assumes in the change process.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	545	Entrepreneurial Marketing	Introduces the process of developing a plan for starting a business and presenting that plan to potential investors in order to obtain financing. Covers the purposes of a business plan, the varying objectives of different types of investors or financial institutions, and how they complement or conflict with the interests of an entrepreneur. Topics include proprietary positioning, types of organization, and differing management objectives.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	550	New Product and Service Development	Intimately familiarizes students with the front end of the new product design process and provides concrete tools for determining strategies for developing new products based on input from customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	555	Business-to-Business Marketing	Provides the tools and specialized knowledge for developing and executing marketing strategy in the business-to-business market. Covers how to identify forces that drive buying behavior in organizations, measure market opportunity, identify profitable segments, and develop strategy, particularly for turbulent, high-technology markets.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	560	Customer Relationship Management	Focuses on the tools, metrics, and systems used to measure and manage customer relationships. Key to the development and use of sound customer metrics are market research skills including competencies in research design, sampling, measurement, data collection, and data analysis. Covers how to use types of data such as surveys, purchased data, transactional data, the Web, and social media to measure and manage customer relationships.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	570	Advanced Marketing Strategy	Covers strategic marketing concepts (portfolio management and resource allocation, market segmentation and positioning, competitive advantage); marketing tools (perceptual mapping, conjoint analysis, portfolio analysis, regression); and market and competitive analysis (analyze changes in market attractiveness, evaluate different courses of action, plan long term).	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W. P. Carey MBA Full Time student.
MKT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Global Management Graduate student; MKT 502 with C or better
MKT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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MKT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MLS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7	L	
MLS	501	Writing about Social Issues: Culture, Gender, Society, and Well-Being in the Southwest	Reading and discussion of nonfiction writing on social issues that integrate cultural, gender, and societal issues that affect the well-being of urban communities with special attention to the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3		Pre-requisite: Master of Liberal Studies student
MLS	502	Religion, Culture, and Health: Where Cultures Intersect	Focuses on how cultural and religious notions may come into conflict around issues of health. Contrasts two societies, not necessarily contemporary, from different continents.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3		Pre-requisite: Master of Liberal Studies student
MLS	503	Ethics, Science, and Culture	Introduces ethics related to the practice of art, science, and medical practice in modern and premodern society.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3		Pre-requisite: Master of Liberal Studies student
MLS	504	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	REC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3		Pre-requisite: Master of Liberal Studies student OR MAS in American Media and Popular Culture student. Credit is allowed for only FMS or MLS 504
MLS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MLS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MLS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Pre-requisite: Master of Liberal Studies student
MND	101	First-Year Chinese I	Beginning course in Modern Standard Chinese designed for students who have little or no previous background in the language. Adopts different pedagogical approaches such as group practice, role play and situational dialogues to help students acquire basic skills in listening, speaking, reading and writing in Modern Standard Chinese. While linguistic elements are the focus of this course, also includes cultural information that go along with language use.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	5		Credit is allowed for only CHI 101 or MND 101
MND	102	First-Year Chinese II	Beginning course in Modern Standard Chinese designed for students who have completed MND 101. Different pedagogical approaches such as group practice, role play and situational dialogues are designed to help students acquire basic skills in listening, speaking, reading and writing in Modern Standard Chinese. While linguistic elements are the focus of this course, also includes cultural information with application to global business communication.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	5		Prerequisite(s): MND 101; Credit is allowed for only CHI 102 or MND 102
MND	201	Second-Year Chinese I	First part of a two-semester course of intermediate Modern Standard Chinese for students who have successfully completed First-Year Chinese I and II. Adopts different pedagogical approaches such as group practice, role play and situational dialogues to help students acquire basic skills in listening, speaking, reading and writing. While linguistic elements are the focus of this course, also includes cultural information that accompanies language use along with a deep emphasis on global work situations.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	5		Prerequisite(s): MND 101; MND 102; Credit is allowed for only CHI 201 or MND 201
MND	202	Second-Year Chinese II	Second part of a two-semester course of intermediate Modern Standard Chinese for students who have successfully completed three semesters of Modern Standard Chinese at the college level or equivalent. Builds on the vocabulary introduced in the first three courses, with deeper emphasis on global work situations. Adopts different pedagogical approaches such as group practice, role play and situational dialogues to help students acquire basic skills in listening, speaking, reading and writing Modern Standard Chinese. While oral proficiency is the focus of this course, also includes cultural information that accompanies language use in the teaching as well.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	5		Prerequisite(s): MND 101; MND 102; MND 201; Credit is allowed for only CHI 202 or MND 202
MSA	101	Elementary Arabic I	Introductory Arabic language focuses on pronunciation of Arabic sounds and basic writing skills. Students learn Arabic culture through standard greetings, common phrases, vocabulary and performance of appropriate social behaviors common in the Arab world which prepares students for work in global organizations.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Credit is allowed for only ARB 101 or MSA 101
MSA	102	Elementary Arabic II	Continuation of Elementary Arabic I, adopts different pedagogical approaches such as group practice, role play and situational dialogues to help increase listening, speaking, reading and writing skills. While linguistic elements are the focus, cultural and intellectual contexts provide a medium for understanding the Arab-Islamic world and the global business setting.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Prerequisite(s): MSA 101; Credit is allowed for only ARB 102 or MSA 102
MSA	201	Intermediate Arabic I	Directed to students who have completed the first two courses of college-level Arabic. Students reach an advanced level of oral proficiency through concentrating on new verbs, vocabulary and unique structures of sentences which enable them to master a highly sophisticated usage of the language.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Prerequisite(s): MSA 101; MSA 102; Credit is allowed for only ARB 201 or MSA 201
MSA	202	Intermediate Arabic II	Provides advanced ability to understand, read, write and communicate in Arabic and is directed to students who have completed the first two Arabic elementary courses and the first intermediate course. Focuses on transitive, intransitive and passive and active verbs which enable students to express themselves in highly sophisticated Arabic styles and discourse. Students study how Arabic people perceive and communicate important cultural, historical and economic themes as well as major historical figures and their contributions to Arabic society.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Prerequisite(s): MSA 101; MSA 102; MSA 201; Credit is allowed for only ARB 202 or MSA 202

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MSE	100	Introduction of Materials Engineering	Engineering design process, concepts about materials, and the materials engineering profession, including teaming, computer models, communication, and societal impact. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	2		Pre-requisites: Undergraduate Engineering or University College student
MSE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-3		
MSE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
MSE	208	Patterns in Nature	Examines topics from optics to analytical techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	4	SQ	Credit is allowed for only MSE 208 or PHS 208
MSE	211	Introduction to Mechanics of Materials	Topics include stress, strain, elasticity, axial loading, torsion, bending, yield criteria, fracture, general energy methods and Castigliano's Theorem.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: PHY 121; PHY 122; MSE 250 with a C or better
MSE	215	Materials Synthesis	Introduces contemporary techniques for synthesizing both traditional and novel materials and the corresponding correlation to synthesized materials properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre/Co-requisite: MSE 250 with C or better if completed
MSE	250	Structure and Properties of Materials	Basic concepts of material structure and its relation to properties. Application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): CHM 114 or 113 with Pre- or corequisite(s): CHM 116 ** DO NOT TOUCH REQUIREMENTS W/OUT SUPERVISOR APPROVAL!**
MSE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
MSE	301	Materials and Civilization	Focuses on exploring how materials technology can change people's lives. Traces how societies evolved based on the access to materials and the ability to exploit them and trade them among nations. Studies the role of materials in a variety of contexts such as food, art, warfare, transportation, medicine, information and energy from the Stone Age through the industrial revolution to the modern world. Analyzes the connection between the dramatic developments in civilization and advances in materials through the lens of structure, properties and processing of materials.	N	LEC	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisites: Minimum Junior standing; Credit is allowed for only MSE 301 or 394 (Materials and Civilization)
MSE	308	Sensing the World	Project-oriented science course develops critical thinking and technical skill using Internet modules on the five senses.	N	LEL	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	4	SQ	Pre-requisite: MSE 208
MSE	330	Thermodynamics of Materials	Principles of statistical mechanics, statistical thermodynamics of single crystals, solutions, phase equilibrium, free energy of reactions, free electron theory, and thermodynamics of defects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate or Materials minor student, OR other majors with minimum 3.00 GPA; MSE 250 or ECE 350
MSE	335	Materials Kinetics and Processing	Introduces kinetics in processing of materials as illustrated through real-world materials processing examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or students with approved Materials minor; MSE 330
MSE	355	Structure and Defects	Intermediate-level grounding in crystallography, crystal defects, surfaces and interfaces.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or students with approved Materials minor; MSE 250 with a C or better; Pre- or corequisite(s): MAT 343 OR Fulton Engineering graduate student
MSE	356	Structures, Properties, and Defects Lab	Lab experiments correlating atomic structure, defects and microstructure of processed metals, ceramics polymers and composites to their mechanical and thermal properties.	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Pre/Co-requisite: MSE 355
MSE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		

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MSE	415	Mathematical and Computer Methods in Materials	Mathematical, computational, and statistical methods and computer programming used to model materials science phenomena and materials engineering applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3	CS	Prerequisite(s): Fulton Engineering undergraduate student or Materials minor, OR other majors with minimum 3.00 GPA; MAT 274 or 275 with C or better; MSE 250 with C or better; Credit is allowed for only MSE 415 or MSE 598 (Math and Comp Mthds in MatrIs)
MSE	420	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, deformation, and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 355 OR Fulton Engineering graduate student; Credit is allowed for only MSE 420 or MSE 514
MSE	421	Physical Metallurgy Laboratory	Focuses on analysis of microstructure of metals and alloys and includes correlation with mechanical properties to some extent.	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Pre/Co-requisite: MSE 420
MSE	440	Mechanical Behavior of Materials	Effects of environmental and microstructural variables of mechanical properties, including plastic deformation, fatigue, creep and brittle fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 355; Credit is allowed for only MSE 440 or MSE 516
MSE	442	Fatigue, Fracture, and Creep of Materials	Relationship between microstructure and fracture; fatigue and creep properties of materials. Environmental effects and recent developments. Current theories and experimental results.	N	LEC	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 250 with C or better; Credit is allowed for only MSE 442 or MSE 494 (Fatigue, Fracture, Creep) or MSE 540
MSE	450	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; PHY 131; MSE 355; Credit is allowed for only MSE 450 or MSE 510
MSE	451	Introduction to Materials Characterization Lab	Lab for materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES.	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; Corequisite(s): MSE 450
MSE	458	Introduction to Electronic, Magnetic, and Optical Properties	Introduces electrical, optical, and magnetic properties of solids and microstructure effects as examined through materials-based examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 415; PHY 241 or 361; Credit is allowed for only MSE 458 or MSE 515 or MSE 598 (Intro to Electronic, Magnetic & Optical Properties)
MSE	460	Nanomaterials in Energy Production and Storage	Emphasizes the relationship among fundamental materials properties, chemical and energy transformation, as well as energy storage. Applications include the role of materials for photovoltaics, nanocatalysts, batteries, and fuel cells. Stresses fundamental principles and charge transfer processes in nanostructured materials in addressing energy needs.	N	LEC	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 250; Credit is allowed for only MSE 460 or MSE 494 (Nanomat. In Energy Production) or MSE 560 or MSE 598 (Nanomat. In Energy Production)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MSE	470	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): FSE undergrad or Materials minor; With C or better: CEE 213, MAE 213, or MSE 211; MAT 242, 342, or 343; MSE 250 or Aerospace major with MAE 325 (394); Credit is allowed for only MAE 455, 513, 598 (Polymers and Composites), MSE 470 or 513
MSE	471	Introduction to Ceramics	Principles of structure and property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 355
MSE	475	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 250 with C or better; Credit is allowed for only MSE 475 or MSE 518 or EEE 518 or MAE 518 or CHE 518
MSE	476	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 250 with C or better; Credit is allowed for only MSE 476 or MSE 519
MSE	482	Materials Engineering Design	Principles of the design process. Feasibility and optimization. Manufacturing processes, materials selection, failure analysis, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3	L	Prerequisite(s): Fulton Engineering undergraduate student; MSE 420 OR Materials minor, Chemistry, Engineering, or Physics major; MSE 355 and 356; minimum 87 hours; Pre- or corequisite(s): MSE 470 and 471 OR Fulton Engineering graduate student
MSE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
MSE	489	Capstone Design Project I	Covers how to plan an open-ended design project, including experience with technical writing and technical presentations. Both MSE 489 & 490 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1	L	Co-requisite: MSE 482
MSE	490	Capstone Design Project II	Students learn how to conduct an open-ended design project, including experience with technical writing and technical presentations. Both MSE 489 and 490 must be taken to secure L General Studies designation.	N	RSC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	2	L	Prerequisite(s): MSE 489
MSE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-6		Prerequisite(s): Barrett Honors student
MSE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
MSE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		Prerequisite(s): Fulton Engineering undergraduate student
MSE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-7		Prerequisite(s): Fulton Engineering undergraduate or graduate student
MSE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-3		

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MSE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	501	Linear Algebra in Engineering	Development and solution of systems of linear algebraic equations. Applications from mechanical, structural, and electrical fields of engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite: graduate Engineering major except MS Electrical Engineering, MS Electrical Engineering (AME), MSE Electrical Engineering, PhD Electrical Engineering, or PhD Electrical Engineering (AME). Credit is allowed for only MAE 501 or MSE 501
MSE	502	Partial Differential Equations	Development and solution of partial differential equations in engineering. Applications in solid mechanics, vibrations, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MAE or MSE 502
MSE	510	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 450 or 510
MSE	513	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering or Science & Engr of Materials student; Credit is allowed for only MAE or MSE 513
MSE	514	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, and deformation and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 420 or 514
MSE	515	Introduction to Electronic, Magnetic, and Optical Properties	Electrical, optical and magnetic properties of solids and microstructure effects as examined through materials-based examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Graduate Engineering major; Credit is allowed for only MSE 515 or 598 (Intro to Electronic, Magnetic & Optical Properties)
MSE	516	Mechanical Behavior of Materials	Effects of environmental and microstructural variables of mechanical properties, including plastic deformation, fatigue, creep and brittle fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): graduate Engineering or Science & Engr of Materials student; Credit is allowed for only MSE 440 or MSE 516
MSE	517	Introduction to Ceramics	Principles of structure, property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	519	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 476 or 519
MSE	523	Structural and Mechanical Properties of Materials	Designed for first-year PhD students in the School of Materials. Topics include crystallography theory, tensor properties of materials, elasticity, crystal defects, dislocation theory, plasticity, fracture, fatigue, and creep.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisites: Graduate Engineering student
MSE	524	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only CHM 541 or MSE 524
MSE	526	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only MSE 526 or NAN 511 or PHY 511
MSE	527	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; MSE 526; Credit is allowed for only PHY 482 or PHY 512 or NAN 512 or MSE 527

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MSE	540	Fracture, Fatigue, and Creep	Relationship between microstructure and fracture; fatigue and creep properties of materials. Environmental effects and recent developments. Current theories and experimental results.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisites: Graduate Engineering student; Credit is allowed for only MSE 442, 494 (Fatigue, Fracture, Creep) or 540
MSE	544	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only CHM 544 or MSE 544 or NAN 544 or PHY 444 or PHY 544
MSE	546	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only NAN 546 or MSE 546 or PHY 546
MSE	548	Fundamentals of Microelectronics Packaging	Multidisciplinary course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): graduate Fulton Engineering student. Credit is allowed for only CHE 518 or EEE 518 or MAE 518 or MSE 475 or MSE 548
MSE	550	Advanced Materials Characterization	Analytical instrumentation for characterization of materials; SEM, SIMS, Auger, analytical TEM, and other advanced research techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	552	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only MSE 552 or NAN 552 or PHY 552 or SEM 552
MSE	553	Electron Microscopy Laboratory I	Lab support for MSE 552.	N	LAB	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Corequisite(s): MSE 552 or PHY 552; Credit is allowed for only MSE 553 or PHY 553
MSE	554	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent-beam diffraction, and electron holography. Novel developments and applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only MSE 554 or PHY 554
MSE	555	Electron Microscopy Laboratory II	Lab support for MSE 554.	N	LAB	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
MSE	560	Nanomaterials in Energy Production and Storage	Emphasizes the relationship among fundamental materials properties, chemical and energy transformation, as well as energy storage. Applications include the role of materials for photovoltaics, nanocatalysts, batteries, and fuel cells. Stresses fundamental principles and charge transfer processes in nanostructured materials in addressing energy needs.	N	LEC	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): graduate Chemistry, Engineering or Physics major. Credit is allowed for only MSE 460 or MSE 494 (Nanomaterials In Energy Production and Storage) or MSE 560 or MSE 598 (Nanomaterials In Energy Production and Storage) or NAN 560
MSE	561	Phase Transformations, Kinetics, and Diffusion in Solids	Hetero/homogeneous diffusion-controlled transformations, order-disorder transformations, and shear martensitic) athermal transformations in solids. Courses in advanced thermodynamics and structure and properties of materials are strongly recommended in preparation for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisites: Graduate Engineering student
MSE	565	Structural Materials in Nuclear Power Systems	Provides an overview of reactor systems and discusses the structural materials used in reactor components (e.g., fuel/core, wall/blanket, heat exchanger, and steam turbine materials). Discusses design considerations and materials degradation processes that occur in service. Emphasizes the effect of radiation damage on materials properties. Reviews reactor systems, including fission- (e.g., PWR, LWR, BWR, LMFBR) and fusion-based reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only MAE 494 (Structural Materials in Nuclear Power Systems) or MSE 494 (Structural Materials in Nuclear Power Systems) or MSE 565

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MSE	571	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples from physics, chemistry and nanoscience.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only MSE 571 or NAN 571 or PHY 571
MSE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisites: Graduate Engineering student
MSE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisites: Graduate Engineering student
MSE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisites: Graduate Engineering student
MSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisites: Graduate Engineering student
MSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
MSE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		Pre-requisite: Graduate Engineering student OR Science & Engr of Materials student
MSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisite: Materials Science & Engineering PhD student
MSE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student

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MSE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-15		Pre-requisite: Materials Science & Engineering PhD student
MSI	601	Contemporary Topics in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from the arts and other disciplines that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): doctoral Music students
MSI	602	Current Issues in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from current public policies, events, and popular culture that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): doctoral Music students
MSI	755	Historical Research in Music	Required for all PhD in Music students. Knowledge and insights related to conducting historical research in music. Includes development of a mini-proposal for a dissertation on the history of music education, or draft of a historical research paper suitable for presentation or publication.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): doctoral Music students
MTC	123	Beginning Composition	Intended for freshmen and sophomores in the composition concentration. Introduces composing. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Theory and Composition student
MTC	125	Basic Music Theory	Notation, scales, keys, modes, intervals, chords, basic part writing and composition. Development of related aural skills through sightsinging and dictation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student
MTC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	221	Music Theory: 18th Century	Styles, techniques, and idioms of 18th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 125 with C or better
MTC	222	Music Theory: 19th Century	Styles, techniques, and idioms of 19th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 221 with C or better
MTC	223	Music Theory: 20th Century	Styles, techniques, and idioms of 20th-century music; emphasizes innovative treatments of musical elements, analysis, and composition; related aural skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 222 with C or better
MTC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MTC	315	Modern Arranging I	Analysis of scores and recordings, application of orchestration and four and five-part harmonization techniques frequently used in arranging for the contemporary jazz ensembles and studio orchestra	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MUP 236 with C or better
MTC	316	Modern Arranging II	A continuation of MTC 315, analysis of scores and recordings, application and creation of new arrangements for contemporary jazz ensembles and/or studio orchestra.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite: Bachelor of Music student; MTC 315 with C or better
MTC	320	Modal Counterpoint	Counterpoint based on 16th-century vocal polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MTC 221 with C or better
MTC	321	Tonal Counterpoint	Counterpoint based on 18th-century polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MTC 221 with C or better
MTC	323	Composition	Writing music compositions, with emphasis on basic techniques and smaller structures. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Prerequisite(s): MTC 123 with C or better OR BMUS Theory and Composition (Composition) or BMUS Theory and Composition (Theory) major with minimum 55 hours
MTC	327	Intermediate form and Analysis	Organizing elements in the most important contrapuntal and homophonic musical forms from the Renaissance through the 19th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 222 with C or better
MTC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	422	Musical Acoustics	Properties of sound and tone. Harmonic series, instruments, the ear, auditorium acoustics, and the reproduction of sound. Assumes a thorough knowledge of musical notation, intervals, scales, and harmony, or 2 years of music theory.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; Passed audition
MTC	425	Studies in 20th-Century Theory	Continued development of analytical techniques and aural skill, with an examination of theoretical systems applicable to 20th-century music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 223 with C or better
MTC	428	Advanced form and Analysis	Organizing principles of the large forms of musical composition in the 19th and 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 223 with C or better
MTC	429	Canon and Fugue	Writing of canons and fugues in tonal style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MTC 321 with C or better

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MTC	430	20th-Century Counterpoint	Counterpoint studies utilizing 20th-century idioms.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MTC 223 with C or better
MTC	433	Orchestration	Studies scoring music for full and chamber orchestras; examines individual orchestral instruments (characteristics and performance techniques).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student
MTC	436	Electronic Studio Techniques I	The study of computer music systems emphasizing advanced audio synthesis and resynthesis as well as their application to professional compositional environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: MTC 223
MTC	437	Electronic Studio Techniques II	Principles of digital electronic music systems and their applications in the composition of electronic music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		
MTC	440	Jazz Theory and Ear Training	Advanced study of jazz harmonic systems. Daily oral drills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		
MTC	441	Jazz Composition	Creative writing in the smaller forms and in the idiom of jazz.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Music student; MTC 440; MUP 236 with C or better
MTC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MTC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Prerequisite(s): Barrett Honors student
MTC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	495	Final Project	Half recital of compositions or approval of a large-scale composition or a research paper.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	0		
MTC	496	Theory Project	Supervised individual writing project dealing with music theory.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MTC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MTC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7	L	
MTC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MTC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	516	Baroque Music	Detailed analysis of selected examples of music from the Baroque period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	517	Classic Music	Detailed analysis of selected examples of music from the Classic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	518	Romantic Music	Detailed analysis of selected examples of music from the Romantic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	519	Late 19th-Early 20th Century Music	Detailed analysis of selected examples of music from the late 19th and early 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	520	Analytical Techniques	Analytical techniques systematically applied to music. Concentration on structural and compositional procedures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	523	Advanced Composition	Advanced music composition, including complex techniques and larger structure. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Graduate Music student
MTC	525	Pedagogy of Theory	Practices and principles of teaching music theory. Emphasizes most desirable and practical offerings possible. Comparative studies of existing practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	528	History of Music Theory	Theory from the 17th century to the present. Need not be taken in sequence with MTC 527.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	540	Jazz Theory and Ear Training	Surveys some of the most influential trends in the jazz tradition with in-depth analysis of harmonic systems, linear elements, and compositional strategies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student

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MTC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisite: Graduate Music student
MTC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MTC	723	Advanced Composition	Special problems in writing in complex forms and textures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): doctoral Music student
MTC	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MTC	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MTC	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MTC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MTC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MTC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): doctoral Music student
MTC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): doctoral Music student
MTE	180	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	Integrative Sciences & Arts	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better

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MTE	180	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE	180	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE	181	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MTE 180 with C or better
MTE	181	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: MTE 180 with C or better
MTE	181	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: MTE 180 with C or better
MTE	181	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: MTE 180 with C or better
MTE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 earned hours
MTE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MTE	210	Mentored Tutoring Internship	Introduces math education students to issues of balancing the content of precalculus mathematics with the needs of someone learning it. Addresses core issues, including articulating what is involved in learning the mathematical idea(s); interpreting students' questions; analyzing student thinking and inferring their underlying rationale from a learner-centered perspective; techniques of question-posing, problem-posing, and instructional scaffolding.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Co-requisite: MAT 207
MTE	250	Technology and Mathematical Visualization	Uses several software packages for exploring mathematics and for preparing mathematical materials, starting from introductory skills and leading to advanced techniques. Places particular emphasis on using computer software with the aim of visualizing mathematical relationships, structures, and processes.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 207, 270, and MTE 210 with C or better
MTE	280	Investigating Quantity: Number, Operations & Numeration Systems	Investigation of mathematical principles and processes regarding the real number system and its properties develop number sense and qualitative reasoning abilities. Designed to meet the requirements for preservice elementary school teachers.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): General Studies MA course with C or better
MTE	281	Investigating Space: Geometry, Measurement, and Visualization	Explores three aspects of geometry: spatial visualization, measurement, and proof. Uses visualization, spatial reasoning, and geometric modeling to solve problems. Provides opportunities for participants (1) to use physical models, technology, and pattern-finding strategies to identify properties of and develop formulas for measuring two- and three-dimensional shapes; and (2) to develop powerful ways of thinking to justify geometric relationships	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): General Studies MA course with C or better
MTE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
MTE	301	Investigating Change: Patterns, Functions, and Modeling	Examines different conceptions of algebra as the study of (1) generalized arithmetic, (2) reasoning with symbols, (3) reasoning with patterns and functions, (4) structure in the number system, and (5) modeling. Distinguishes arithmetic from algebraic reasoning, and develops an appreciation for the pervasiveness of the function concept in the K-8 school mathematics curriculum. Features algebraic thinking and representation using algebra tiles and other concrete models, realistic problems, dynamic geometry software, graphing calculators, and a variety of virtual tools and Web sites. Topics include, but are not limited to: patterns, relations, functions and covariational thinking; multiple conceptions of quantity, variables, constants, and unknowns; inductive, deductive, and analogical reasoning; rate of change and proportional thinking; algebra learning trajectories; and comparisons of additive vs. multiplicative, absolute vs. relational, and arithmetic vs. algebraic thinking.	N	LEC	N	GNA	Integrative Sciences & Arts	School of Mathematical and Statistical Sciences	3		Prerequisite(s): admission to the Professional Program

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MTE	301	Investigating Change: Patterns, Functions, and Modeling	Examines different conceptions of algebra as the study of (1) generalized arithmetic, (2) reasoning with symbols, (3) reasoning with patterns and functions, (4) structure in the number system, and (5) modeling. Distinguishes arithmetic from algebraic reasoning, and develops an appreciation for the pervasiveness of the function concept in the K-8 school mathematics curriculum. Features algebraic thinking and representation using algebra tiles and other concrete models, realistic problems, dynamic geometry software, graphing calculators, and a variety of virtual tools and Web sites. Topics include, but are not limited to: patterns, relations, functions and covariational thinking; multiple conceptions of quantity, variables, constants, and unknowns; inductive, deductive, and analogical reasoning; rate of change and proportional thinking; algebra learning trajectories; and comparisons of additive vs. multiplicative, absolute vs. relational, and arithmetic vs. algebraic thinking.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
MTE	320	Conceptual Foundations of 7-12 Mathematics Curricula and Assessment	Focuses on concepts of mathematics curricula and their relationships to perspectives on learning, instruction, and assessment. Using a variety of participation formats (e.g., individual and small group work, and whole group discussions) and directed activities, participants examine curricular principles underlying the historical development of mathematics curricula and assessment, and current curricula and curricular recommendations and controversies surrounding them.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 207; MTE 210 and 250 with C or better
MTE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	402	Service Learning	K-12 tutoring and mentoring internship related to academic course work in mathematics education. Requires weekly reflective reading and writing. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	C	Pre/Co-requisite: MAT 117 or MAT 142 or other course meeting General Studies MA requirement
MTE	412	Mathematics in Elementary Schools	Methods of teaching mathematics to all students at the K-8 level, instructional planning and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 412 or MTE 412 or SPE 410
MTE	430	The Development of Mathematical Thinking	This capstone course requires students' sustained engagement with, and analysis of, artifacts from research on learning mathematics from instruction. The artifacts include: curricular/instructional task sequences, samples of student work, video-cases showcasing students' involvement in instruction, problem-solving interviews, and teaching experiments.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MTE 320 with C or better
MTE	482	Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 310 with C or better; admission to the Professional Program
MTE	482	Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): MAT 310 with C or better; admission to the Professional Program
MTE	483	Mathematics in the Secondary School	Topics in geometry, number theory, algebra, and analysis. Emphasizes unifying principles.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 310 with C or better
MTE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	485	Teaching Standards-Based Middle and High School Mathematics	Detailed exploration of the Common Core State Standards (CCSS) for middle school and high school mathematics. In addition to an in-depth coverage of the CCSS content and practices, students engage with, review and analyze existing instructional task sequences addressing the CCSS. Students also design and construct partial and complete lesson plans to cover specific mathematical content and practices.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 271 or minimum 45 hours; Credit is allowed for only MTE 485 or MTE 494 (Adv Mthds Tchng Math Sec Sch)
MTE	485	Teaching Standards-Based Middle and High School Mathematics	Detailed exploration of the Common Core State Standards (CCSS) for middle school and high school mathematics. In addition to an in-depth coverage of the CCSS content and practices, students engage with, review and analyze existing instructional task sequences addressing the CCSS. Students also design and construct partial and complete lesson plans to cover specific mathematical content and practices.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): MAT 271 or minimum 45 hours; Credit is allowed for only MTE 485 or MTE 494 (Adv Mthds Tchng Math Sec Sch)
MTE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
MTE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MTE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		

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MTE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
MTE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
MTE	585	Modern Geometry for Teachers	Euclidean, projective, and non-Euclidean geometries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		
MTE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		
MTE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MTE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MTE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	605	Research-based Practices, Pedagogy and Instructional Leadership in Mathematics	Examines research-based practices, pedagogy, and instructional leadership in mathematics classrooms K-8. Emphasizes learning and teaching mathematics for understanding. Featured practices and pedagogy for fostering symbolic thinking include inductive and deductive concept development, problem-based learning, cognitively guided instruction, learning trajectories, and use of physical manipulatives and virtual tools to facilitate mathematical thinking. Mathematics instructional leadership projects emphasize development of mentoring techniques and professional development expertise. Prepares K-6 and 5-9 mathematics teachers as mathematics teacher leaders, specialists, or coaches in middle schools and the elementary grades.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MTE	610	Number and Operations 2	Examines different conceptions of number and operations as the study of (1) patterns and relationships of numbers, (2) the meaning of operations, (3) reasoning through estimations and conjectures, (4) structure in the number system, and (5) modeling. Participants develop a deeper sense of numbers and operations as they progress through the K-8 curriculum. Various manipulatives and electronic tools facilitate investigations. Topics include: base systems, composing and decomposing numbers, operational relationships, operational strategies, integer meaning, and rational numbers.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MTE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		

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MTE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		
MTE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MUD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
MUD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MUD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
MUD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
MUD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
MUD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
MUD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
MUE	101	The ASU School of Music Experience	Introduces all new first-time ASU students to the unique elements, culture, challenges and opportunities of their university, the School of Music and the Herberger Institute for Design and the Arts. Covers the music education and music therapy programs in the School of Music.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	1		Credit is allowed for only MUE 101 or 194 (ASU School of Music Experience for Music Education)
MUE	110	Introduction to Music Education	Overview of music education and career options. Orientation to student characteristics, teacher roles, teaching qualities, and philosophical and historical foundations. Requires school observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music major
MUE	154	Gesture and Sound	Covers fundamentals of musical leadership through gestures associated with sounds in the performance of music.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	1		
MUE	161	Introduction to Music Therapy	Overview of the profession of music therapy and its applications in mental health, rehabilitation, and special education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		

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MUE	162	Introduction to Music Therapy Lab	Develops skills needed to lead music experiences in a variety of settings.	N	LAB	N	GNA	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music education or therapy major; Corequisite(s): MUE 161
MUE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	211	Music in Recreation	Materials, methods, and organizational structures appropriate for recreational music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		
MUE	261	Music Therapy as a Behavioral Science	Orientation to preclinical experience with emphasis on observation skills, assessment, goal setting, and professional ethics. Requires off-campus observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MUE161 with C or better
MUE	262	Music Therapy as a Behavioral Science Lab	Develops skills needed to lead music experiences in a variety of settings.	N	LAB	N	GNA	Herberger Inst Design & Arts	School of Music	1		Corequisite(s): MUE 261
MUE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUE	310	Music in Early Childhood	Examines music through the lens of the culture(s) of young children, which (though they intersect with adult cultures) are unique, different from adult experiences, and particular to them. Emphasizes the musical content of children's songs as well as the music they hear, and the kinds of musical engagements that are particular to young children. Also emphasizes the uses, functions, and meanings of music for children.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Pre-requisites: ENG 102 with C or better; minimum 30 hours
MUE	311	Music in the Lives of Children and Youth	Examines the role of music in the lives of young people with particular attention to child and youth learning and development (cognitive, social, emotional, personal/identity, musical). Includes examination and critique of music intended for children and youth (e.g., social and gendered meanings), as well as consideration of how music is related to individual and social identity.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Pre-requisites: BLE 220, RDG 291, SPE 222 or TEL 215, or minimum 30 hours
MUE	317	Strings Lab	Students apply educational theory to the development and refinement of specialized skills in string teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music major; Passed music education interview
MUE	319	Digital and Hybrid Lab	Provides a foundation for integrating a range of technologies and digital media in music teaching and learning. Encourages critical and creative thinking while considering the possibilities for innovative applications of technology and digital media based upon contemporary curricular, theoretical and pedagogical frameworks. Students demonstrate skills and understanding related to using technology and digital media in the context of musicianship, music teaching and learning.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUE	321	Jazz Lab	Jazz rehearsal and performance techniques and repertoire appropriate for rehearsing jazz ensembles in K-12 schools.	N	LEC	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music Education major; Credit is allowed for only MUE 321 or MUE 394 (Jazz Lab)
MUE	323	Keyboard Lab	Piano keyboard skills appropriate for music educators.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): minimum 45 hours; Credit is allowed for only MUE 323 or MUE 394 (Keyboard Lab)
MUE	325	Voice/Choral Lab	Skills for developing voices and rehearsing choral ensembles.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MUE 110; Credit is allowed for only MUE 325 or MUE 394 (Voice/Choral Lab)
MUE	327	Brass Lab	Students apply educational theory to the development and refinement of specialized skills in brass teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music major; Passed music education interview
MUE	334	Guitar Lab	Guitar skills for teaching guitar classes in K-12 schools.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music Education major; Credit is allowed for only MUE 334 or MUE 394 (Guitar Lab)
MUE	335	Educational Methods for Guitar	Students apply educational theory to the development and refinement of specialized skills in guitar teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music major; Passed music education or therapy interview
MUE	336	Percussion Lab	Students apply educational theory to the development and refinement of specialized skills in percussion teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music major; Passed music education interview
MUE	337	Woodwinds Lab	Students apply educational theory to the development and refinement of specialized skills in woodwind teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music major; Passed music education interview
MUE	338	Educational Methods for Double Reed Instruments	Students apply educational theory to the development and refinement of specialized skills in woodwind teaching. 3 hours per week.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music major; Passed music education interview

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MUE	381	Music Therapy Research	Statistics and research design appropriate for investigations in music therapy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	L	Pre-requisite: Music Therapy student
MUE	384	Therapy Preclinical I	Paired students provide music therapy for small groups at a community agency for mentally retarded, geriatric, or physically disabled clients for a minimum of 10 clock hours.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	385	Therapy Preclinical II	Individual placement in ASU Music Therapy Clinic.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	386	Therapy Preclinical III	See MUE 385.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	387	Therapy Preclinical IV	Individual clinical work in a community mental health facility.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	388	Therapy Preclinical V	See MUE 387.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		
MUE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisites: Music Education or Music Therapy student
MUE	413	The Art of Teaching Children Music	Methods of instruction, planning, and presentation of appropriate contents in music. For music educators and music therapists.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music student
MUE	415	The Art of Teaching Contemporary Musicians	Curriculum, student characteristics, and teaching strategies for general music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music major
MUE	436	Percussion Methods for Music Therapy	Provides knowledge and practical performance skills on percussion instruments, further improving the effectiveness of the student in the practice of music therapy. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music Therapy student
MUE	441	Psychology of Music	Psychological and physiological aspects of music emphasizing musical behavior, function, perception, and learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	463	Music Therapy Techniques	Organization, administration, and use of music in rehabilitation with various client populations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music Therapy student; MUE 467 with C or better
MUE	465	Children's Music for Music Therapy	Methods of music therapy instruction, planning, and presentation of appropriate contents in music for children ages 2-12.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music Therapy student; Minimum Junior standing
MUE	467	Music Therapy Theory and Practice in Psychopathology	Influence of music on behavior; principles and practices of music therapy and psychiatric clients.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	475	Group Process and Music Therapy	Principles of group process, verbal counseling, professional writing, as related to music therapy practice.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisite: Music Therapy student; MUE 463 (MUE 362) with C or better or Graduate student in Clinical Music Therapy
MUE	476	Internship in Music Therapy	Full-time, 6-month, off-campus residency in an approved clinical institution.	N	PRA	N	Z1	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 211 with C or better
MUE	480	The Art of Teaching Choral Musicians	Methods of instruction, organization, and presentation of appropriate content in choral music classes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music major with passed audition; minimum 55 hours
MUE	481	The Art of Teaching Beginning Instrumentalists	Instrumental music as a means of developing music skills, understandings, and attitudes in elementary and secondary school students.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music major with passed audition; minimum 55 hours
MUE	482	The Art of Teaching Advanced Instrumentalists	Advanced instrumental music as a means of developing music skills, understandings, and attitudes in elementary and secondary school students.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music major with passed audition; minimum 55 hours
MUE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	489	Repertoire for Music Therapy	Music skills repertoire for music therapy, including units on brass, strings, woodwinds, electronic instruments, computer music, and improvisation techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy student; MUE 211 with C or better
MUE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Prerequisite(s): Barrett Honors student
MUE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student

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MUE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUE	501	Introduction to Professional Music Therapy	Introduces the profession of music therapy through lecture, active discussion, and observations of clinical sessions. Experiential learning is achieved through music making in peer groups.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy graduate student or Clinical Music Therapy graduate student
MUE	536	Percussion Methods for Music Therapy	Designed to provide knowledge and practical performance skills on percussion instruments, further improving the effectiveness of the student in the practice of music therapy. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music Therapy MM Student
MUE	548	Introduction to Research in Music Education	Survey of research methods and literature in music education. Focuses on interpretation and evaluation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	549	Foundations of Music Education	A treatment of historical perspectives, philosophy-aesthetics identified with music education, and learning theories applied to music teaching/learning. Basic research and writing skills appropriate to graduate studies in music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	550	Studies in Music Curricula	Scope and sequence of musical experiences. Develops criteria for the evaluation of music curricula.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	551	Listening and Creating	Studies the nature of music listening and music creating and their relationship. Reviews research and pedagogical practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MUE	552	Advanced Studies in Secondary General Music	Organization and content of school music classes that are not performance oriented.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	555	String Pedagogy and Rehearsal Techniques	String pedagogy and orchestral rehearsal skills for teachers who work with K-12 string classes.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only MUE 555 or MUE 598 (String Pedagogy and Rehearsal Techniques)
MUE	560	Jazz Pedagogy	Study of pedagogy, repertoire, and technique of instruction in jazz styles, ensemble techniques, and performance practice for school ensembles.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	562	Jazz Rehearsal Techniques	Conducting and rehearsal techniques for school jazz ensembles.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): graduate Music student
MUE	563	Music Therapy Techniques for Children	Organization, administration, and use of music in rehabilitation with children and adolescents with special needs.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy MM student; MUE 581 with C or better
MUE	564	Instrumental Music, Advanced Rehearsal Techniques	In-depth analysis of instrumental techniques in preparation for a thorough discussion of band tuning problems and solutions. Discussion of productive conducting and rehearsal techniques for school music teachers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	565	Children's Music for Music Therapy	Methods of music therapy instruction, planning, and presentation of appropriate contents in music for children ages 2-12.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music Therapy Graduate student
MUE	566	Instrumental Literature and Pedagogy for Schools	Provides an in-depth examination of ensemble music and teaching techniques to instrumental music teachers.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	567	Professional Practicum I	Students provide music therapy for small groups at a community agency providing services to people who are intellectually disabled, physically disabled, and the elderly.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music Therapy Graduate student or Clinical Music Therapy Graduate student
MUE	568	Choral Music, Advanced Rehearsal Techniques	Musical and vocal techniques necessary for presentation of choral literature. Analysis and experimentation with psychological, acoustical, and other problems of rehearsal and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	569	Professional Practicum II	Continuation of MUE 567. Practicum.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music Education Graduate student; MUE 567 with C or better
MUE	570	Choral Literature for Schools	Comprehensive study and analysis of choral music for the high school with special emphasis on octavo literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	571	Music Therapy Seminar I: Supervision and Administration	Covers health care administrative skills pertinent to music therapy practice, including budgeting, resource allocation, and staff supervision.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): graduate Music student
MUE	572	Music Therapy Seminar II with Lab: Advanced Practice in Music	Deepens and broadens knowledge and skills in music therapy clinical practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	573	Music Therapy Seminar III with Lab: Music Therapy Theory and Philosophy	Explores current theory in music therapy and develops the theoretical basis for the profession.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy MM student
MUE	574	Music Therapy Music Skills I: Improvisation	Teaches new forms of musical improvisation pertinent to music therapy practice, broadening and deepening existing skills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music Therapy MM student

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MUE	575	Music Therapy Music Skills II: Accompaniment	Teaches new forms of musical accompaniment pertinent to music therapy practice, broadening and deepening existing skills.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music Therapy MM student
MUE	579	Psychology of Music	Nature of musicality and its evaluation. Review of recent research.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	581	Music Therapy Theory and Practice in Psychopathology	Influence of music on behavior; principles and practices of music therapy and psychiatric clients.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy Graduate student or Clinical Music Therapy Graduate student
MUE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	585	Vocal Acoustics and Production	In-depth approach to the psychological/physiological workings of the vocal mechanism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	586	Music Therapy Graduate Clinical Project	Develops clinical- and research-based music therapy skills in selected cognate area.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	2-6		Pre-requisites: MUE 571, 572, 574, and 575
MUE	589	Repertoire for Music Therapy	Music skills repertoire for music therapy, including units on brass, strings, woodwinds, electronic instruments, computer music, and improvisation techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy MM Student
MUE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisite(s): graduate Music student
MUE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MUE	754	Teacher Education Research and Policy	Reading and discussion of research and policy documents in teacher education with a focus on arts and music teacher preparation. Includes development of a research project or essay suitable for publication or presentation, an abbreviated prospectus for a dissertation, or literature review.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Doctoral Student in Music Education
MUE	756	Qualitative Research in Music Teaching and Learning	Studies qualitative research and methods in music education, including readings and discussion, data collection and data analysis. Includes development of an abbreviated prospectus for a qualitative dissertation, or a draft of a qualitative research paper suitable for presentation or publication. Prerequisite: doctoral student in music education.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Doctoral Student in Music Education

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUE	757	Quantitative Research in Music Teaching and Learning	Studies quantitative research and methods in music education, including readings and discussion, data collection, and analysis. Includes development of an abbreviated prospectus for a quantitative dissertation or a draft of a quantitative research paper suitable for presentation or publication.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Doctoral Student in Music Education
MUE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MUE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MUE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MUE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MUE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MUE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): doctoral Music student
MUE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): doctoral Music student
MUE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): doctoral Music student
MUP	100	Concert Attendance	6 semesters required for all music majors. A total of 4 convocations and 6 approved recitals required each semester.	N	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	0		
MUP	101	The ASU School of Music Experience	Orientation to university and School of Music resources and procedures as well as career planning and guidance. Through various course discussions and assignments, music students examine the concept of academic integrity and its potential impact on their future and learn about taking an interdisciplinary perspective. Required for all music majors.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	1		Credit is allowed for only MUP 101 or 194 (ASU School of Music Experience)
MUP	111	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	117	Applied Jazz Improvisation	Principles, methods, and theory of jazz performance and pedagogy. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	121	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	127	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	4		Prerequisite(s): Music major who has passed audition
MUP	131	Class Piano	4-semester sequence (with MUP 132, 231, and 232) designed for those with little or no piano experience. Emphasizes keyboard technique, sight reading, simple accompaniments, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student
MUP	132	Class Piano	4-semester sequence designed for those with little or no piano experience. Emphasizes keyboard technique, simple accompaniments, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music student; MUP 131 with C or better
MUP	133	Class Voice	4-semester sequence (with MUP 134, 233, and 234) open to all students. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	134	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MUP	170	Music Theatre I	Development of performance skills for opera and music theater emphasizing the portrayals of simple and complex emotions, character development, solo and ensemble performance, music and dialogue analysis, body awareness, and freedom of the vocal and breath mechanisms.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Music	2		
MUP	172	Music Theatre II	Further development of performance skills for opera and music theater, broadening the portrayals of simple and complex emotions, character development, solo and ensemble performance, music and dialogue analysis, body awareness, and freedom of the vocal and breath mechanisms. Students learn to research and develop characters in order to perform various types of songs and dramatic scenes.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: MUP 170
MUP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		Prerequisite(s): Music major who has passed audition
MUP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisite(s): Music major who has passed audition
MUP	209	Beginning Choral Conducting	Essentials of choral conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	210	Beginning Instrumental Conducting	Essentials of instrumental conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	217	Applied Jazz Improvisation	Emphasizes basic jazz literature, chord symbol reading, melodic patterns and concepts, ear training, analysis of improvised solos, and pedagogical issues.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 117 with C or better
MUP	231	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music student; MUP132 with C or better
MUP	232	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student; MUP231 with C or better
MUP	233	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	234	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student
MUP	235	Jazz Piano	2-semester sequence (with MUP 236) designed for jazz keyboard experience. Emphasizes chord symbol reading, simple improvisation, and voicing. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student
MUP	236	Jazz Piano	See MUP 235.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	250	Diction for Singers	Use of phonetics in the study of song and opera literature. Language emphasis differs each semester. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	270	Music Theatre III	Further development of performance skills for music theater emphasizing the portrayals of simple and complex emotions, character development, solo and ensemble performance, music and dialogue analysis, body awareness, and freedom of the vocal and breath mechanisms. Students learn to develop characters and project various moods and scenarios through song.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 172
MUP	272	Music Theatre IV	Further development of performance skills for opera and music theater emphasizing the portrayals of simple and complex emotions, character development, solo and ensemble performance, music and dialogue analysis, body awareness, and freedom of the vocal and breath mechanisms. Students conduct in-depth analyses of characters from both the historical and contemporary repertoire of music theatre.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 270
MUP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisite(s): Music major who has passed audition
MUP	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Barrett Honors Music students who have passed audition
MUP	301	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 232. Emphasizes accompaniments, ensemble playing, score reading, advanced harmonizations, repertoire, technique, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music student; MUP 232 with C or better
MUP	302	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 301. A sequential continuation of MUP 301 skills that include both group and studio instruction. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student; MUP301 with C or better

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MUP	311	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	317	Applied Jazz Improvisation	Emphasizes listening, analysis, and performance of advanced jazz literature and composition in contemporary styles. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	319	Advanced Audio Engineering in the Arts	Synthesis and application of analog and digital recording methods (voices and instruments), mixing and the advanced skills needed to create professional recordings (CDs, DVDs, internet sound files, etc.). Further emphasis on electronic music production, computer based applications, MIDI, and contemporary studio hardware.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Minimum Junior standing in the Herberger Institute for Design in the Arts
MUP	321	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	327	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Prerequisite(s): Music major who has passed audition
MUP	337	Studio Instruction: Collaborative Piano	Repertoire to be selected from vocal and instrumental literature. 1 hour lesson per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	339	Choral Conducting	Elements of choral conducting technique and interpretation. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 209 or MUP 210
MUP	340	Instrumental Conducting	Fundamentals of score reading and interpretation of instrumental music. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 210 with C or better
MUP	370	Music Theatre V	Development of specific skills for musical-dramatic interpretation and of specific physical theatre skills for the actor. Performance-based class provides an opportunity to connect physically, emotionally and intellectually to the body of the musical theatre actor, and provides an opportunity to explore strong, clear acting choices. Students participate in various movement theories and techniques in class and complete independent performance projects utilizing the body and the body with voice, choosing a song from various categories to workshop and perform.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MUP 272
MUP	373	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus). May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	374	Music Theatre Technical Production	In-depth study of approaches to Technical Music Theatre. Classroom study of costumes, sets and lighting (Section 1, Topic: Tech) is followed by practical experience on a technical running crew for a Lyric Opera Theatre production (Section 2 Topic: Problems). The two sections should be taken in consecutive semesters.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	385	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	388	Collaborative Piano	Performance class for collaborative piano majors. Repertoire includes vocal and instrumental selections. Advanced analysis of ensemble techniques, style and performance practice in preparation for graduate study or professional application.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: 4 terms of MUP 127 with C or better
MUP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	440	Keyboard Harmony	Performance-oriented class emphasizing chord progressions, harmonization, figured bass realization, stylistic improvisation, transposition, open score reading, and sight reading.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	442	Instrumental Ensembles	Students participate in numerous ensembles and artistic and educational projects that together, comprise a rich assortment of musical experiences. During the academic year, each student participates in a variety of projects that present a wide range of musical experiences. Curriculum accommodates the distinctive needs of each student in that artistic-educational experiences are, to a large extent, tailor made to each individual's career aspirations. Consequently, learning outcomes are highly individualized and student driven, rather than institutionally convenient. Each artistic-educational project focuses on specific pedagogical and/or musical learning outcomes that, in various ways, promote the primary course objective: the enhancement of musical diversity and artistic depth in every student.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): Music major or nonmajor who has passed audition

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MUP	443	Choral Ensembles	Active, thoughtful participation in music ensembles can provide for development beyond the possibilities of individual study alone. The ensemble setting is, in part, a forum for the synthesis of component parts of a complete music education. Includes the study and performance of diverse musical expressions that represent a variety of historical and cultural perspectives. These ensembles provide the opportunity to prepare and present varied music composed for the mixed choir from the major stylistic periods with the intent of serving composers, performers and listeners by performing choral music of the highest possible quality.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): Music major or nonmajor who has passed audition
MUP	448	Classical Style: Performance and Analysis	Integrates historical and theoretical analysis with performance, examining classical period repertoire.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music major who has passed audition; Junior standing; Credit is allowed for only MUP 448 or 494 (Classical Style: Performance and Analysis)
MUP	449	The Unaccompanied Music of JS Bach: Performance and Analysis	Integrates historical and theoretical analysis with performance, examining the unaccompanied works of J. S. Bach.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music major who has passed audition; Junior standing; Credit is allowed for only MUP 449 or 494 (Unaccompanied Bach: Performance & Analysis)
MUP	450	Choral Union	Large mixed ensemble focuses on the study, synthesis, and performance of major choral masterworks while gaining in-depth understanding of significant choral repertoire and historical ramifications. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): minimum 45 hours
MUP	451	Repertoire	In-depth study of music for performing, involving advanced interpretive and technical concepts from historical, stylistic, and performance-related perspectives.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Completed 4 semesters of 100-level studio instruction
MUP	453	Song Literature	Early Italian, English, German, and French art song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	454	Song Literature	American, Russian, Spanish, Scandinavian, and contemporary song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	455	Men's Chorus	Membership in this ensemble involves the in-depth study and application of specialized musical skills in the performance of a variety of historically and musically standard male repertoire, within historical context. An audition is required to participate in the ensemble.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): minimum 45 hours
MUP	457	Women's Chorus	Membership in this ensemble involves the in-depth study and application of specialized musical skills in the performance of historically and musically important repertoire for treble voices. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		
MUP	459	Barrett Choir	The Barrett Choir is an opportunity for students from all over the university, but primarily from Barrett, The Honors College, to participate in a high-quality choral ensemble. The group seeks to harness the creativity and intellect of honors students to create a collaborative ensemble that operates on a unique model of student-centered learning. The repertoire, mostly chosen by the members, is highly varied, ranging from world music to pieces in the great choral tradition to newer music and popular music. There are normally two major concerts per semester, with some occasional smaller performances.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): minimum 45 hours
MUP	460	The Visiting Quartet Residency Program	Develops skills as a chamber musician and provides opportunities to work with members of the visiting string quartet in residence.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Pre-requisite: Music major (bass, cello, viola, violin) who has passed audition
MUP	461	Marching and Concert Bands	Development of specific professional performing skills through staging of formations and drills for football games and other events (Marching Band); the development of specific professional performing skills for concert settings, with in-depth study of masterpieces of symphonic band literature (Concert Band). An audition may be required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	465	Music Theatre VI	Membership in this ensemble involves the in-depth study and application of specialized musical skills in the performance of a variety of historically and musically standard male repertoire, within historical context. An audition is required to participate in the ensemble.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MUP 370; Credit is allowed for only MUP 465 or MUP 494 (Acting for Singers)
MUP	470	Music Theatre VII	Designed for students in the collaborative performance areas of musical theatre (music, theater and dance). Examines the development of landmark styles and theories specifically in musical theater and Broadway dance.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MUP 465; Credit is allowed for only MUP 470 or MUP 494 (Musical Theatre Dance) or MUP 566

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MUP	471	Music Theatre: Workshops	Development of specific skills for musical-dramatic interpretation. Section 1 (Aria Preparation); Section 2 (Broadway I); Section 3 (Broadway II).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite: Music major
MUP	472	Music Theatre VIII	Development of specific skills and effective practices for musical theatre auditioning and development of specific skills for musical-dramatic interpretation. This is a performance-based class providing an opportunity to explore strong, clear acting choices for the musical theatre performer in a setting with a scene partner or scene partners, requiring the performance of songs, monologues, scenes, and choreography.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MUP 470
MUP	476	New Music Ensemble	In-depth study, synthesis, and performance of classical works written within the last twenty years for small ensemble and for instruments with electronics. Involves discussion and realization of advanced interpretive and technical concepts related to contemporary music.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	479	Chamber Music Ensembles	Faculty-coached ensembles involving in-depth study and application of specialized, professional skills in performing with two or more players of like or unlike instruments and/or voice.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	481	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music students who have passed audition
MUP	482	Piano Pedagogy	Continuation of MUP 481 (Piano). Problems and techniques of teaching intermediate to advanced piano students.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): Music major who has passed audition
MUP	486	Jazz Band	Analysis, rehearsal and performance of new, traditional, and Latin literature for jazz ensembles. Development of advanced sight-reading and instrumental doubling skills. 4 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	487	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week. May not be taken for audit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	489	Ethnomusicology Ensembles	Students apply indigenous music theories to actual practice, contextualized in background reading and listening, as they refine their ability to perform orally generated music and sometimes dance traditions. This course is open to non-music majors by audition or consent of instructor.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Barrett Honors Music students who have passed audition
MUP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Barrett Honors Music students who have passed audition
MUP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	495	Performance	For candidates of a BM degree in which 1/2 recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0		Prerequisite(s): Music major who has passed audition
MUP	496	Performance	For candidates of a BM degree in which a full recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0		Prerequisite(s): Music major who has passed audition
MUP	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Barrett Honors Music students who have passed audition
MUP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7	L	Prerequisite(s): Music major who has passed audition
MUP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		Prerequisite(s): Music major who has passed audition
MUP	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUP	507	Group Piano Practicum	Curricula, materials, and teaching techniques for group teaching at the university and community college levels. Observation/supervised teaching in group piano.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	508	Studio Observation	Weekly observation of studio teaching by various piano faculty. Paper as final requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition

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MUP	509	Jazz Keyboard Harmony	Emphasizes jazz chords and chord progressions, harmonization, voicing, and analysis of transcriptions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	510	Jazz Keyboard Harmony	Continuation of emphasis on jazz chords and chord progressions, harmonization, voicing, and analysis of transcriptions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	511	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Graduate Music major who has passed an audition
MUP	517	Advanced Improvisation	Improvisation techniques within the context of advanced jazz literature. Must be taken in sequence with MUP 518.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	521	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	527	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour per week. May be repeated for credit. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Prerequisite(s): Graduate Music major who has passed an audition
MUP	540	Principles of Integrated Conducting	Score preparation and conducting techniques for instrumental music. Concentration on study of historical styles. Required of DMA students in Instrumental Music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: DMA Conducting major
MUP	541	The Art Song	Seminar on solo song from its beginning to the present day.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	542	Instrumental Ensembles	Students participate in numerous ensembles and artistic and educational projects that together, comprise a rich assortment of musical experiences. Graduate students especially need opportunities to hone their skills in a great variety of performance opportunities. During the academic year, each student participates in a variety of projects that present a wide range of musical experiences. The curriculum is designed to accommodate the distinctive needs of each student in that artistic-educational experiences are, to a large extent, tailor made to each individual's career aspirations. Consequently, learning outcomes are highly individualized and student driven, rather than institutionally convenient. Each artistic-educational project focuses on specific pedagogical and/or musical learning outcomes that, in various ways, promote the primary course objective: the enhancement of musical diversity and artistic depth in every student. Audition required during the first week of classes.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): graduate Music student
MUP	543	Choral Ensembles	Active, thoughtful participation in music ensembles can provide for development beyond the possibilities of individual study alone. The ensemble setting is, in part, a forum for the synthesis of component parts of a complete music education. Includes the study and performance of diverse musical expressions that represent a variety of historical and cultural perspectives. These ensembles provide the opportunity to prepare and present varied music composed for the mixed choir from the major stylistic periods with the intent of serving composers, performers and listeners by performing choral music of the highest possible quality.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	548	Classical Style: Performance and Analysis	Integrates historical and theoretical analysis with performance, examining classical period repertoire.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Graduate Music major who has passed audition; Credit is allowed for only MUP 548 or 598 (Classical Style: Perf. & Anlys)
MUP	549	The Unaccompanied Music of JS Bach: Performance and Analysis	Integrates historical and theoretical analysis with performance, examining the unaccompanied works of J.S. Bach.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Graduate Music major who has passed audition; Credit is allowed for only MUP 549 or 598 (Unaccomp Bach Perf & Analysis)
MUP	550	Choral Union	Open to all students in the university and to interested singers in the community by audition. Preparation and performance of the larger choral works. 2 hours per week. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	551	Repertoire	Literature available for performance in all performing media.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Pre- or corequisite(s): Graduate Music major who has passed audition

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MUP	554	Major Repertoire, Score Study, and Performance Practice	Conducting course comprising a survey of significant repertoire (encompassing, over multiple semesters, literature from choral, musical theater/opera, orchestral, and wind band genres); an introduction to historical performance practice; and a range of score study techniques. Conducting majors are required to enroll each semester (or as advised) and, subsequently, display a comprehensive historical knowledge of the repertoire and development of ensembles over the past 500 years, demonstrate command of standard performance practices with respect to each historical era, and exhibit a clear understanding of varied methods of score study.	Y	SEM	Y	GNA	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: DMA Conducting major
MUP	555	Men's Chorus	Rehearsal and performance of music for mixed voices. 3 hours per week. An audition is required to participate in the ensemble.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	557	Women's Chorus	Rehearsal and performance of music for mixed voices. 2 hours per week. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	560	The Visiting Quartet Residency Program	Develops skills as a chamber musician and provides opportunities to work with members of the visiting string quartet in residence.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Pre-requisite: Graduate Music major who has passed audition
MUP	561	Marching and Concert Bands	Staging of formations and drills for football games and other events (fall); masterpieces of symphonic band literature (spring). Meets MWF. An audition may be required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	565	Acting for Singers	Process class with exercises specifically developed to assist the student actor to learn the fundamental techniques of acting with an emphasis on the actor's approach to characterization.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Graduate Music major who has passed an audition; Credit is allowed for only MUP 565 or 598 (Acting for Singers)
MUP	566	Broadway Dance	Designed for students in the collaborative performance areas of musical theatre (music, theater and dance). Examines the development of landmark styles and theories specifically in musical theater and Broadway dance.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Graduate Music major who has passed an audition; Credit is allowed for only MUP 566 or 598 (Musical Theatre: Dance)
MUP	570	Music Theatre: Techniques	Exercises and improvisations for the singing actor emphasizing body awareness, isolations, and freedom of the vocal and breath mechanisms. Section 1 (Interpretation); Section 2 (Expression); Section 3 (Movement for Singers). Each Section: 3 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	571	Music Theatre: Workshops	Development of specific skills for the musical-dramatic interpretation. Section 1 (Role Preparation); Section 2 (Styles); Section 3 (Opera Scenes); Section 4 (Musical Comedy); Section 5 (Revue Ensembles).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	573	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	574	Music Theatre Technical Production	Introduces technical music theatre. Classroom study of costumes, sets and lighting (Section 1, Topic: Tech) followed by practical experience on a technical running crew for a Lyric Opera Theatre production (Section 2 Topic: Problems). The two sections should be taken in consecutive semesters.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	576	New Music Ensemble	Rehearsal and performance of music written in the last 20 years.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	579	Chamber Music Ensembles	String, brass, woodwind, percussion, keyboard, vocal, and mixed ensembles. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	581	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	585	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	586	Jazz Band	Rehearsal and performance of new, traditional, and Latin literature for jazz bands. 4 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	587	Ethnomusicology Ensembles	Performance learning experience for the music of various cultures of the world.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	588	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
MUP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	596	Solo Performance	May be full recital, major operatic role, solo performance with orchestra, ensemble, or lecture recital.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	597	Solo Performance	See MUP 596.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	727	Studio Instruction	Minimum contact of 1 hour per week. May be repeated for credit. Conducting students register for 2 semester hours; all other students register for 4 semester hours.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Prerequisite(s): Doctoral Music major who has passed audition
MUP	751	Seminar in Piano Literature	In-depth study of selected topics related to the standard piano literature. Requires research paper, bibliography, class presentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre- or corequisite(s): Doctoral Music major who has passed audition

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MUP	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	796	Solo Performance	May be full recital, major operatic role, solo performance with orchestra, ensemble, or lecture recital.	N	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUS	100	Fundamentals of Music Notation	Provides nonmusic majors with sufficient symbol literacy to begin work in the field of musical learning. Credit not applicable toward any music degree.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUS	131	Bach to Bebop	Develops an understanding of the repertoire for the various musical instruments and ensembles throughout the five eras being studied and discernment through listening different genres of music. For the lectures regarding instruments, introduces students to the respective repertoire for the instrument from c. 1700-present with special emphasis on how the use of the instrument developed throughout history or during each era.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Credit is allowed for only MUS 131 or 194 (Performance: Bach to Bebop)
MUS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MUS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	210	The Arts Around Us	Develops the ability to think and create from an arts-rich perspective. In particular, focuses on the arts in the lives of children and youth, arts experiences for children and youth in the community, and one's personal experiences with the arts.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 210 or 294 (The Arts Around Us)
MUS	211	Dance, Music and Meaning	Explores the fundamental nature of human experience across time and culture through the medium of dance and music using a variety of dance and musical materials including folk dance and music, popular dance and music, and such theatrical forms as ballet and modern dance and the music connected with them.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 211 or 294 (Dance, Music, and Meaning)
MUS	212	Music, Meaning and Imagination	Explores how music provides ways to make meaning of the world around us and music as a medium for creative thinking and doing. Develops understanding by trying on roles ranging from critics to creators in both individual and group projects.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 212 or 294 (Music, Meaning and Imagination)
MUS	213	Critical Thinking in the Arts	Fosters critical thinking abilities in relationship to performing and visual arts. Students learn how to listen to music and view art analytically. Develops and applies knowledge of common elements (within and across art forms) such as form, texture, balance and contrast in order to enhance understanding both of arts processes and products.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	
MUS	214	Art, Music and Learning	Offers an integrated introduction to, and examination of, the core structural and formal elements of visual art and music in the context of contemporary experiences and learning process.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	
MUS	215	Children, Creativity, Arts	Interdisciplinary exploration of children's creative processes through critical analysis, hands-on participation and personal reflection. Specifically focuses on creative processes in the arts.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	

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MUS	231	Laughing to Music	Modern-day comedies like Spamalat, Avenue Q, and Glee are part of a comic tradition extending back to the Renaissance. Looks at funny in music from commedia dell'arte to the present. Studies works including the comedies of Mozart, Gilbert and Sullivan, the Marx Brothers, Monty Python, Mel Brooks and many others.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 231 or 294 (Laughing to Music)
MUS	240	Listening to Music	Surveys the historical periods of music making in western civilization, the study of which will hopefully create within the student a listener with an appreciation for art music of many periods and provide more enjoyment in the process. Through lectures, presentations, readings, listening examples and video/DVDs, studies music identified as strong examples of the major periods, composers and compositions in the history of music. Students learn and adopt a minimum new language to help express the elements of music they experience and listen to and develop strategies for writing and communicating about what they hear and put words to how they respond to it. Because experiencing music performed live is an integral part of the learning process, students are required to attend concerts outside of class and submit critical reviews of what they hear.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
MUS	254	Blues to Heavy Metal	Covers important musicians and trends from the 1930s through the 1970s. Topics include blues, rhythm and blues, rockabilly, doo wop, teen idols, girl groups, dance craze, surf, novelty, soul, Motown, British invasion, art rock, psychedelic rock, hard rock, heavy metal, and early '70s styles. Emphasizes musical instruments and stylistic traits with historical information provided as background. Features listening examples drawn from selected artists and bands including popular songs and rarities, and demonstrations using various musical instruments and techniques.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 254 or 354 (Blues to Heavy Metal)
MUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MUS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUS	340	Music for the Concert Hall, Stage, and Screen	In-depth study of examples from Western art music. Emphasizes aural analysis and synthesis of historical data with musical phenomena. Critiques the canon and its limits in specific instances.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU & H	Prerequisite(s): minimum 42 hours
MUS	347	Jazz in America	In-depth study, analysis and synthesis of examples from the jazz tradition. Includes the application of advanced aural analytic techniques to exemplary jazz musical works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & C	Pre-requisite: ENG 102, ENG 105 or ENG 108 with C or better
MUS	349	Music in America	Current styles of American music including jazz, popular, and folk music.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	
MUS	354	Popular Music	In-depth study of a specific topic in the history of popular music. Emphasizes aural analysis and synthesis of historical data with musical phenomena to create new perspectives.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Prerequisite(s): minimum 42 hours
MUS	354	Popular Music	In-depth study of a specific topic in the history of popular music. Emphasizes aural analysis and synthesis of historical data with musical phenomena to create new perspectives.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 42 hours
MUS	355	American Music	In-depth study of current research topics in American music. Engages students in current scholarly debates. Charts the limits of current scholarly methodologies and historical research programs.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & C & H	Prerequisite(s): minimum 42 hours
MUS	356	Broadway and the American Musical	In-depth chronological study of American musical theatre on Broadway, including origin and development, historical references, global and cultural influences. By way of critical analysis, emphasizes comprehensive stylistic understanding of minstrelsy, operetta, revues, book musicals, film musicals, rock musicals, mega-musicals, and Broadway revivals. Engages students in current scholarly debates on American musical theatre.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
MUS	356	Broadway and the American Musical	In-depth chronological study of American musical theatre on Broadway, including origin and development, historical references, global and cultural influences. By way of critical analysis, emphasizes comprehensive stylistic understanding of minstrelsy, operetta, revues, book musicals, film musicals, rock musicals, mega-musicals, and Broadway revivals. Engages students in current scholarly debates on American musical theatre.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
MUS	362	Rap Music and Hip Hop Culture	Examines the history of rap music and hip hop culture from their origins to about 1995, including most, but not all, of the major artists from this period. Explores connections between rap music and other elements of hip hop culture, and challenges students to think critically about rap music and its place in society. Uses listening exercises, demonstrations, and conversations with artists to examine how rappers create meaning in their musical works. Drawing on secondary articles by rap critics and scholars, considers in detail such controversial subjects as censorship, sexism, obscenity, and race politics in America as they relate to rap music.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU & C	Pre-requisite: Minimum 42 hours; Credit is allowed for only MUS 354 (Hip Hop) or 362

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUS	371	World Music	Provides an introduction to world music, including traditional and popular styles. Examines specific music genres from Africa, Asia, Europe, and the Americas and explores their historical development, cultural contexts, communicative functions, forms, styles, instruments and musical philosophies. Throughout the semester, considers the interrelationships among musical genres and other art forms (dance, theater, visual arts, and literature) and analyzes how these musics have intersected with the issues of race, class, gender, religion, ritual, politics, social movements and cultural identity. Students learn to hear and discuss significant stylistic elements of selected genres through listening assignments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & G	Pre-requisite: Minimum 45 hours; Credit is allowed for only MUS 371 or 394 (World Music)
MUS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MUS	410	History of Women in Music	Surveys musical achievements of women as well as the historical contexts that shaped and defined their artistic development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & C & H	
MUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
MUS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Prerequisite(s): Barrett Honors student
MUS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MUS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7	L	
MUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
MUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
MUS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
MUS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		

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MUS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
MUS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
MUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MUS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		
MUS	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		
NAN	505	Nanoscience and Society	Integrates nanoscience and nanotechnology with potential societal issues involved in the students' NAN 593 Applied Projects. Coordinated by the faculty and research staff at the Center for Nanotechnology in Society.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NAN	506	Innovation and IP Management	Intellectual Property (IP) Management in the context of innovation (research, regulations, manufacture, access to markets, and trade) with emphasis on strategies, public-private interface, licensing, and technology transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2		
NAN	511	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: Degree- or nondegree-seeking graduate; Credit is allowed for only MSE 526, NAN 511, PHY 511, or PHY 481
NAN	512	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 527, NAN 512, PHY 482 or PHY 512
NAN	542	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
NAN	544	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CHM 544, NAN 544, PHY 444 or PHY 544
NAN	546	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 546, NAN 546 or PHY 546
NAN	552	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 552, NAN 552, PHY552 or SEM 552
NAN	560	Nanomaterials in Energy Production and Storage	Emphasizes the relationship among fundamental materials properties, chemical and energy transformation, as well as energy storage. Applications include the role of materials for photovoltaics, nanocatalysts, batteries, and fuel cells. Stresses fundamental principles and charge transfer processes in nanostructured materials in addressing energy needs.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): graduate Chemistry, Engineering or Physics major. Credit is allowed for only MSE 460 or MSE 494 (Nanomaterials In Energy Production and Storage) or MSE 560 or MSE 598 (Nanomaterials In Energy Production and Storage) or NAN 560
NAN	564	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
NAN	571	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples from physics, chemistry and nanoscience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 571, NAN 571 or PHY 571
NAN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
NAV	101	Introduction to Naval Science	Introduces the customs, traditions, missions and regulations of the Department of Defense, United States Navy and United States Marine Corps. Introductory course for the Naval Reserve Officer Training Corps (NROTC) by laying the basic foundation of knowledge about the Navy and Marine Corps required to progress through the NROTC program. Also provides the requisite knowledge to allow follow-on shipboard summer training to be safely and effectively conducted.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		
NAV	102	Sea Power and Maritime Affairs	Informs the participants of the historical evolution of sea power for the U.S. Navy and world history. Also covers the evolution of international terrorism and the effects on U.S. strategies and policies regarding potential adversaries.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Credit is allowed for only NAV 102 or NAV 194 (Sea Power and Maritime Affairs)
NAV	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-3		
NAV	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-4		
NAV	202	Navigation	Basic principles, procedures and analytic processes of marine navigation.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Credit is allowed for only NAV 202 or NAV 294 (Navigation)
NAV	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-4		

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NAV	301	Naval Ship Systems I	Provides detailed knowledge of naval engineering systems and principles of ship construction. Topics covered include ship design, hydrodynamic forces, stability, conventional and nuclear propulsion, electrical theory and systems, hydraulics and ship control. Concepts of the theory and design of steam, gas turbine and diesel propulsion.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 301 or NAV 394 (Navy Ship Systems I - Engineering)
NAV	302	Naval Ship Systems: Weapons	Overview of the theory and concepts underlying modern weapon systems used aboard naval warships.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours. Credit is allowed for only NAV 302 or NAV 394 Naval Ship Systems II: Weapons
NAV	303	Evolution of Warfare	Provides marine option students with a basic understanding of the art, science and concepts of war from the beginning of recorded history to the present day. Addresses the interrelationships among technology, politics, culture and society to better understand warfare today and in the future.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours. Credit is allowed for only NAV 303 or NAV 394 Evolution of Warfare
NAV	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-4		
NAV	401	Naval Operations and Seamanship	In-depth study of numerous aspects relating to the efficient and professional manner of U.S. Navy ships' operations.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 401 or NAV 494 (Naval Operations and Seamanship)
NAV	402	Leadership and Ethics	Applies leadership and ethical theories discussed to an actual leadership or ethical dilemma or issue that Junior Officers in the Fleet or FMF are currently facing or have faced in the recent past.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 402 or NAV 494 (Leadership and Ethics)
NAV	403	Amphibious Warfare	Focuses on the historical aspect of amphibious operations. Emphasizes how the development of this war fighting discipline played a key role throughout much of the early history of the Marine Corps.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 394 (Amphibious Warfare) or NAV 403
NAV	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-4		
NAV	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of Naval Science	1-3		
NEU	555	Advanced Molecular and Cellular Sciences	Study of structural and functional organization of biomolecules and cells, based on current literature.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MCB 555 or NEU 555
NEU	556	Human Systems Neuroscience	Systems-level neuroscience course focusing on human diseases. Classes involve lectures and/or other activities such as observations of clinical procedures and tours of clinical facilities (e.g., the neurosurgical suite, imaging facilities).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisite: Neuroscience PhD major. Credit is allowed for only BIO 598 (Human Sys Neuroscience), BME 556 or NEU 556
NEU	558	Neuroscience Journal Club	Small class emphasizing discussion, presentation by students, and written research papers.	N	SEM	Y	GNA	Liberal Arts and Sciences	School of Life Sciences	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
NEU	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Interdisciplinary Graduate Program in Neuroscience PhD students
NEU	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GRD	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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NEU	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NEW	101	The ASU New College Experience	Required, one-credit course for new incoming freshmen. Offered in small classes capped at 19, introduces students to the unique elements, culture, challenges and opportunities of their university. Covers several core topics, including how to be successful at ASU, what it means to be a New College student, understanding interdisciplinarity, the significance of academic integrity, academic skill building, advising, service learning, the freshman first-year reading and discovering your major and/or career.	N	LEC	N	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Credit is allowed only for ASU 101 or NEW 101
NEW	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-3		Prerequisite(s): freshman standing with 25 or fewer hours
NEW	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
NEW	210	From Passion to Practice: Charting Your Path	Part self discovery, part professional boot camp, this highly interactive course allows students to explore their strengths and passions and utilize them most effectively in their careers. Drawing upon the expertise of successful leaders, organizations and guest speakers from diverse professions, students learn skills and methodology that prepare them for entry into a fulfilling profession.	N	LEC	N	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Credit is allowed for only IAS 294 (Passion to Practice: Charting Your Path) or NEW 210
NEW	225	Building a Better You	Equips students to manage their lives effectively and integrate beliefs, values and skills into fulfilling careers. Students develop a focused career path based upon their learning profile, interests and self-knowledge. Develops critical thinking and reading skills needed for effective decision making and communication. Uses the Let Me Learn Advanced Learning System® to enhance self-awareness and growth.	N	LEC	N	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		
NEW	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
NEW	300	International Cities	Expands the global awareness of students through intensive study of a major international city. Students study such areas as the history, political system, economy, geography, architecture, science, technology, arts and/or culture of the city before visiting it physically during a break. While abroad, students build on what they have learned in class by exploring the city and experiencing it firsthand.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours
NEW	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): minimum 45 hours
NEW	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): minimum 45 hours
NEW	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): minimum 45 hours

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NEW	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-3		
NLM	160	Voluntary Action and Community Leadership	Introduction to voluntary behavior in American society for students interested in volunteerism, community service, and civic engagement.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	SB	
NLM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
NLM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
NLM	210	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD or NLM or PRM or TDM 210
NLM	220	Introduction to Nonprofit Organizations	Introduces the nonprofit sector and its role in developing the cultural, economic, and social impact in U.S. society.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
NLM	235	Leadership and Ethics	Examines ethical questions faced by emerging leaders. Focuses on helping students develop emotional intelligence, current professional issues, and the refinement of a professional philosophy and comprehensive set of competences that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only CRD 235 or NLM 235
NLM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
NLM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
NLM	300	Fund Raising and Resource Development	Theory and practice of philanthropy, resource acquisition methods through ethical fund raising, and earned income approaches for nonprofit organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
NLM	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301
NLM	302	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	C	Pre-requisites: ENG 102; MAT 142 or higher; NLM 160 (or PRM 120) with C or better; Minimum 2.50 GPA; Credit is allowed for only CRD, NLM, PRM or TDM 302
NLM	310	Volunteer Management	Studies volunteer administration practices integral to community organizations providing an introduction to management techniques including program organization, recruitment, interviewing, placement, supervision, recognition and evaluation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only NLM or PRM 310
NLM	320	Professional Development Seminar	Professional seminar featuring nonprofit executives; variable topics on leadership and management concerns. Forum for exchange between students and professionals.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Pre-requisites: Nonprofit Leadership Alliance (formerly American Humanics) certification program student

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NLM	380	Financial Management for Nonprofit Organizations	Instructs students about nonprofit financial, management, and social accounting; accounting issues specific to nonprofits; budgeting; reporting; and nonprofit analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Nonprofit Leadership and Management major students or Nonprofit Administration minor students or American Humanics Certificate students; NLM 220 with a C or better
NLM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
NLM	402	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre- or corequisite(s): CSM 401, NLM 410, PRM 401, or TDM 401 with C or better if completed; Credit is allowed for only CSM 402 or NLM 402 or PRM 402 or TDM 402
NLM	403	Leadership and Professional Development	Examines leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: NLM, PRM or TDM 210 and NLM, PRM or TDM 301 with C or better; Senior standing; 2.50 GPA. Credit is allowed for only CRD, NLM, PRM or TDM 403
NLM	410	Social Entrepreneurship	In-depth study of social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or NLM 210; NLM 220. Credit is allowed for only NLM 410 or NLM 562
NLM	420	Nonprofit Leadership Alliance Institute	Nonprofit Leadership Alliance Institute for preparation of nonprofit professionals. Requires out-of-state conference.	Y	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-2		Pre-requisite: Nonprofit Leadership Alliance (formerly American Humanics) certification program students
NLM	430	Managing Nonprofit Organizations	Analyzes administrative structures, decision making, and program delivery within nonprofit organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	L	Prerequisite(s): NLM 220 and 300 with C or better; senior standing
NLM	435	Service Learning for Community Development	Applies youth and adult development theories through community service immersion in collaboration with local nonprofit partners.	N	REC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): Minimum 45 hours. Credit is allowed for only CRD 435 or NLM 435
NLM	451	Grant Writing	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only NLM 451, 565 or PRM 451
NLM	463	Senior Internship	Supervised guided experience in selected agencies.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	6-12		Prerequisite(s) with C or better: CRD 403 or PRM 413; CSM 402 or NLM 402 or PRM 402 or TDM 402. Credit is allowed for only CSM 463 or NLM 463 or PRM 463 or TDM 463
NLM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; Minimum 72 hours; Minimum 2.50 GPA; Non-SCRD majors
NLM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
NLM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6	L	Prerequisite(s): Barrett Honors student
NLM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
NLM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
NLM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-7	L	

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NLM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
NLM	510	The Nonprofit Sector	Provides grounding in scope, function and philosophical foundations of the nonprofit sector in American society, including civic engagement, service delivery, reproduction of values and entrepreneurship.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	520	Financial and Resource Management	Baseline understanding of key and critical financial management issues and practices for nonprofit organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	525	Fundraising and Resource Development	Examines fundraising and resource development in philanthropy from the perspective of the nonprofit practitioner. Also examines issues confronting nonprofit organizations related to fundraising and philanthropic purposes in society. Increases students' knowledge and understanding of charitable giving and fundraising--who gives to what, why, and how to raise funds for a cause. Examines a wide range of fundraising methods and tools. Focuses on critical thinking, reflection on practice, collaboration, discussion and writing.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	530	Program Evaluation and Information Management	Develops skills in several areas, including evaluation, needs assessment, information and data collection, data management and analysis, computer applications, and report writing.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	540	Strategic Human Resources Management	Managing human resources in nonprofit organizations; practices and theories.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	545	Volunteer Resource Management	Core topics in effective management of volunteers in carrying out the mission of organizations and ensuring volunteers have good experience with community organizations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only NLM 545 or 598 (Volunteer Resource Management)
NLM	550	Philanthropy	Examines the role of philanthropy and charitable giving in contemporary American society from perspectives of the nonprofit practitioner, the philanthropist and the general public.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	560	Leadership and Ethics in the Nonprofit Sector	Examines leadership and ethical questions encountered by managers and leaders in the nonprofit organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	562	Social Entrepreneurship	Introduces social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only NLM 410 or 562
NLM	565	Grant Writing Nonprofit Organizations	Provides practical, experiential instruction identifying grant makers, writing proposals, developing budgets, and evaluating grant proposals for the nonprofit sector. Students develop proposals based on actual, identified needs of their partner nonprofit organization.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: Graduate (degree or non-degree) student; Credit is allowed for only NLM 451, 565 or PRM 451
NLM	570	International Non-Governmental Organizations	Increases knowledge and understanding of international non-governmental organizations by examining what these organizations do and how they operate in a cross-cultural context.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	572	Community and Social Innovations	Considers community innovation and development from the perspective of achieving balance among economic, environmental, social, physical and political realms as a framework of sustainability.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CRD, NLM 572 or NLM 598 (Community & Social Innovations)
NLM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NLM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
NLM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	605	Nonprofits, Law and Society	Enhances the legal sensibilities of nonprofit leaders and engaged stakeholders. This necessitates critical in-depth understanding of: (1) legal needs common to all nonprofit organizations, regardless of mission or area of focus such as nonprofit corporation law, tax-exempt status, fiduciary duties and fundraising and lobbying ethics and parameters; (2) commonalities among nonprofit, for-profit and governmental enterprises operating within similar spheres of society, especially the importance of nonprofit organizations' compliance with laws generally applicable to specific subsectors such as contracts, labor and employment, volunteer and premises liability, and intellectual property; and (3) the overall importance and impact of legal structures on nonprofit organizations' abilities to successfully pursue their missions for the benefit of society.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	610	Executive Leadership and Governance	Examines the multiplicity of roles for executives and board of directors in providing strategic leadership for nonprofits.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	620	Capstone: Integrative Seminar	Improves understanding of trends emerging within nonprofits such as leadership, resource development, and social responsibility.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite: Master of Nonprofit Studies major
NTR	100	Introductory Nutrition	Basic concepts of human nutrition. Recent controversies in nutrition and how food choices affect personal health.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 100 or 241
NTR	142	Applied Food Principles	Applied scientific principles of food preparation and production.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): Nutrition (Dietetics or Food and Nutrition Management or Food and Tourism Management or Human Nutrition or Nutrition Communication) major OR Food and Nutrition Management minor OR Child Nutrition certificate
NTR	150	Introduction to the Professions in Nutrition and Dietetics	Introduces the professions of nutrition and dietetics; their history, practice, and future; credentials, ethics, and standards of practice.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		
NTR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
NTR	241	Human Nutrition	Principles of human nutrition. Emphasizes nutrient metabolism and the relationships between diet and disease.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: CHM 101 or 113
NTR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
NTR	300	Computer Applications in Nutrition	Introduces nutrition and food software, including dietary assessment and analysis, food inventory and control, and telecommunications.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 or 241
NTR	320	History of Human Nutrition	Origins of human nutrition; evolving theories of nutrition and disease; historical role of nutrition in social, military, cultural events.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 or 241
NTR	340	Principles of Evidence-Based Nutrition	Investigates methods of inquiry in human nutrition and techniques for critiquing and interpreting research within the context of evidence-based practice; utilizes evidence-based practice methods to explore current controversies in the nutrition field.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): BIO 201; NTR 241
NTR	341	Medical Nutrition Therapy I	First in a three-course sequence in medical nutrition therapy. Introduces the study of nutritional therapy of disease and evidence-based practice in prevention and nutritional management of diseases. Nutrition care planning for chronic diseases is taught via a variety of methods including case studies.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 or 241

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NTR	343	Food Service Purchasing	Introduces purchasing systems, bid processes, receiving and storage procedures, and regulatory agencies involved in the food service industry.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: NTR 100 or 241
NTR	344	Nutrition Management and Leadership	Organization, administration, management and leadership in the nutrition field within healthcare, food service and other institutions.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Prerequisite(s): NTR 100 or NTR 241
NTR	345	Development of Healthy Cuisines	Principles and applications of nutrition, food selection, food preparation and mindful eating in the development of healthy cuisine for wellness, prevention and disease states.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 or 241
NTR	348	Cultural Aspects of Food	Origins, development, and diversity of food preferences and dietary habits; food patterns and attitudes of global populations and U.S. immigrants.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB & C & G	Pre-requisites: NTR 100 or 241
NTR	350	Nutrition Counseling	Counseling techniques in nutrition; interpersonal and communication skills in clinical and community sites; nutrition education for individuals and populations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 341 with C or better or NTR 345
NTR	351	Nutrition Communication	Approaches of nutrition and health communications; development of nutrition and health communication materials for selected target audiences.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Prerequisite(s): ENG 101, 105, or 107 with C or better; NTR 100 or 241
NTR	353	Perspectives on the Western Diet: Food, Health and Sustainability	Hybrid course covering political, ethical, social and cultural issues inherent in the U.S. food system. Topics include examination of U.S. food guidance; the food system and food environment; the history of food and farm policy; food security and aspects of sustainability in relation to food system impacts on the health of humans, society and the environment.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only NTR 353 or NTR 394 (The Western Diet: Food, Health, & Sustainability) or SOS 353
NTR	360	Entrepreneurship and Value Creation	Exploration of entrepreneurial opportunities in nutrition, food service, wellness and health communications.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only FSE 301 or MGT 360 or NTR 360 or NTR 494 (Nutrition Entrepreneurship)
NTR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
NTR	400	Preprofessional Preparation in Dietetics	Applies academic knowledge in field practicum; aspects of professional development.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisites: Nutrition/Dietetics students; Senior status; NTR 341 with C or better; NTR 440, 441 or 444 with C or better
NTR	401	Field Experience in Food and Nutrition	Applies academic knowledge in food service management to field practicum; develops practical skills in planning, purchasing, production, management.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: Food and Nutrition management, Nutrition Communication, or Human Nutrition students; Senior standing; Pre/Co-requisites: NTR 351, 343 or 444
NTR	440	Advanced Human Nutrition I	Metabolic reactions and interrelationships of vitamins, minerals, and water.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): BIO 202 with C or better; NTR 241 with C or better; NTR 341 with C or better; Pre- or corequisite(s): BCH 361 with C or better if completed; Credit is allowed for only NTR 440 or NTR 540
NTR	441	Advanced Human Nutrition II	Metabolic reactions and interrelationships of carbohydrate, lipid, and protein.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BCH 361 with C or better; BIO 202; NTR 241; Credit is allowed for only NTR 441 or 541
NTR	442	Experimental Functional Foods	Food product development techniques, food evaluation and testing, and investigation of current research into food composition.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: CHM 101 or CHM 113; NTR 142; NTR 100 or NTR 241
NTR	444	Medical Nutrition Therapy II	Second in a three-course sequence in medical nutrition therapy. Covers the principles of medical nutrition therapy for prevention and treatment of disease and promotion of health.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): BIO 202; NTR 341 with C or better; Credit is allowed for only NTR 444 or NTR 544
NTR	445	Management of Food Service Systems	Standardized methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: NTR 100 or NTR 241; NTR 142; NTR 343; Credit is allowed for only NTR 445 or 545
NTR	446	Medical Nutrition Therapy III	Third in a three-course sequence in medical nutrition therapy. Content includes hands-on assessment techniques, evaluation and interpretation of laboratory data, and nutrition support with relation to disease process and progression. Nutrition assessment is taught via a variety of methods including case studies.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	4		Prerequisite(s): NTR 444 with C or better; Pre- or corequisite(s): BCH 361; Credit is allowed for only NTR 446 or NTR 546

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NTR	448	Community Nutrition	Food-related behaviors; organization and delivery of nutrition services; program design, implementation, and evaluation strategies; nutrition assessment of populations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 448 or 548
NTR	450	Nutrition in the Life Cycle	Nutritional needs and problems in pregnancy and lactation, infancy, childhood, adolescence, adults and older adults. Analysis of cultural, environmental, behavioral, psychosocial, physical and socio-economic factors affecting nutritional status through the life span.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 450 or 550
NTR	453	Nutrition and the Media	Examines the promotion of nutrition ideas and concepts through media.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: Minimum 45 hours; Credit is allowed for only NTR 453 or 494 (Nutrition and the Media)
NTR	455	Retail Food Service Operations	Development, evaluation and management of retail food service operations; legal and ethical issues in food and beverage management. Capstone course for food management degrees.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 (or 241); Junior standing
NTR	457	Sports Nutrition	Nutritional needs of recreational and elite athletes; energy balance; nutrient metabolism during activity; fluid-electrolyte regulation; evaluation of ergogenic supplements.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 201; NTR 241
NTR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6		Prerequisite(s): Barrett Honors student
NTR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6	L	Prerequisite(s): Barrett Honors student
NTR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
NTR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-7	L	
NTR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
NTR	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	501	Research Methods in Nutrition II	Reviews survey, focus group, and epidemiologic research; develops questionnaires; analyzes large data sets.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	503	Designing Health Behavior Change Interventions	Project-based course focuses on the process of health behavior change interventions using design process and behavioral science.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only NTR 503 or 598 (Designing Health Behavior Change Interventions)
NTR	523	Vegetarian Nutrition	Health benefits, nutritional characteristics, potential risks of vegetarian diets.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	525	Complementary Nutrition	Critical review of functional foods, phytochemicals, nutrient supplements in health promotion.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	527	Policies, Environment, and Obesity Prevention	Enhances students' understanding of the role policies and environments play in health promotion and disease prevention with a special focus on obesity prevention. Looks at a variety of examples to see how policies and environments related to food, nutrition and physical activity affect individual and community health. Also explores how "non-health" policies can be used as an effective tool to promote healthy behaviors.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	529	Pediatric Nutrition	Critical review of pediatric disease states and current nutritional therapies.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	530	Techniques of Health Coaching	Health coaching techniques and skills for medical, allied health and health promotion professionals. The content illustrates the theory, principles and practices of evidence-based coaching psychology. Aligns with the training programs affiliated with Wellcoaches® (endorsed by the American College of Sports Medicine). Designed in three parts: (1) building of core coaching skills; (2) establishing generative moments with clients; and (3) developing coaching presence and positive psychology.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HSC 440 or NTR 530

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NTR	532	Endocrine Pathophysiology and Nutrition	Explores the etiology of various endocrine pathophysiological conditions. Throughout the course, students learn the etiology of common conditions and are responsible for finding and presenting evidence for nutrition-based treatments for these conditions. At the conclusion of the course, students gain an appreciation and understanding of current research in nutrition-based approaches to treat endocrine disorders.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	533	Ethics and Policy of American Diets	Political and ethical issues inherent in the U.S. food system. Topics include food and agricultural policy, government dietary recommendations and regulations, food environment, current issues in food politics, ethical questions of food choice, issues of obesity and food security, sustainability, and investigation of how and why Americans eat the way they do.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	535	Nutrigenomics	Provides a sound foundation for promoting personalized nutrition by integrating and applying molecular nutrition and nutritional biochemistry to clinical settings.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: BCH 361; BCH 367; NTR 440 or 441
NTR	537	Evidenced-Based Nutrition	Reviews current evidence of the role of diet on disease prevention, development, and management.	N	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	539	Global nutrition	Provides an overview of global nutrition issues, including the epidemiology, etiology, sociocultural and economic context, and program and policy responses to nutrition-related topics. Areas to be covered include childhood malnutrition, growth stunting, micronutrient deficiencies, parasites and nutrition, sanitation, and obesity and chronic disease incidence in developing countries. Course is participatory; students engage in a series of class activities, discussions, and presentations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		
NTR	540	Advanced Micronutrient Metabolism	Metabolism of vitamins and minerals, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 440 or 540
NTR	541	Advanced Macronutrient Metabolism	Metabolism of protein, fat, and carbohydrate, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 441 or 541
NTR	544	Therapeutic Nutrition	Current theories of the nutritional prevention or treatment of various diseases.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 444 or 544
NTR	545	Management of Institutional Food Service Systems	Standardizes methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences. May require field trips.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 445 or 545
NTR	546	Assessment Techniques in Nutrition	Clinical and biochemical evaluation of nutritional status.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	4		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only NTR 446 or NTR 546
NTR	548	Advanced Community Nutrition	Planning, development, implementation, and evaluation of community nutrition programs, including the process of grant applications.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 448 or 548
NTR	550	Advanced Nutrition in the Life Cycle	In-depth review of metabolic characteristics and nutritional needs during pregnancy and lactation, infancy, childhood, adolescence, adults and older adults. Analysis of cultural, environmental, behavioral, psychosocial, physical and socio-economic factors affecting nutritional status through the life span.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking). Credit is allowed for only NTR 450 or NTR 550
NTR	551	Geriatric Nutrition	Explores the impact of nutrition on the aging process and how the aging process influences nutritional needs. Examines the physiology, demographics and economics of aging as well as issues such as end-of-life care. Addresses health promotion, disease prevention and disease management within the context of geriatric nutrition.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	553	Nutrition and Cardiovascular Disease	Reviews current evidence of the role of diet on cardiovascular disease prevention, development and management.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): NTR 541. Credit is allowed for only NTR 553 or NTR 598 (Nutrition and Cardiovascular Disease) or NTR 537 (Cardiovascular Nutrition)
NTR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		
NTR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		
NTR	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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NTR	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NUR	300	Professional Nurse Concepts I	Introduces students to professional nursing attributes.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): enrollment into upper-division Nursing program; Pre- or corequisite(s): NUR 325; NUR 336; NUR 352
NUR	310	Nursing Concepts	Theoretical concepts related to health integrity focusing on the individual client across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: BSN Nursing major in clinical program
NUR	311	Pharmacology	Applications of pharmacologic interventions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing major in clinical program OR postbaccalaureate Clinical Nursing Program major
NUR	312	Psychomotor Skills for Professional Nursing Practice	Theoretical foundation for application of psychomotor nursing skills to professional nursing practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): Nursing major in clinical program. Credit is allowed for only NUR 312 or NUR 394 (Psychomotor Skills For Professional Nursing Prac)
NUR	313	Nursing Concepts for Adult Health	Nursing concepts related to selected alterations in health with focus on adult populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 310 and NUR 311 and NUR 330 all with C or better if completed; NUR 320 with Y passing grade; Corequisite(s): NUR 323; Credit is allowed for only NUR 313 or NUR 394 (Nursing Concepts for Adult Health)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NUR	315	Nursing Research and Application to Practice	Provides scientific and clinical inquiry and research methodology along with concepts needed for integration of evidence into practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	L	Prerequisite(s): Traditional BSN or Post Baccalaureate BSN: NUR 330 with C or better. RN/BSN: TWC 361 with C or better; NUR 391 with C or better
NUR	316	Nursing Concepts for Psychiatric/Mental Health	Theoretical concepts related to select psychiatric/neurobiological disorders as they affect nursing practice, with focus on individuals, families, and groups.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 310 with C or better if completed; NUR 311 with C or better if completed; NUR 330 with C or better if completed
NUR	317	Nursing Concepts for Psychiatric/Mental Health Nursing	Theoretical concepts related to select and/or prevalent psychiatric/neurobiological disorders as they affect nursing practice, with focus on individuals, families and groups.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): NUR 311; NUR 330; NUR 356; NUR 366; Corequisite(s): NUR 367; Credit is allowed for only NUR 317 or NUR 494 (Nursing Theory for Psychiatric Mental Health)
NUR	320	Nursing Practice	Integrates knowledge and attitudes from theory into the nursing care of adults in a variety of health care settings.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): Nursing major in clinical program; Corequisite(s): NUR 310; NUR 311; NUR 312; NUR 330
NUR	323	Nursing Practice Adult Health	Applies nursing process with selected alterations in health with focus on adult populations in the acute care setting.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 310 and NUR 311 and NUR 330 all with C or better if completed; NUR 320 or NUR 484 (Nursing Practice) with Y passing grade if completed; Corequisite(s): NUR 313 or NUR 394 (Nursing Concepts Adult Health)
NUR	324	Nursing Practice: Psychiatric/Mental Health	Application of nursing process, critical thinking, clinical decision making with individuals, families, and groups experiencing acute/chronic alterations in mental health and/or psychiatric disorders.	N	SEM	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 310 and NUR 311 and NUR 330 all with C or better if completed; Corequisite(s): NUR 316; Credit is allowed for only NUR 324 or NUR 484 (Nursing Practice: Psychiatric/Mental Health)
NUR	325	Health and Illness Concepts I	Applies physiologic and psychosocial concepts in the client domain.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): enrollment into upper-division Nursing program; Pre- or corequisite(s): NUR 311; NUR 330; NUR 336; NUR 346; NUR 352
NUR	330	Professional Nurse Attributes	Professional nursing roles and responsibilities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	HU	Prerequisite(s): Nursing major in clinical program OR postbaccalaureate Clinical Nursing Program major
NUR	336	Experiential Learning	Applies assessment and care concepts in the nursing domain.	N	LAB	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): enrollment into upper-division Nursing program; Pre- or corequisite(s): NUR 311; NUR 325; NUR 352
NUR	346	Nursing Practice: Adults and Elders	Applies concepts in the nursing domain.	N	LAB	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): enrollment into upper-division Nursing program; Pre- or corequisite(s): NUR 311; NUR 325; NUR 336; NUR 352
NUR	352	Fundamental Concepts in Nursing	Applies care concepts in the client and nursing domain.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): enrollment into upper-division Nursing program; Pre- or corequisite(s): NUR 311; NUR 330; NUR 336

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
NUR	356	Nursing Theory I	Focuses on the knowledge and skills essential to maintaining the health and wellness of clients across the lifespan and the concepts related to selected alterations in health in the adult population.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	5		Prerequisite(s): Nursing major in clinical program or postbaccalaureate Clinical Nursing Program major; Pre- or corequisite(s): NUR 311
NUR	366	Nursing Practice I Post Baccalaureate	Applies knowledge and skills essential to maintaining health and wellness in clients across the lifespan.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	6		Pre-requisite:Nursing major in clinical program OR postbaccalaureate Clinical Nursing Program major. Pre- or corequisite(s): NUR 356
NUR	367	Nursing Practice: Psychiatric/Mental Health	Applies nursing process, critical thinking, clinical decision-making with individuals, families, and groups experiencing acute and/or chronic alterations in mental health and/or psychiatric disorders.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 with Y passing grade if completed
NUR	384	Gerontological Nursing	Focuses on optimizing the health of older adults and the management geriatric syndromes and chronic conditions.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Pre- or corequisite(s): NUR 330 with C or better if completed
NUR	391	Professional Nursing Theory	Analyzes the multiple dimensions of contemporary professional nursing.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4	L	Prerequisite(s): ENG 101 with C or better; ENG 102 with C or better; Corequisite(s): TWC 361
NUR	392	Health Promotion Across the Life Span	Examines concepts and theories involved in health promotion across the lifespan and their application for nurses.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: NUR 315; NUR 391; TWC 361
NUR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students
NUR	404	Professional Nurse Concepts: Intermediate	Explores concepts related to quality of care, quality improvement, safety, innovation and communication within health care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): minimum 45 hours
NUR	405	Professional Nurse Concepts: Advanced	Focuses on preparing to become active members of the nursing profession, including developing strategies for successful transition into professional practice.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 404; NUR 425; NUR 436; NUR 446; NUR 447; NUR 452; Pre- or corequisite(s): NUR 437; NUR 448; NUR 453; NUR 459
NUR	410	Nursing Concepts for Community and Public Health	Examines concepts related to health promotion, disease prevention, and health maintenance within the global community.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 313 and 315 and 316 all with C or better if completed; NUR 323 and 324 with Y grade if completed; Corequisite(s): NUR 420 or 484 (Nur Pract: Comm/Pub Hlth); Credit allowed for only NUR 410 or 494 (Nur Concepts Comm & Pub Hlth)
NUR	411	Nursing Concepts for Child bearing and Pediatric Clients	Concepts related to care of individuals and families within the childbearing and peditic populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 313 and 315 and 316 all with C or better if completed; NUR 323 and 324 with Y passing grade if completed; Corequisite(s): NUR 421; Credit is allowed for only NUR 411 or 494 (Nursing Concepts Childbearing Individ & Families)
NUR	412	Nursing Concepts for Pediatric Patients and their Families	Examines essential concepts related to the nursing care of pediatric patients and their families. Provides a nursing care approach for the pediatric patient and family across the healthcare continuum.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 313 and NUR 315 and NUR 316 all with C or better if completed; NUR 323 and NUR 324 with Y passing grade if completed; Corequisite(s): NUR 422; Credit is allowed for only NUR 412 or NUR 394 (Nursing Concepts: Pediatrics)

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NUR	413	Nursing for Complex Care	Advanced theoretical knowledge and interprofessional collaborative care required for the delivery of safe and competent care of the adult client experiencing acute and complex alterations in health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre- or corequisite(s): NUR 410 and NUR 411 and NUR 412 all with C or better if completed; NUR 420 and NUR 421 and NUR 422 all with Y passing grade if completed; Corequisite(s): NUR 423
NUR	415	Nursing Concepts for Childbearing Family	Examines the care of childbearing clients and their families. Embedded content focuses on providing care to clients along the healthcare continuum.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 with Y passing grade if completed
NUR	416	Nursing Concepts: Community/Public Health	Examines selected concepts, theories, and applications of epidemiology, community assessment, and population-centered health education for community and public health nursing locally and globally.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 315 and NUR 415 and NUR 417 all with C or better if completed; NUR 475 and NUR 477 with Y grade if completed; Corequisite(s): NUR 476
NUR	417	Nursing Concepts: Pediatric Clients	Concepts related to care of individuals and families within pediatric populations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 with Y passing grade if completed; Corequisite(s): NUR 477
NUR	418	Nursing Concepts: Complex Care	Advanced theoretical knowledge and interprofessional collaborative care required for the delivery of safe and competent care of the adult client experiencing acute and complex alterations in health.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 with Y passing grade if completed; Credit is allowed for only NUR 418 or NUR 478
NUR	419	Leading & Managing Nursing in Organizational Systems	Analyzes selected concepts and theories related to leading and managing nursing in organizational systems.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 315 and NUR 415 and NUR 417 all with C or better if completed; NUR 475 and NUR 477 with Y passing grade if completed; Corequisite(s): NUR 479
NUR	420	Nursing Practice: Community/Public Health	Applies community/public health nursing concepts in the delivery of primary, secondary, and tertiary care in a variety of community settings.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 313 and NUR 315 and NUR 316 all with C or better if completed; Corequisite(s): NUR 410; Credit is allowed for only NUR 420 or NUR 484 (Nursing Practice: Community and Public Health)
NUR	421	Nursing Practice: Child Bearing/Family Nursing	Applies nursing care concepts related to the child-bearing woman and family.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 313 and NUR 315 and NUR 316 all with C or better if completed; NUR 323 and NUR 324 with Y grade if completed; Corequisite(s): NUR 411; Credit is allowed for only NUR 421 or NUR 484 (Nursing Practice: Childbearing Clients)

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NUR	422	Nursing Practice: Pediatrics	Focuses on clinical care of the pediatric client and family.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 313 and NUR 315 and NUR 316 all with C or better if completed; NUR 323 and NUR 324 with Y passing grade if completed; Corequisite(s): NUR 412; Credit is allowed for only NUR 422 or NUR 484 (Nursing Practice: Pediatrics)
NUR	423	Nursing Practice: Complex Care & Clinical Immersion	Students perform nursing practice in a variety of clinical settings, laboratory and simulated patient care environments. Students provide nursing care to patients who are physiologically unstable in advanced medical-surgical, and critical care clinical environments. Students perform advanced psychomotor skills in the clinical, laboratory and simulation environments. Students also complete a clinical immersion experience in a selected clinical setting. During the clinical immersion experience, students have the opportunity to apply leadership and management principles, and work in interprofessional healthcare teams to provide nursing care to clients experiencing health alterations across the lifespan.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	5		Pre- or corequisite(s): NUR 410 and NUR 411 and NUR 412 all with C or better if completed; NUR 420 and NUR 421 and NUR 422 all with Y passing grade if completed; Corequisite(s): NUR 413
NUR	425	Health and Illness Concepts: Adults and Pediatrics	Applies and integrates interrelated concepts related to health and illness concepts. Integrates evidence-based principles into the care of clients experiencing acute alterations in health.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): NUR 315; NUR 326; NUR 337; NUR 347; NUR 348; NUR 353; Pre- or corequisite(s): NUR 404; NUR 436; NUR 446; NUR 447; NUR 452; NUR 458
NUR	430	Professional Nurse Attributes: Leadership and Management	Applications of theories and concepts of organizations, management, and leadership with focus on nursing management and leadership in healthcare organizations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 410 and NUR 411 and NUR 412 all with C or better if completed; NUR 420 and NUR 421 and NUR 422 all with Y passing grade if completed; Corequisite(s): NUR 431
NUR	431	Professional Nurse Attributes Innovative Professional	Focuses on the process of transition to the professional nursing role, and the gathering, interpretation, and evaluation of evidence that serves as a basis for improving client outcomes and professional satisfaction.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	L	Pre- or corequisite(s): NUR 315 with C or better if completed; NUR 330 with C or better if completed
NUR	436	Experiential Learning: Advanced	Students practice skills for professional nursing including advanced medication administration and bio-psycho-social care of the child and acutely ill adult.	N	LAB	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 315; NUR 326; NUR 337; NUR 347; NUR 348; NUR 353; Pre- or corequisite(s): NUR 404; NUR 425; NUR 446; NUR 447; NUR 452; NUR 458
NUR	437	Experiential Learning: Readiness to Practice	Students demonstrate readiness for interprofessional nursing practice including coordination of nursing care of multiple patients.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 404; NUR 425; NUR 436; NUR 446; NUR 447; NUR 452; NUR 458; Pre- or corequisite(s): NUR 405; NUR 453; NUR 459
NUR	440	Community and Public Health Nursing in the United States	Examines selected concepts, theories and applications of epidemiology, community assessment, and population-centered health education for community and public health nursing in the United States.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: NUR 391; NUR 315; TWC 361 with C or better
NUR	444	Innovation in Nursing	Examines the role and behaviors of an innovator in the nursing profession.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: NUR 315; NUR 391; TWC 361 with C or better
NUR	445	Nursing Management in Health Care	Examines selected theories and concepts of organizational behavior and the management of people and resources. Focuses on the application of selected management theories and concepts to nursing practice and healthcare systems.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: NUR 315; NUR 391; TWC 361 with C or better
NUR	446	Complex Nursing Practice: Adults	Prepares learners in the application and demonstration of advanced theoretical knowledge, professional nursing practice, and interprofessional collaboration and referral in the management and delivery of safe, competent care of adult clients experiencing serious health alterations.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): NUR 315; NUR 326; NUR 337; NUR 347; NUR 348; NUR 353; Pre- or corequisite(s): NUR 404; NUR 425; NUR 436; NUR 447; NUR 452; NUR 458

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NUR	448	Nursing Practice Readiness	Prepares the learner for the practice of professional nursing in diverse settings.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 404; NUR 425; NUR 436; NUR 437; NUR 446; NUR 447; NUR 452; NUR 458; Pre- or corequisite(s): NUR 405; NUR 453; NUR 459
NUR	453	Integration Concepts in the Health Care	Explores the impact of health care policy, systems, economics, law and informatics on the delivery of health care today and in the future.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3	L	Prerequisite(s): NUR 404; NUR 425; NUR 436; NUR 446; NUR 447; NUR 452; Pre- or corequisite(s): NUR 405; NUR 437; NUR 448; NUR 459
NUR	458	Interprofessional Education and Collaboration Seminar	Focuses on the assessment and analysis of health and disease in the community and population. Provides the data for the IPE Seminar in Senior 2 where an Interprofessional Team of students utilizes the information to plan and implement interventions to improve the health status of communities and populations.	N	SEM	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): NUR 315; NUR 326; NUR 337; NUR 347; NUR 348; NUR 353; Pre- or corequisite(s): NUR 404; NUR 425; NUR 436; NUR 446; NUR 447; NUR 458
NUR	459	Interprofessional Education and Collaboration Seminar: Advanced	Focuses on the development, implementation and evaluation of a community action project.	N	SEM	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 404; NUR 425; NUR 436; NUR 446; NUR 447; NUR 452; NUR 458; Pre- or corequisite(s): NUR 405; NUR 437; NUR 448; NUR 453
NUR	460	The Art of Nursing	Explores the aesthetic, ethical, and personal patterns of knowing in nursing for the practicing RN.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4	HU	Pre-requisites: NUR 391; NUR315; TWC 361 with C or better
NUR	464	Capstone: The Synthesis of Professional Nursing	Synthesizes theories and concepts for professional nursing practice with a focus on role transition.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: BIO 202; CHM 101; MAT 142; MIC 205; NUR 392; NUR 440; NUR 444; NUR 445; NUR 460; NUR 495; PGS 101 (or CDE 232) with C or better
NUR	475	Nursing Practicum: Care of the Childbearing Family	Applies nursing care concepts related to the childbearing woman and family.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 and NUR 367 with Y passing grade if completed; Corequisite(s): NUR 315; NUR 415
NUR	476	Nursing Practice: Community and Public Health	Applies community and public health nursing concepts in the delivery of primary, secondary, and tertiary prevention from a population-centered perspective.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 415 and NUR 417 with C or better if completed; NUR 475 and NUR 477 with Y grade if completed; Corequisite(s): NUR 416
NUR	477	Nursing Practice: Pediatrics	Focuses on clinical care of the pediatric client and family.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 and NUR 367 with Y passing grade if completed; Corequisite(s): NUR 315; NUR 417
NUR	478	Nursing Practice: Complex Care	Applies advanced psychomotor and leadership skills, nursing care delivery management, and interprofessional referral and collaboration for clients experiencing health alterations across the lifespan in advanced care settings.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 415 and NUR 417 with C or better if completed; NUR 475 and NUR 477 with Y passing grade if completed; Corequisite(s): NUR 418
NUR	479	Nursing Practice: Clinical Immersion	Builds on the knowledge and skills obtained in the nursing curriculum and integrates the curriculum concepts in varied and diverse practice settings. Supports the student's transition into the role of the professional registered nurse.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 415 and NUR 417 with C or better if completed; NUR 475 and NUR 477 with Y passing grade if completed; Corequisite(s): NUR 419

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NUR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Upper Division Nursing Program students
NUR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-6		Prerequisite(s): Barrett Honors student
NUR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-6	L	Prerequisite(s): Barrett Honors student
NUR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students
NUR	495	Public and Global Health in Nursing	Analyzes public health concepts, theories, and practice with a focus on the health of all clients in a global environment. Includes core public health functions, domestic and international health care delivery systems, public health and health policy, conceptual and scientific frameworks for community/public health nursing practice, epidemiology, and global health issues.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4	G	Pre-requisites: NUR 315, 391, and TWC 361 with C or better
NUR	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-6		Prerequisite(s): Barrett Honors student
NUR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-7	L	Pre-requisites: Upper Division Nursing Program students
NUR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-3		
NUR	501	Individual and Innovation Leadership in Advanced Nursing Practice	Examines the role and behaviors of an innovator in an advanced nursing practice role. Explores the skills required to create a compelling vision to influence others through innovation and ethical leadership. Examines and correlates different situational challenges utilizing principles of complexity and emotional intelligence to advance innovation in advanced nursing practice roles.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Nursing (Care Coordination) MS or Nursing Education MS or Nursing (Patient Safety and Health Care Quality) MS
NUR	502	Advanced Health Assessment, Pathophysiology and Pharmacotherapeutics for Health Promotion I	Uses a lifespan developmental framework to present, integrate and interrelate advanced concepts, practices and principles applied to the biological, cognitive and psychosocial domains of health assessment, pathophysiology, and pharmacotherapeutics for health promotion appropriate to master's level nursing practice and roles.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to a Nursing MS program
NUR	503	Advanced Health Assessment, Pathophysiology and Pharmacotherapeutics for Health Promotion II	Uses an at-risk population framework to present, integrate and interrelate advanced concepts, practices and principles applied to the biological, cognitive and psychosocial domains of pathophysiology, pharmacotherapeutics and health assessment for health promotion among vulnerable populations appropriate to master's level nursing practice and roles.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 502 with B- or higher
NUR	509	Clinical Prevention and Population Health Practicum	Preceptored practicum appropriate to master's level nursing practice and roles within the context of team-based interprofessional clinical prevention and population healthcare and/or services.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s) with B- or better: DNP 604; 605; 608; 633
NUR	510	Foundations of Care Coordination Practice	Focuses on the theoretical concepts of care coordination and case management, including current models, intervention components, evaluation methods and financing. Provides the foundation for understanding care coordination and the roles nurses have played in the evolution and implementation of the care coordination models.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Nursing (Care Coordination) MS degree or certificate program
NUR	511	Concepts of Care Coordination and the Nurse's Role	Focuses on how nurses make care coordination visible in nursing practice and make a difference in cost-efficiency, quality and safety outcomes. Prepares nurses to advance care coordination at the unit, organizational or systems levels.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 510 with B- or better if completed
NUR	512	Improving Quality and Safety Outcomes Through Effective Care Coordination	Focuses on the nurse's role in care coordination, and how care coordination programs are used to provide cost-effective and patient-centered care, improve quality and safety outcomes for patients and families, and use health information technology to advance the goals of care coordination.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Nursing (Care Coordination) MS degree or certificate program
NUR	513	Interprofessional Collaborative Practice and Transforming Health Care Policy	Examines the nurse's role in communicating, collaborating and leading interprofessional teams to advance innovative care coordination models. Prepares nurses to influencing health policy through care coordination research and leadership.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s) with B- or better: NUR 510; 511
NUR	519	Role-Focused Practicum: Care Coordination	This mentored practicum provides the learner with opportunities to apply care coordination (CC) concepts and principles in a practice environment at the unit, organization or systems levels. Tailored to the prior experiences and level of the learner and may include working in intra- and interprofessional teams to address care coordination initiatives at the unit, organizational or systems levels.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 510 with B- or better; NUR 511 with B- or better; NUR 512 with B- or better; NUR 513 with B- or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
NUR	520	Patient Safety and Health Care Quality Principles, Assessment and Methods	Focuses on the application of core principles of patient safety and health care quality to patients. Explores current and historical factors that contribute to quality health care outcomes. Examines the influence of financial, legal and regulatory factors on patient safety and health care quality. Applies various theories, concepts and tools to promote patient safety and health care quality. Describes the principles of just culture and the relationship to analyzing errors. Discusses the nurse's role in advancing patient safety and health care quality. Infuses the Quality Safety Education in Nursing (QSEN) competencies into course activities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing (Patient Safety and Health Care Quality) MS major
NUR	521	Health Care Evidence, Informatics and Analysis	Focuses on applying information technology and research methodology to safety and quality initiatives. Students learn the role of technology related to select human factors engineering concepts and related clinical application (e.g., medication administration, clinical decision making). Focuses on determination of outcome measures related to evidence-based practice (EBP) and quality improvement (QI). Discusses survey methods including construction, data collection methods, and data analysis.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 520 with B- or better
NUR	522	Designing Systems for Patient Safety and Health Care Quality	Focuses on the design, implementation, evaluation and sustainability of patient safety and health care quality initiatives. Uses innovation and change theories, as well as high reliability and just culture principles, to support data collection, analysis and reporting within complex health care systems.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 520 with B- or better; NUR 521 with B- or better
NUR	523	Interprofessional Collaboration for Improving Patient Safety and Health Care Quality Outcomes	Focuses on developing skills and strategies for interprofessional collaboration, team leadership, communication, and project management to improve patient safety and health care quality outcomes in an interprofessional health-related setting. Theory and evidence-based strategy for team building, maintenance and conflict resolution for improved team-based practice and performance.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 520 with B- or better
NUR	529	Role-Focused Practicum: Patient Safety and Health Care Quality	Mentored practicum provides opportunities to apply patient safety and health care quality (PSHQ) concepts and principles in a practice environment at the unit, organization or systems levels. Tailored to the prior experiences and level of the learner.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 520 with B- or better; NUR 521 with B- or better; NUR 522 with B- or better; NUR 523 with B- or better
NUR	530	Foundational Concepts for Nursing Informatics	Focuses on the foundational concepts of nursing informatics. Analyzes the scope and standards of practice; ethical and privacy principles; relationships amongst biomedical, health and nursing informatics; and models, concepts and theories that support nursing informatics practice. Appraises accreditation and legal and regulatory requirements for health and nursing informatics practice.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NUR	531	Advanced Concepts in Nursing Informatics	Focuses on advanced concepts in nursing and health informatics practice. Analyzes the health informatics metastructures, relationships between nursing and multidisciplinary standardized terminologies, trends in nursing and health informatics, ethical, privacy and legal issues, and the emerging role for the nurse informaticist.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 530
NUR	539	Role-Focused Practicum: Nursing Informatics	Learners complete 135 hours of mentored clinical practice during this practicum applying nursing informatics (NI) concepts and principles in a practice environment at the unit, organization or systems levels. Tailored to the prior experiences and level of the learner and may include working in intra- and interprofessional teams to address informatics initiatives at the unit, organizational or systems levels.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 530 with B- or better; NUR 531 with B- or better
NUR	579	Role-Focused Practicum: Nurse Educator	Mentored teaching practicum includes application of teaching/learning principles in a specialized area of interest. Tailored to the teaching experience and level of the student. May include classroom, online or clinical teaching, attendance at approved conferences, relevant meetings or other activities that provide opportunity for the learner to gain expertise in the selected area of interest.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 670; NUR 671; Credit is allowed for only NUR 579 or NUR 580 (Teaching Practicum)
NUR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Nursing student
NUR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
NUR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NUR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Pre-requisites: Nursing Graduate student
NUR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Pre-requisites: Nursing Graduate student
NUR	601	Scientific Role Development I: Engaging and Committing	First in a series that focuses on the development of a scientific role identity in nursing and health care innovation, including the areas of education, policy and research. Analyzes current trends in the development of innovative scientists and leadership characteristics needed for future roles.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): Nursing and Health Care Innovation PhD student
NUR	602	State of the Science in Nursing and Healthcare Innovation	Focuses on research synthesis and critiques of the scientific literature as a basis for knowledge generation related to a focal area of research interest.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing & Healthcare Innovation PhD student; Corequisite(s): NUR 605
NUR	603	Social and Contextual Issues in Nursing and Healthcare	Analyzes nursing practice and the healthcare system for an identified population using social-ecological approaches.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	604	Philosophy of Science Perspectives in Nursing and Healthcare Innovation	Analyzes the history and philosophy of science as a basis for knowledge and academic scholarship in nursing and healthcare innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	605	Theory Analysis	Examines theoretical perspectives and approaches guiding research in nursing and healthcare innovation across the lifespan. Includes the historical evaluation, social contextual factors, implicit assumptions, and bias that influence nursing and healthcare innovation knowledge generation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): PhD Nursing and Healthcare Innovation major
NUR	606	Scientific Role Development II: Validating and Demonstrating	Second in a series that focuses on the development of a scientific role identity in nursing and health care innovation, including the areas of education, policy and research. Posits the knowledge, skills and resources needed to expand one's career as an educator and scientist in a health-related leadership role in the context of a future health care environment. Explores strategies for progressive and creative approaches in preparing leaders for innovative change in education, research and health care policy affecting healthcare delivery.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): Nursing and Health Care Innovation PhD student
NUR	607	Scientific Role Development III: Bridging	Focuses on the development of a scientific role identity in nursing and health care innovation, including the areas of education, policy and research. Students study the career trajectories of key leaders in nursing and health care innovation as a basis for development of their own personal plans for success, including research trajectories and marketing.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): NUR 606
NUR	608	Qualitative Research Design and Methods	Explores and critiques selected qualitative research approaches. Includes fieldwork exercises as an integral part of course expectations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	609	Quantitative Research Design and Methods	Examines multiple research approaches in clinical and health policy research from a quantitative perspective.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	612	Advanced Analysis of Variance: Design and Analysis of Experiment	Introduces theory, methods, and practice of analysis of variance.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	613	Principles of Regression and Correlation	Introduces theory, methods, and practice of regression analysis.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	614	Design and Implementation of Theory-Based Interventions	Focuses on the knowledge related to advanced methods for intervention research. Examines methodological, ethical, and practical issues in the design and implementation of theory-based intervention studies.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	615	Qualitative Data Management Seminar	Qualitative research methods applied to thesis, dissertation or qualitative research reports, focusing on data reduction, analysis, interpretation, credibility, ethics and dissemination.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): COE 503 or CRJ 613 or EDP 503 or NUR 608 or PAF 610
NUR	616	Community-Based Participatory Research	Overview of Community-Based Participatory Research (CBPR). Familiarizes participants with key historical underpinnings of CBPR, principles of CBPR practice, as well as methodological CBPR considerations in building community partnerships, issue analysis, research planning, data gathering and data sharing.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only NUR 616 or NUR 691 (Community-Based Research)
NUR	617	Foundational Concepts in Science and Statistics	Provides basic skills necessary for health-related research specifically geared toward (1) understanding concepts of widely used statistical methods with examples from health care; (2) ethical knowledge of human subjects research; and (3) processes of research including research design, interpretation and presentation of results and critiquing research articles.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): COE 502 or EDP 502 or EXW 501; Credit is allowed for only NUR 617 or NUR 691 (Foundational Concepts in Science and Statistics)

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NUR	618	Advancing Research-Based Health Policy Through Leadership and Innovation Science	Integrative synthesis course in which students apply values and knowledge from previous PhD core courses in philosophy of science, theory analysis, state of the science, quantitative and qualitative methods, and the art and science of teaching. Examines the role of scholars and scientists in health policy reform. Using tools from leadership and innovation science, advances strategies to accelerate the use of interprofessional research in policy decisions and advances the national agenda for improving health and the quality and affordability of health care.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 602, 603, 604, 605, and 609
NUR	628	Research, Theory and Principles for Palliative Care in the Older Adult	Focuses on theory and research underlying end of life and palliative care for the older adult utilizing current practice guidelines and research.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): PhD Nursing and Healthcare Innovation major
NUR	629	Research for Geriatric Practice	Gaining knowledge and skills in critical appraisal and synthesis of evidence to guide best practice in gerontology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only DNP 629 or NUR 629
NUR	630	Mechanisms of Disparities	Analyzes and applies the complex issues underpinning culture and health disparities related to a specific health outcome to research with a selected cultural group.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Nursing and Healthcare Innovation PhD student; Credit is allowed for only NUR 598 (Mechanisms of Culture), 598 (Mechanisms of Disparities) or 630
NUR	631	Leveraging Culture in Intervention Development	Analyzes the complex issues underpinning the development of evidence-based interventions among various cultural groups. Also analyzes methods of leveraging culture to optimize the development, delivery, effect and evaluation of health interventions for various cultural groups.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: NUR 630 (or NUR 598 Mechanisms of Disparities); Nursing and Healthcare Innovation PhD student; Credit is allowed for only NUR 598 (Leveraging Culture in Intervention Development) or 631
NUR	640	Integrative Theories of Innovation in Healthcare	Analyzes cross-disciplinary theories of innovation for improving health and quality of healthcare.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: NUR 605; Credit is allowed for only NUR 691 (Integrative Theories of Innov) or NUR 640
NUR	641	Theories of Emergent Leadership in Healthcare Innovation	Analyzes cross-disciplinary theories of leadership. Emphasizes leadership frameworks that describe, explain and predict the relationships among leadership and healthcare innovation and outcomes.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 640. Credit is allowed for only NUR 641 or 691 (Theories of Emergent Leadership in Healthcare Innovation)
NUR	650	Human Lactation in the Post-Modern World	In-depth exploration of the complex and multifaceted social, cultural and environmental contexts that affect the public health goal of improving successful breastfeeding during the first years of life.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only NUR 650 or 691 (Human Lactation in the Post Modern World)
NUR	670	Curriculum Development in Academic and Practice Settings	Includes analyses of historical, philosophical, societal, environmental, cultural, technological, and educational factors of curriculum development in academic and practice settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing (Nursing Education) MS or Graduate Certificate in Nursing Education; Pre- or corequisite(s): NUR 671 with B or better
NUR	671	Teaching in Academic and Practice Settings	Analyzes theories, issues, research related to teaching in nursing and educational leadership. Focuses on the process of teaching and learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Nursing Graduate student or Certificate program.
NUR	672	Design and Delivery of Mediated Instruction	Addresses instructional design issues, theory, and practices related to online and electronically mediated learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	673	Producing and Evaluating Programs for Academic and Practice Settings	Critical examination of standards, regulatory environment, administrative systems, leadership requirements, technological infrastructure, human factors, future trends regarding mediated education planning, production, and evaluation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
NUR	688	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
NUR	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
NUR	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	692	Research		N	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
NUR	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NUR	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing and Health Innovation	1-15		
OBS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	501	Obesity Prevention and Management: An Introduction	Helps students understand the complex etiology of obesity and enhances their ability to work with individuals and populations at risk of obesity to develop effective behavior change-based strategies for prevention and management of the condition across the lifespan.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): Obesity Prevention and Management MS major; Credit is allowed for only OBS 501 or OBS 598 (Obesity Prevention and Management)
OBS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		
OBS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	598	Special Topics	Topical courses not offered in regular course rotation (e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand).	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OGL	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
OGL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		

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OGL	200	Introduction to Organizational Leadership	Presents a broad survey of leadership theory and research as currently practiced in formal organizations. Includes examination of leadership models, power and influence, team leadership, cross-cultural leadership, strategic styles of interaction, ethics, leadership skill development, decision-making techniques and effective goal implementation.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better
OGL	220	Behavioral Dynamics in Organizations	Explores the different theories, strategies and skills that managers and subordinates need to develop to improve interpersonal relations. Primarily emphasizes skill areas in leadership, motivation, communication, group dynamics, organizational development, conflict resolution, political strategy, cross-cultural relations, ethical behavior, stress management and time management. Develops effective strategies for becoming effective managers, subordinates, peers and students.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better
OGL	240	Introduction to Project Management	Offers insights into each step of the project management process through an examination of various theoretical approaches.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
OGL	260	Resource Allocation in Organizations	Introduces the decision-making framework of resource allocation within the broader context of basic business finance. Students learn that resource allocation decisions are regularly guided by fundamental principles in finance. Primarily focuses on business resources, resource management and allocation, accounting statements, profit and loss drivers, cash and profit statements, balance sheets, budgets and forecasts, management accounts and capital investment.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; MAT 117 (or any course with General Studies MA designation)
OGL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
OGL	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
OGL	300	Theory and Practice of Leadership	Presents an in-depth study of leadership theory and its practical application in formal organizations. Includes examination of the trait approach, situational approach, contingency theory, path-goal theory, leader-member exchange theory, transformational leadership, psychodynamic approach, and women and leadership. Emphasizes application of these theories in real-world case studies.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): OGL 200; minimum 56 hours
OGL	320	Foundations of Project Management	Covers project management terminology, tools, best practices, theoretical approaches, the phases of project management and how they are applied developing a project plan and schedule, and other competencies needed to effectively manage projects.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 56 hours; Credit is allowed for only OGL 240 or OGL 320
OGL	321	Project Leadership, Strategy and Scope	Explores how executive management is responsible for conceiving, designing, implementing and managing the organization's overall objectives, culture, environment and processes as part of the project management process. Within this context, primarily focuses on understanding project management, aligning project management with the organization, project management oversight, projects as capital investments, globalization and resources optimization.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): OGL 240 or OGL 320; minimum 56 hours
OGL	322	Project Time Management	Explores project scheduling and time management within the broader context of the planning effort. Students learn how important the determination of the timing and sequence of project activities is to the planning process--and ultimate project success. Primarily focuses on understanding bar charts, basic networks, the critical path network, precedence networks, resource allocation, schedule updating, schedule compression, scheduling and schedule risk management.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: OGL 240; Minimum 55 earned hours
OGL	323	Project Cost Management	Concepts and complex processes of effective project cost management. Primarily focuses on project needs assessment, cost estimation, project cost control, project budgeting, cash flow management, financial management, value management, configuration management and supply chain management. Students also learn to appreciate the importance of integrating cost and value management processes.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: OGL 240; Minimum 55 hours
OGL	324	Resources in Project Management	Major elements of project resource management as well as the broader context of this critical planning function. Students learn that sound resource management is an important part of developing a sustainable competitive advantage in the emerging global marketplace. Primarily focuses on operations and productivity, resources in project management, product design, process strategy, layout strategy, human resources and job design, supply chain, inventory management and scheduling.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: OGL 240; Minimum 55 hours

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OGL	326	Project Procurement Management	Concepts and processes of procurement management. Primarily focuses on sourcing management, supplier selection, contracts and legal requirements, risk management, negotiation, project management, quality, supplier management and financial decisions. Effective procurement requires the use of good business practices capable of maximizing value to the organization through the acquisition of goods and services. Students learn that procurement professionals control the entire sourcing and acquisition process.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: OGL 240; Minimum 55 hours
OGL	350	Diversity and Organizations	Critical interdisciplinary analysis of individual, cultural, and organizational diversity.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L & C	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 56 hours. Credit is allowed for only BIS 350 or OGL 350
OGL	355	Leading Organizational Innovation and Change	Process and theory of strategic management with primary emphasis on situation analysis, strategy formulation, strategy implementation and strategy evaluation. Covers the strategic management context, external analysis, internal analysis, functional and competitive strategies, international strategies, strategic entrepreneurship and nonprofit strategy. Students understand the process of analyzing situations, developing appropriate strategies, putting those strategies into action, and evaluating and changing those strategies as needed.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 56 hours
OGL	360	Assessment of Leadership Effectiveness	Empirical analysis of leadership, a conceptual model of effective leadership, and a practical guide for developing the competencies and attributes most likely to produce effective leaders. Primarily focuses on leadership competencies, organizational fit, leadership strengths, fatal flaws, leadership teams, leadership development, improvement measurement and leadership follow through. Students learn to distinguish between leadership success and leadership effectiveness.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): MAT 117 (or any course with General Studies MA designation); OGL 200; minimum 56 hours
OGL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
OGL	421	Project Risk Management	Philosophy, principles, practices and techniques for managing risk in projects. Covers risk identification, qualitative risk management, risk treatment, monitoring and review, project processes, risk allocation, environmental risk and quantification of project risk. Students learn that risk management assists project managers in setting priorities, allocating resources and implementing actions and processes that reduce the risk of the project not achieving its objectives.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: OGL 321; Minimum 55 hours
OGL	422	Project Quality Management	Process and theory of total quality management with primary emphasis on the total quality approach, ethics and corporate responsibility, strategic alliances, quality culture, employee empowerment, leadership and change, team building, effective communication, and tools and techniques. Students understand how continual improvement of people, processes, products/services, and environments can enhance the process and outcomes of project management. Students have the opportunity to develop practical total quality management skills as they apply theory and practice to real-world cases.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: OGL 321; Minimum 55 hours
OGL	481	Organizational Leadership Pro-Seminar I	Students draw on their experiences in previous organizational leadership courses, employing key concepts, theories and skills learned throughout the program toward the strategic analysis of organizations. Using Bolman and Deal's organizational frames concept, students synthesize key learnings across their education and explore organizations through four unique perspectives.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): OGL 200; OGL 220; OGL 260; OGL 300; OGL 320; Credit is allowed for only OGL 481 or OGL 498 (Pro-Seminar I)
OGL	482	Organizational Leadership Pro-Seminar II	Students draw on their personal background, individual differences, knowledge and skills to assess career choices that maximize their strengths, values and passions. Students explore their own balance between work and the other important elements in life, and develop strategies for living a meaningful and fulfilling life, at least through work. Explores the notion of career management and work/life integration from a number of different perspectives, and centered on one's own unique personal characteristics, life circumstances and goals. Explores some of the most relevant career management literature/theory, taking into consideration the interdisciplinary nature of this topic. Also connects students with some of the ideas learned in previous organizational leadership core courses, conducts a qualitative, thematic self-analysis, develops short-term and long-term career/life plans, and collect artifacts to help along life's journey.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): OGL 481; Credit is allowed for only OGL 482 or OGL 498 (Pro-Seminar II)
OGL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
OGL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
OGL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
OGL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
OGL	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
OGL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7	L	Prerequisite(s): Organizational Leadership major; minimum 90 hours; BIS 343 and 345; ENG 102 or 105 or 108 with C or better; OGL 200, 220, 240, 260, 300, 321, and 350
OGL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
OMT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
OMT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
OMT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
OMT	343	Occupational Safety and Ergonomics	Health and safety movement, accident theories and effects, OSHA standards and liability, safeguarding, hazards, workers' compensation, ergonomics, and safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		
OMT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
OMT	402	Legal Issues for Technologists	American legal system and impact on technology management issues: contracts, torts, intellectual property, white collar crime, antitrust, environmental, and employment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 330; minimum junior standing
OMT	405	Forecasting and Evolution of Technology	History and evolutionary nature of selected technologies, issues in the management of emerging technologies, and methods of technological forecasting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite: Minimum Junior standing
OMT	430	Ethical Issues in Technology	Topics in social responsibility for industrial technology and engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 330; Fulton Polytechnic School undergraduate or graduate student
OMT	440	Introduction to International Business	International business principles and operations, including partnerships, trade agreements, currency issues, international sales, and cultural differences between countries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3	G	Prerequisite(s): TMC 330; Prerequisite(s): Fulton Polytechnic School undergraduate or graduate student; MGT 301, TMC 330 (TMC 346)
OMT	445	Industrial Internship	Work experience assignment in industry commensurate with student's program. Specialized instruction by industry with university supervision. Pass/fail.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-10		Prerequisites: Fulton Polytechnic School undergraduate student; Minimum 2.25 GPA; minimum Junior standing
OMT	452	Industrial Human Resource Management	Concepts and practices of human resource management in a global industrial environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre requisite(s): Fulton Polytechnic School student
OMT	480	Organizational Effectiveness	Human aspects of supervisory behavior in the industrial setting and how they influence efficiency, morale, and organizational practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): MGT 301 or TMC 330 (TMC 346)
OMT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		
OMT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		Pre-requisites: Minimum Junior standing; Minimum 2.25 GPA
OMT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
OMT	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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OMT	502	Financial Management	Examines corporate financial and managerial accounting systems, budgeting, and financial policy, using microcomputers to analyze, forecast, and report information.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	503	Marketing Management	Modern methods and industrial case studies of planning, pricing, promoting, and distributing goods and services in the global marketplace.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	504	Ethical Issues in Technology	Analyzes legal and ethical framework for making managerial decisions in the corporate environment of engineering- and technology-related industries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only OMT 430 or OMT 504
OMT	520	Strategic Management of Technology	Analyzes entrepreneurial dynamics and technology development, methods of research and development management, new technology implementation, and start-up organization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	540	International Management	Practices and procedures for effective management of multinational business organizations, including partnerships, joint ownerships, and global subsidiaries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	548	Statistical Methods for Research	Multivariate statistical techniques to analyze research data. Uses statistical software and applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	549	Research Techniques and Applications	Selection of research problems, analysis of literature, individual investigations, preparing reports, and proposal writing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	560	Managerial Decision Making	Analyzes common decision-making biases and techniques to overcome them. Uses both subjective quantitative decision tools and computerized decision aids.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	570	Advanced Project Management	Planning, organizing, coordinating, and controlling staff and project groups to accomplish the project objective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only OMT 570 or TMC 470
OMT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	592	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		
OMT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	OP4	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OPM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
OPM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
PAF	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
PAF	200	Public Service and Policy in the 21st Century	Provides a broad introduction to the field of public service and leadership. Topics include an overview of management, policy, urban studies, and leadership in the public sector. Covers the history and development of the public sector, as well as how it serves contemporary society.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		

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PAF	201	Economics and Public Policy	Introduces the terminology and methods of analysis in microeconomics. In particular, examines the behavior of individual consumers and firms, with a focus on market failures and the role of government policy in correcting those failures. Applies microeconomic principles to the distribution of income, policies for eliminating poverty and discrimination, the problems of environmental pollution, and the impact of different market structures on economic activity.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	SB	
PAF	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
PAF	300	Public Management and Administration	Examines the context and role of the public manager and the development of the field of public administration.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	301	Applied Statistics	Focuses on statistical techniques used in social science research. Applies concepts such as measures of central tendency and dispersion as well as statistical techniques, including the following: one-sample z and t tests, two-sample t tests, chi-square, and correlation. Goals include helping students understand the mathematical and statistical concepts presented and assisting them in using these concepts in everyday life and in the study of social sciences.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	CS	Pre-requisites: MAT 142 or higher
PAF	302	Public Service Research Methods	The philosophy, scope, and methods of public sector research. Examines quantitative and qualitative research methods and research design.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 301 with C or better
PAF	311	Leadership and Change	The leader's role in bringing about significant organizational and societal change with special attention to group and organizational behavior dynamics, establishing a vision, mobilizing and empowering individuals and groups, and assessing outcomes of the change process in a variety of settings.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	SB	Pre-requisites: Minimum 30 hours
PAF	340	Contemporary Policy Challenges	Develops conceptual, critical, and practical understanding of public policy, the policy process, and policy analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: Minimum 30 hours
PAF	350	Introduction to Science & Technology Policy	Explores the variety of ways in which governments make policies, how the policies shape the development of science and technology and their applications, and how policy may be shaped to create better futures.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 30 hours
PAF	360	Introduction to Emergency Management	Emergency management theories. Comprehensive emergency management. Mitigation, preparedness, response, and recovery. Post-disasters and policy formation. Current FEMA all-hazards approach.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 45 hours
PAF	363	Computer Applications in Emergency Management	Explores specific computer programs that are currently in use for contingency planning, tracking chemical inventories, and response resources.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: MAT 142
PAF	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
PAF	400	Senior Capstone Project	Teaches students to solve problems related to the public sector by applying theory, knowledge, and methods from previous courses to a hands-on project in the community. Seminars include guest speakers and discussions on professional development. Students work as individuals and as a team to prepare research papers and a professional report that is presented to the community.	N	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: PAF 200, 201, 301 (or 401), 302, 311 (or 411), 340, and 460 with C or better
PAF	410	Building Leadership Skills	Introduces understanding and developing leadership skills, including an examination of leadership theories and models from multidisciplinary and crosscultural points of view, an assessment of the student's leadership capabilities, and practical applications to improve individual leadership capabilities.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	SB	Pre-requisites: Minimum 30 hours; Credit is allowed for only PAF 410 or URB 410
PAF	420	Public Leadership	Examines key concepts, models, and strategies for leading public and nonprofit organizations, emphasizing self-knowledge, skills, and abilities for effective leadership.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	421	Leadership Capstone	Builds upon leadership courses in the Leadership and Ethics certificate program by applying concepts and examples from the readings as well as individual experiences.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 311 and 410; Credit is allowed for only PAF 421 or 494 (Leadership Capstone)
PAF	424	Comprehensive Emergency Management	Addresses theory and management techniques for emergency preparedness, including mitigation, preparedness, response, and recovery.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 45 hours
PAF	425	National Incident Management System (NIMS)	Covers concepts, terminology, players, compliance requirements, including doctrine of National Incident Management System per HSPD-5. Discussion of National Response Plan.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 45 hours
PAF	460	Public Service Ethics	Role, values, and issues of public management in democratic governance, citizen participation, power structures, and professional codes of conduct.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	461	Homeland Security	In-depth analysis of policies, procedures, and organizational structure for effective homeland security program. Covers all hazard/all risk philosophy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: minimum 45 hours. Credit is allowed for only PAF 461 or 561
PAF	468	Simulation and Exercising	Requirements, planning, conduct, and critique of exercises related to emergency planning. Emphasizes realism using moulage and props.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 45 hours

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PAF	469	Terrorism Defense	Explores the background and evolution of terrorism. Presents specific tactics for preparation for and response to acts of terrorism.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ABS 598 (Terrorism Defense) or PAF 469
PAF	470	Topics in Public Economics and Financial Management	Provides an analysis of public economic practices and problems in a federal system. Presents detailed descriptions, where appropriate, of significant institutions and applies modern economic theory to the ways that these institutions finance and deliver services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: ECN 212 or PAF 201 with C or better
PAF	471	Public Policy Analysis	Provides further study in the concepts, models, and operational methods used in public policy decisions and analysis. Enables students to develop higher skills needed for defining policy issues, identifying alternative solutions, and predicting the potential impact of policy alternatives.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: PAF 301 and 340 with C or better
PAF	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-6		Prerequisite(s): Barrett Honors student
PAF	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-6	L	Prerequisite(s): Barrett Honors student
PAF	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
PAF	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-3		
PAF	501	Public Service Research I	Philosophy, scope, and methods; public service research design, values, and ethics.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: Must have earned B or better or currently enrolled in PAF 401, POS 401, PSY 230 QBA 221, or SOC 390 AND course must be completed within 4 previous terms
PAF	502	Public Service Research II	Quantitative techniques including multivariate analysis, data analysis, decision making, and computer applications in public affairs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 501 with C or better
PAF	503	Public Affairs	Development and context of American public administration and policy, role of administration in governance, and values and ethics in administration.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	504	Microeconomics of Public Policy I	Provides key principles of microeconomics. Places particular emphasis on developing the analytic tools of economic reasoning and using these tools to examine policy interventions of interest to public managers.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	505	Public Policy Analysis	Institutional and formal analysis of policy processes, decision making, and problem solving; values, ethics, and the uses of policy analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 504 with C or better
PAF	506	Public Budgeting and Finance	Legal, social, economic, political, institutional, and ethical foundations of governmental finance, budgets, and budgeting.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 504 with C or better
PAF	507	Public Human Resource Management	Personnel systems, behavior and management of people in public organizations, collective behavior, unionism, conflict management, motivation, productivity, and ethics.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	508	Organization Behavior	Theory and application in the management of organizational behavior with emphasis on leadership and the public service.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	509	Public Affairs Capstone	Capstone application of core course knowledge, skills, and abilities required for public service.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: PAF 501, 502, 503, 504, 505, 506, 507 and 508 with C or better
PAF	520	Public Management	Management process in government and public agencies, with emphasis on the executive leadership within the public sector.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	522	Advanced Governmental Financial Management: Capital Budgeting and Infrastructure Financing	Focuses on capital budgeting and infrastructure financing. Covers information required to finance a capital improvement plan, specifically for infrastructure items such as streets, parks, public utilities, airports, highways, bridges and tunnels, and other public works. Combining strategy as well as process, examines financial management from different perspectives.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): Public Administration MPA student
PAF	523	The City and County Manager	Manager's role and resources in the differing forms of administrative, legislative, and community sectors.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	525	Public Entrepreneurship	Explores entrepreneurship in the public sector from various angles, including small and large communities and nonprofits.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	529	Organization Change and Development	Explores the nature and management of change and development as a tool to achieve organizational goals; effecting planned change.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PAF	530	Management of Urban Government	Administrative practices and behavior within the urban political administrative environment. Functional areas such as citizen participation, urban planning, urban transportation, and the conflicts between urban politics and administrative efficiency.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	531	Community Conflict Resolution	Interdisciplinary approach to understanding the dynamics of community conflict. Strategic considerations in policy design and advocacy; potential reaction to conflict. Relevant models and research findings generated by both case studies and comparative methods.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	534	Urban Services Infrastructure	Provides an overview of the network of services being provided in the urban environment by a variety of governmental and nongovernmental agencies. Discusses coordination, cooperation and overlap of services by local, special district, county, regional and state levels, alternate delivery methods including nonprofits, and the evolving relationship of these services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	540	Adv Policy Analysis	Emphasizes the structure of policy problems, forecasting policy alternatives, optimizing resources, and reducing uncertainty in policy making.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 505 with C or better
PAF	541	Program Evaluation	Various methodologies available for the evaluation of public policies and programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 501 with C or better
PAF	545	Organizations, Sustainability & Public Policy	Sustainability concerns are fast becoming a strategic issue for organizations in all sectors. In the last ten years, numerous organizations have completely redefined their business strategies in line with principles of sustainability by balancing the requirements for economic development, environmental quality and social justice, and governments worldwide are developing programs and policies that encourage these activities. Explores the connections between organization strategy--especially within the private sector, sustainability and public policy. Through a combination of practical cases, readings and lectures, class sessions engage students in discussions aimed at developing sustainability assessment models. Additionally, students apply new strategy tools that incorporate principles of proactive environmental management and social responsibility designed to enhance the public good.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only PAF or SOS 545
PAF	546	Environmental Policy and Management	Analyzes environmental policy and planning issues and principles related to the analysis and management of natural and urban/regional resources.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	547	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 515 or GLG 547 or HSD 515 or PAF 547 or SOS 516
PAF	548	Women/Politics/Public Policy	Explores how political philosophy, politics, and public policy affect and are affected by women.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	549	Diversity Issues and Public Policy	Examines public policy issues concerning or affecting women, black, Latino, Asian, and American Indian communities, as well as those groups' impact on the policy process.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	550	Governing Emerging Technologies	Examines the governance of science and technology through a focus on emerging technologies whose potential consequences in society are apparent only in anticipation and whose manifestations are still being shaped by local, domestic, and international institutions. These emerging technologies include nanotechnologies, synthetic biology, and other technologies associated with genetic modification, and information and cognitive science and neuro-technologies.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PAF 550, HSD 503 or POS 573
PAF	552	Integrated Emergency Management	Theory and practice of comprehensive emergency management. Explores scope and function of Department of Homeland Security.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	555	Information Technology in Emergency Management	Provides theory and application of computer-based programs in emergency management and the use of various emergency modeling programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	560	Community Resilience	Examines community resilience from a systems perspective, embracing governments, private, nonprofit and civic roles. Presents research, case studies, and strategies for policy planning and implementation. Provides an understanding of how community members respond to the need to prepare for, endure and recover from disasters and the ability to utilize multiple communication methods to help community members before, during and after these emergencies.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	561	Interoperability for Emergency Managers	Enables understanding of the multiple technologies and skills utilized by emergency managers to enhance successful coordination and communication between all levels of emergency managers and responders during emergency mitigation, prevention, preparedness, response and recovery operations.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 554

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PAF	564	Political Economy	Classical and contemporary literature and historical development of governmental and economic arrangements, with special emphasis on the role of the state.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	565	Theories and Practices of Democracy	Critically explores the wide range of ideas, issues, challenges, and promises related to democracy in theory and practice. Intended for all students interested in democratic leadership, public service, civic engagement, and participatory governance.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	566	Participatory Governance & Civic Engagement	Examines classic and current theoretical debates on participatory governance and civic engagement, discusses theoretical and practical implications, and analyzes different models of participatory governance.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	570	Microeconomics of Public Policy II	Provides the policy tools to solve economic problems such as market concentrations, market failures and externalities, and asymmetric information. Increasingly, government interventions are moving away from a command-and-control-style of direct provision of goods and services and toward a large menu of indirect approaches implemented through a complex system of third-party actors. Government intervention in private markets now entails loans and loan guarantees, grants-in-aid, contracts, vouchers, social and economic regulation, and many other policy tools. Each of these instruments involves vastly different behavioral distortions, policy technologies, political considerations and technical sophistication. Analyzes the economics of four policy interventions: grants, tax expenditures, social regulation and vouchers. Provides an overview of each tool (including its key design features) and combines economic theory with background information on how public policies actually operate.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 504 with C or better
PAF	571	Geographic Information Systems (GIS) and Analysis	Provides foundational information related to application of GIS technology to meet various needs within governmental operations, administration, and public policy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	573	Applied Econometrics	Applied treatment of the most important modern econometric methods used to evaluate public policies. Help students become savvy consumers of econometric methodology and develops the methodological skills necessary for implementing quantitative evaluations of public policies. Accordingly, course stresses critical thinking and creativity.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 502 with C or better
PAF	574	Diversity, Ethics, and Leading Public Change	Focuses on leadership, ethics, and benefits and tensions of the multicultural city to develop leadership and multicultural competence.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	579	Public Policy Capstone	Integrative, client-based project course.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	L	
PAF	582	E-Public Administration	Explores how new techniques and technologies for using, processing and managing information are changing how we interact, work and serve. As an example of this very concept, this course is offered online. During the semester, managers explore current trends, use a wide variety of information and communication tools, and have manager-created content consistent with new trends of online participation. By the end of the course, managers have experience with tools (including Wikis, Blogs, search engines, collaboration tools, reputation systems, social networks, virtual worlds); are familiar with current information issues (transparency, privacy, equal access, governance); and explore how they are relevant to a variety of contexts (local government, non-profits, public service).	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Public Affairs	1		
PAF	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Pre-requisite: Doctoral student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
PAF	601	Seminar: Pol Analysis & Eval	Normative and conceptual issues of policy formulation, implementation, and evaluation; methods of policy analysis and evaluation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	602	Seminar: Foundations of Public Administration	Philosophy of science (including conduct of inquiry--epistemological and ontological foundations), historical development, and theoretical foundations of the field.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: Doctoral PAF student
PAF	603	Advanced Economics for Public Administration and Public Policy	Theory of utility and demand, theory of the producer, organization, operation of product and factor markets, market equilibrium, regulation, risk and uncertainty, general equilibrium and welfare policy, market failure, public goods and taxation, and game theory.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 504 with C or better; doctoral major
PAF	604	Foundations of Public Administration II	Philosophy of science (including research design issues and alternative approaches) and contemporary public administration, including political, social, technological, and economic institutions involved in governance, exposure to research being conducted within department.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: Doctoral PAF student; PAF 602
PAF	610	Advanced Qualitative Methods for Public Affairs Research	Explores a number of qualitative research approaches and methods, including ethnography, ethnomethodology, participant observation, interviews, focus groups, content analysis, discourse analysis, and some comparative/historical methods. Also exploreS the important theoretical and ethical issues that bear on these approaches.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: PhD student
PAF	620	Public Administration Professional Development Workshop	Prepares doctoral students to become productive and effective public administration scholars, teachers, and researchers.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: Doctoral PAF student
PAF	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-15		
PAF	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Public Affairs	1		
PAF	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-15		
PAX	230	Introduction to Peace Studies	Intensive, one-semester introductory course. Explores multidisciplinary approaches to the study of peace, conflict and human rights as well as the historical background of peace studies (trans)disciplinary orientation. Knowledge gained in peace studies can be applied toward education, policy, law, cross-cultural communication, community-based organizations, nongovernmental organizations and ethics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
PAX	456	Studies in Forensic Linguistics	Focuses on the three main aspects of that branch of applied linguistics, namely language and the law, court cases where language is the central dispute, and linguistic evidence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better; minimum 45 hours; Credit is allowed for only ENG 456 or FOR 456 or PAX 456 or ENG/FOR 494 (Studies in Forensic Linguistics)
PBH	100	Introduction to Public Health	Introduces public health in the United States. Familiarize students with the broad discipline of public health and how it influences community and individual health status. Discusses the role of various agencies in public health, methods of measurement and evaluation, major public health issues in the United States, and factors that contribute to individual and community health. Solidifies concepts through the use of in-class discussion, group work and individual analysis.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only HCD 101 or PBH 100
PBH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		

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PBH	201	Economics for Health Majors	Introduces economics and demonstrates the relevance of economic principles to the study of health care delivery systems and public health. Combines elements of a traditional introductory economics curriculum with broad coverage of the history of economics, and specific application to current issues in health care delivery and public health policy. Prepares the student for further study of health economics.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only HCD 201 or PBH 201
PBH	202	Public Health Economics	Applies the basic economic tools students have acquired in previous coursework to the study of population health. Acquaints public health students and other undergraduate health majors with the ways economics contributes to both epidemiology (e.g., how people change their behavior in response to the possibility of illness) and health policy (e.g., how to evaluate the cost-effectiveness of public health programs). Particular focus on the ways in which economic concepts (e.g., marginal analysis, opportunity cost, negative externalities) can inform the debate on public health problems such as health disparities, obesity and population aging.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): PBH 201 with C or better
PBH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
PBH	300	Biostatistics	Biostatistics and its use in health and health services research. Familiarize students with statistical concepts and methods to analyze and interpret data and conceptually addresses statistical theory. Introduces SPSS software to analyze large data sets.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3	CS	Prerequisite(s): completion of General Studies MA requirement with C or better; minimum 45 hours. Credit is allowed for only HCD 300 or PBH 300
PBH	310	Epidemiology in Public Health	Essential principles and practices of public health epidemiology. Increases an undergraduate student's ability to analyze problems and make decisions based on application of epidemiologic concepts and methods in a variety of settings. Students gain experience communicating epidemiologic findings in both written and oral formats. Includes applied hands-on exercises in analysis of epidemiologic data, case studies and critical review of epidemiologic methods used in scientific literature.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): PBH 300; not open to Exercise and Wellness or Health Education and Health Promotion majors
PBH	355	Research Methods for Public Health	Society incurs high opportunity costs when public health interventions which yield a high health return on investment are not implemented, or when resources are expended on interventions with low health returns. Public health practitioners should, therefore, incorporate the best scientific evidence in planning, implementing and evaluating public health policies and programs. Covers concepts and tools of public health research where the research objective is to provide evidence that informs and improves decisions regarding the allocation of public health resources. Covers basic components that inform evidence-based decision making, namely: accessing the best available scientific evidence; developing research questions, collecting and analyzing qualitative and quantitative data; using data and information systems methodically; and adhering to standards of ethical research.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): PBH 310; not open to Exercise and Wellness or Health Education and Health Promotion majors
PBH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
PBH	422	Health Disparities and Access to Health	Racial and ethnic health disparities in the United States. Explores disparities in healthcare seen at the provider and system level and their effects on health in the community. Also considers the historical context of racial and ethnic health disparities and the demographic and conceptual issues surrounding health disparities research. Reflects on the effects of behavior, socioeconomic status and group-specific disparities on community health status.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCD 101 (or PBH 100) or BS Medical Studies major. Credit is allowed for only HCD 422 or PBH 422
PBH	444	Public Health Field Experience	Provides opportunity to gain experience working in community and public health settings. Course meetings provide guidance during the field experience and an opportunity for students to share their projects.	N	RSC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	4		Prerequisite(s): EXW 450; HCD 101 or PBH 100
PBH	455	Public Health Program Evaluation	Federal, state and local policies shape the nature of the public health programs implemented in communities. Public health professionals are often responsible for evaluating, at multiple levels, the programs that result from such policies. Provides public health students with the analytical tools necessary to manage the implementation and evaluation of public health programs. Program evaluation serves many important functions. It supplies information to managers who are charged with implementing public health programs and to policymakers who face decisions about which programs to fund, scale back, expand, modify or eliminate. Evaluation is an accountability tool: when a public health agency decides to finance a program, they have a right to ask what their funds bought. Evaluation is also a vehicle for improving public health programs. By identifying what works and what does not--and how new programs fare relative to existing practice--policymakers and managers can improve program designs.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): PBH 355

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PBH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		
PBH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
PGM	100	PGA/PGM Introduction	Introduces the golf professional training program. Career enhancement, rules of golf, tournament operations, and playing professional development programs.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	110	Player Development I	Introductory instruction on golf game improvement to assist PGM students in preparation for Players Ability Test.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	111	Player Development II	Instruction to assist PGM students in preparation for Players Ability Test with emphasis on full swing mechanics and practice plan development.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	112	Player Development III	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	113	Player Development IV	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	114	Player Development V	Introductory instruction on golf game improvement to assist PGM students in preparation for Player Ability Test.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	120	Golf for Business and Life	Introduces nongolfing students to the game of golf. For beginners.	N	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	130	PGA/PGM Level 1	Focuses on golf professional training program and the completion of the PGA Level One experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		
PGM	150	Teaching Golf I	Introduces golf instruction. Focus on fundamentals of golf swing and teaching techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		
PGM	166	Turf Equipment Management	Introduces turf equipment used on golf courses. Instruction in maintenance, adjustment, and safety issues.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
PGM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
PGM	200	PGA/PGM Level 2	Focuses on golf professional training program and the completion of the PGA Level Two experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		
PGM	250	Teaching Golf II	Communicating with student golfers, swing evaluation, key factors club fitting, developing a successful teaching practice.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
PGM	300	PGA/PGM Level 3	Business planning and operations, business communications related to business of golf. Completion of the PGA Level Three experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	350	Teaching Golf III	Teaching swing concepts. Developing a teaching philosophy, analyzing flawed swing mechanics through video and swing analysis software.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	367	Landscape Plants and Design	Identification, design, and use of plants in urban landscapes.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	4		Prerequisite(s): minimum 45 hours
PGM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
PGM	400	GPTP IV	Food and beverage control, supervision and delegation of golf facilities. Completion of the PGA Level Three experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	463	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
PGM	466	Integrated Pest Control	Management of pests affecting golf turf and landscape plants. Structural Pest Control Board sprayer certification preparation offered during the semester.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		
PGM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		
PGM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
PHI	101	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	
PHI	101	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI	101	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	103	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Pre-requisites: ENG 101, 105 or 107 with C or better
PHI	103	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Pre-requisites: ENG 101, 105 or 107 with C or better
PHI	103	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 101, 105 or 107 with C or better
PHI	105	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	

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PHI	105	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI	105	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	120	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	
PHI	120	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI	120	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
PHI	300	Philosophical Argument and Exposition	Develops techniques of philosophical argument and exposition. Frequent written exercises. Course content may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Prerequisite(s): Philosophy majors; minimum 25 hours; ENG 102 with C or better
PHI	303	The Future of Religions	Critical theorists of modern religious and secular beliefs argued that both theism and atheism have had their martyrs and tyrants. Nietzsche proclaimed "God" of the West dead, Marx unmasked religion as opium for the oppressed masses, and Freud analyzed religious future as an unconscious illusion. The future of secular progress has become equally suspect in the wake of the Holocaust, Hiroshima, the gulags, the killing fields of Cambodia, Rwanda. Globally motivated terror revealed itself as capable of religious as much secular justifications. The future of faith and reason has become a doubly open theoretical and practical question in philosophy, religious studies, literary study, critical theory, cultural and gender studies, and all sciences. Applies theoretical and methodological tools to critically exam beliefs, practices, and communities and their role in both generating and transforming the ethical and spiritual discontents of the global age.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only HON 394 (The Future of Religions), PHI 303 or REL 300
PHI	304	Existentialism	Covers such topics as absurdity, authenticity, the meaning of life and death, responsibility, and subjectivity. May include readings in phenomenology.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI	304	Existentialism	Covers such topics as absurdity, authenticity, the meaning of life and death, responsibility, and subjectivity. May include readings in phenomenology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	306	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	
PHI	306	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI	306	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	307	Philosophy of Law	Nature and source of law and its relation to morality. Legal rights, legal enforcement of morals, civil disobedience, liability and responsibility, punishment, judicial reasoning, justice, property, and differences between theories of natural and positive law.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours
PHI	307	Philosophy of Law	Nature and source of law and its relation to morality. Legal rights, legal enforcement of morals, civil disobedience, liability and responsibility, punishment, judicial reasoning, justice, property, and differences between theories of natural and positive law.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 hours
PHI	310	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Credit is allowed for only BIO 324 or PHI 310
PHI	311	Philosophy and Literature	In-depth study of selected literary and philosophic texts. Addresses philosophical problems such as the nature of moral goodness and human relations; the purpose of life; or the relations among beauty, truth and justice. Also addresses whether literary aspects of philosophical texts such as myth, image, metaphor or rhetorical devices contribute to meaning or promote ethical insight as well as interdisciplinary tensions and bridges between rhetoric and philosophy.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): minimum 45 hours

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PHI	311	Philosophy and Literature	In-depth study of selected literary and philosophic texts. Addresses philosophical problems such as the nature of moral goodness and human relations; the purpose of life; or the relations among beauty, truth and justice. Also addresses whether literary aspects of philosophical texts such as myth, image, metaphor or rhetorical devices contribute to meaning or promote ethical insight as well as interdisciplinary tensions and bridges between rhetoric and philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours
PHI	311	Philosophy and Literature	In-depth study of selected literary and philosophic texts. Addresses philosophical problems such as the nature of moral goodness and human relations; the purpose of life; or the relations among beauty, truth and justice. Also addresses whether literary aspects of philosophical texts such as myth, image, metaphor or rhetorical devices contribute to meaning or promote ethical insight as well as interdisciplinary tensions and bridges between rhetoric and philosophy.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 hours
PHI	313	Probability, Evidence, and Decision	Philosophical topics in epistemology and practical reasoning; probability and its use in representing and reasoning about belief, evidence, and rational choice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: MAT 119 (or higher); Minimum 30 hours; Credit is allowed for only HPS 313 or PHI 313
PHI	314	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI	314	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI	318	Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI	318	Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	319	Philosophy, Computing and Artificial Intelligence	Philosophical problems surrounding artificial intelligence (AI). Thinking as computation and AI; the ethics, epistemology and metaphysics of computing.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 25 hours
PHI	319	Philosophy, Computing and Artificial Intelligence	Philosophical problems surrounding artificial intelligence (AI). Thinking as computation and AI; the ethics, epistemology and metaphysics of computing.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	CS	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 25 hours
PHI	319	Philosophy, Computing and Artificial Intelligence	Philosophical problems surrounding artificial intelligence (AI). Thinking as computation and AI; the ethics, epistemology and metaphysics of computing.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	CS	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 25 hours
PHI	320	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only BIO 312 or IAS 340 or PHI 320
PHI	320	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	322	History and Philosophy of Sustainability	Examines sustainability issues in a broadly interdisciplinary way, but with a special emphasis on humanities perspectives, focusing on human ideas, values and institutions as they have evolved over time.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours; Credit is allowed for only HST 308 or PHI 322 or SOS 309 or BIO/HST/PHI/SOS 394 (History & Philosophy of Sustainability)
PHI	324	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	325	Philosophy of Social Science	Philosophical problems surrounding the aims, structure, and methods of the social sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU or SB	
PHI	326	Philosophy of Happiness	Examines ancient and contemporary philosophical models of happiness and consideration of criteria for living a life of human flourishing.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better
PHI	328	History of Ancient Philosophy	History of Western philosophy from its beginnings through the Hellenistic period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 25 hours
PHI	329	History of Modern Philosophy	History of Western philosophy from the Renaissance through Kant.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours

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PHI	330	Theory of Knowledge	Nature, sources, and limits of human knowledge. Topics may include truth, a priori knowledge, empirical knowledge, perception, induction, and skepticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	331	Philosophy of Language	Problems pertaining to the nature of language, including meaning, reference, truth, definition, analyticity, translatability, synonymy, and contributions of contemporary linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	332	Metaphysics	Problems pertaining to the nature of reality. Topics may include nature of person, minds, substance, universals, space, time, causation, and modality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	333	Symbolic Logic	Studies symbolic techniques to represent knowledge, deductive arguments, refutation by counter-example, and model-theoretic representation. Covers propositional and first-order predicate logic and provides a deeper understanding of theories about the world and of reasoning in life generally. Students gain a valuable tool for any field or discipline in which rigorous thinking is necessary such as science, medicine, business and the legal profession.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102 or 105 or 108 with a C or better; Minimum 25 hours
PHI	334	Philosophy of Mind	Nature of consciousness. Common sense view of mind, behaviorism, materialism, dualism, functionalism, self-knowledge, and knowledge of other minds.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	335	History of Ethics	Major works of moral philosophy, both ancient and modern, such as those by Plato, Aristotle, Hobbes, Hume, Kant, and Mill.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	335	History of Ethics	Major works of moral philosophy, both ancient and modern, such as those by Plato, Aristotle, Hobbes, Hume, Kant, and Mill.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	336	Social and Political Philosophy	Alternative principles and methods relevant to problems of human association and conflict; discusses justice and power, freedom and equality, and autonomy and order.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	336	Social and Political Philosophy	Alternative principles and methods relevant to problems of human association and conflict; discusses justice and power, freedom and equality, and autonomy and order.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	337	Ethical Theory	Theories in normative ethics about the nature of what is right and wrong, good and bad, virtuous and vicious. May include issues in metaethics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	338	Metaethics	Concerns questions about the nature of value, morality, and normativity in general, such as "Is morality objective, subjective, or relative?"	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 25 hours. Credit is allowed for only PHI 338 or PHI 420 (Metaethics)
PHI	339	Philosophy of Art	Central problems in philosophy of art, e.g., the nature of a work of art, modern and traditional theories of art, aesthetic perception and experience, and objectivity and relativity in art criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours
PHI	339	Philosophy of Art	Central problems in philosophy of art, e.g., the nature of a work of art, modern and traditional theories of art, aesthetic perception and experience, and objectivity and relativity in art criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 hours
PHI	347	Philosophical Theories of Constitutional Law	In-depth study of the philosophical theories surrounding constitutional rights and interpretation.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	360	Business and Professional Ethics	Examines moral theories applied to cases of corporate responsibility, property rights, environment, fairness, profit, employee rights, and responsibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours
PHI	360	Business and Professional Ethics	Examines moral theories applied to cases of corporate responsibility, property rights, environment, fairness, profit, employee rights, and responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 hours
PHI	390	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
PHI	390	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
PHI	391	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357, PHI 391 or REL 391

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	391	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357, PHI 391 or REL 391
PHI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
PHI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
PHI	401	Rationalism	Examines classical philosophical rationalism, as in Descartes, Spinoza, Malebranche, or Leibniz. Contemporary rationalist thought may also be examined.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Undergraduate Philosophy student; Minimum 56 hours
PHI	402	Empiricism	Examines representatives of either classical or contemporary philosophical empiricism, e.g., Bacon, Hobbes, Locke, Butler, Berkeley, Reid, Hume, Mill, Carnap, and Ayer.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Undergraduate Philosophy student; Minimum 56 hours
PHI	403	Contemporary Analytic Philosophy	Aims and methods of such 20th-century philosophers as Frege, Moore, Russell, Wittgenstein, Carnap, Ayer, Wisdom, Ryle, Austin, Strawson, Quine, and Sellars, with application to metaphysics and epistemology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Undergraduate Philosophy student; Minimum 56 hours
PHI	405	Moral Psychology	Advanced study of key, contemporary authors and issues in moral psychology as a subfield of philosophy.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy undergraduate major; minimum 56 hours; Credit is allowed for only PHI 405 or PHI 420 (Moral Psychology) or PHI 530
PHI	406	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 101 or 105 or 107 with C or better. Credit is allowed for only FOR 406 or IAS 406 or PHI 406
PHI	407	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHI	407	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHI	408	Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 earned hours. Credit is allowed for only IAS 408 or PHI 408
PHI	408	Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 earned hours. Credit is allowed for only IAS 408 or PHI 408
PHI	409	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Credit is allowed for only IAS 409 or PHI 409
PHI	411	Continental Philosophy	Contemporary European thought emerges out of a crisis of the Enlightenment that unfolds throughout the 19th and 20th centuries. Kant's critique of the theoretical, practical, aesthetic and religious foundations articulates this crisis in Western philosophy, society and culture. Explores Continental thinkers and schools of thought in light of Kant's understanding of this crisis. Figures might be Nietzsche, Marx, Freud, Kierkegaard, Husserl, Heidegger, Benjamin, Adorno, Marcuse, Sartre, de Beauvoir, Irigaray, Kristeva, Spivak, Habermas, Lévinas, Marion, Derrida and others. Schools of thought considered may include existentialism, phenomenology, hermeneutics, critical theory, poststructuralism, deconstruction, feminist theory, critical race theory, postcolonial theory, and comparative philosophy. Continental philosophy dovetails with other fields like communication, cultural studies, law, political science, religious studies, literature and various social sciences.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours. Credit is allowed for only PHI 411 or PHI 494 (Continental Philosophy & Religion) or PHI 494 (Studies in Continental Philosophy)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
PHI	412	Philosophy and Literary Criticism	Explores dynamic tensions between philosophical and literary critical approaches to texts. Aims to identify distinct ways that literature and critical practices "philosophize" about truth, moral dilemmas or existential struggles. Probes the challenges that each form of inquiry, philosophical and critical, poses for the other. Seeks to enhance understanding of the philosophical underpinnings of key literary works. May address poetry, novels and other media.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 101 or 105 or 107 with C or better; minimum 30 hours. Credit is allowed for only PHI 412 or PHI 494 (Philosophy and Literature) or ENG 401 (Philosophy and Literary Criticism)
PHI	413	Advanced Symbolic Logic	Properties of formal systems axiomatizing propositional and 1st-order predicate logic. May also include modal logic, number theory, and limits of logicism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): undergraduate Philosophy student; minimum 56 hours; Credit is allowed for only PHI 413 or PHI 556
PHI	415	Philosophy and Film	Introduces philosophical themes via the medium of film. Students read classical and contemporary literature in philosophy, view films that portray philosophical concepts, and demonstrate their understanding through writing assignments and class presentations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only PHI 415 or PHI 294 (Philosophy and Film)
PHI	420	Topics in Philosophy	Course descriptions on file in department.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): undergraduate Philosophy major; minimum 56 hours
PHI	421	Philosophical Topics	Focuses on important issues within the discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
PHI	428	Immunophilosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: MIC 420, PHI 317, HPS314, or PHI 428 with C or better. Credit is allowed for only MIC 428 or PHI 428
PHI	439	Philosophy of Love and Sex	Advanced introduction to historical and contemporary philosophical writings and sociological case studies on the philosophy of sex and love.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only PHI 439 or PHI 494 (Philosophy of Love and Sex)
PHI	448	Justice and Reparations	Advanced study of the moral basis of reparations and reparative justice.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy undergraduate major; minimum 56 hours; Credit is allowed for only PHI 420 (Jus/Reparations) or PHI 448 or PHI 527
PHI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
PHI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
PHI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Prerequisite(s): Barrett Honors student
PHI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
PHI	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
PHI	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7	L	
PHI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
PHI	501	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
PHI	520	Topics in Applied Philosophy	Selected topics in applied philosophy.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	521	Bioethics	Addresses current controversies and major topics in bioethics and biosciences.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Found-Bioethics) or PHI 521
PHI	522	Ethics of Sustainability	Explores the normative framework of sustainability.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Topics in the Ethics of Sustainability) or PHI 522
PHI	524	Disaster Ethics	Investigates moral and political questions connected to disasters and emergencies such as obligations of aid workers, responsibilities for preparedness and rebuilding, and related social justice questions.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Ethics and Disaster) or PHI 524
PHI	525	Rational Choice	Recent philosophical work on rational decision making.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Rational Choice) or PHI 525
PHI	526	Evolution and Strategic Interaction	Recent work on the philosophical significance of evolutionary models of social interactions and social structures.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	527	Justice and Reparations	Explores the moral, legal and political aspects of reparative justice after episodes of mass violence, massive human rights violations and intergenerational harms to specific groups (for example, African-Americans and Indigenous peoples). Explores what normative moral conceptions of reparative and restorative justice support obligations to repair historical injustice, as well as contemporary forms of systemic or structural injustice for affected groups.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Jus/Reparations) or PHI 448 or PHI 527
PHI	529	Feminist Philosophy	Examines contemporary feminist work in some of the subfields of philosophy, such as ethics, political philosophy, epistemology.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Feminist Philosophy) or PHI 529
PHI	530	Moral Psychology	Central issues and texts in moral psychology including the impact of psychological research on philosophical theorizing.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 405 or PHI 420 (Moral Psychology) or PHI 530
PHI	531	Philosophy of Emotion	Theories of what an emotion is and the relevance of emotion to work in various subfields of philosophy such as ethics and philosophy of fiction.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	532	Experimental Philosophy	Examines experimental work taken to directly bear on important philosophical theories.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Experimental Philosophy) or PHI 532

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PHI	533	Philosophy and Art	Recent philosophical work in the philosophy of fiction, visual art and/or music. Also discusses the fittingness of art works to address philosophical topics, especially in ethics.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Philosophy of Art) or PHI 533
PHI	540	Topics in Value Theory	Selected topics in value theory.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	541	Normative Ethics	Explores one or more leading normative ethical theories that inform the contemporary discussions in ethics, applied ethics, issues of justice and human rights, and public policy.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Normative Ethics) or PHI 541
PHI	544	Studies in Meta-Ethics	Selected topics in meta-ethics.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	545	Studies in Philosophy of Law	Selected topics in the philosophy of law.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	546	Studies in Political Philosophy	Selected topics or figures in political philosophy.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	555	Topics in Formal Methods	Selected topics in formal methods.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	556	Advanced Symbolic Logic	Advanced topics in logic relevant to philosophical theorizing such as modal, deontic and temporal logic.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	557	Philosophy of Mathematics	Examines selected topics and theories in the philosophy of mathematics.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Philosophy of Mathematics) or PHI 557
PHI	560	Topics in Epistemology	Selected topics in epistemology	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	562	Perception	Recent work on the nature and content of perception.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Perception) or PHI 562
PHI	565	Probabilism	Recent work on rational belief, evidence and belief change.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	566	Studies in Philosophy of Science	Selected topics in philosophy of science.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	570	Topics in Metaphysics	Selected topics in metaphysics	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	571	Studies in Philosophy of Mind	Selected recent philosophical work in philosophy of mind such as the nature of sensation and perception, theories of consciousness, and the unity of the self	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	572	Studies in Philosophy of Language	Selected recent philosophical work in philosophy of mind language as theories of meanings, direct reference and vagueness.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): MA or PhD Philosophy major. Credit is allowed for only PHI 420 (Philosophy of Language) or PHI 572
PHI	576	Realism	Recent work on realism and anti-realism, starting with Michael Dummett, and including philosophers such as Hilary Putnam, Donald Davidson, John McDowell and Kit Fine. Global realism and anti-realism and more specific realisms/antirealisms about the past, the mind, theoretical entities, mathematics and ethics.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	581	Studies in Ancient Greek Philosophy	Selected topics in ancient philosophy from 585 BC to 529 AD.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	582	Studies in Modern Philosophy	Selected topics and significant figures in the modern period.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		

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PHI	586	20th and 21st C. Philosophers	Examines the work of one or more philosophers prominent in the 20th or 21st century.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	587	Topics in the History of Philosophy	Selected topics in the history of philosophy.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PHI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PHI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Masters or Doctoral Philosophy student.
PHI	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		
PHI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PHI	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PHI	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHI	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		
PHI	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHL	385	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
PHL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
PHL	480	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
PHS	110	Fundamentals of Physical Science	One-semester survey of the principles of physics and chemistry. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	

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PHS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	208	Patterns in Nature	Examines topics from optics to analytical techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	Credit is allowed for only MSE 208 or PHS 208
PHS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
PHS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Prerequisite(s): Barrett Honors student
PHS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		
PHS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		
PHS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	505	Energy and the Environment	Current problems in energy resources, production, consumption, and conservation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	530	Methods of Physics Teaching I	Inquiry approach to high school physics teaching.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	531	Methods of Physics Teaching II	Extension of modeling techniques introduced in PHY 580.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	534	Methods of Teaching Physical Science I, II, III	Design of curriculum and conduct of instruction for physical science courses.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	540	Integrated Physics and Chemistry	Collaborative inquiry methods for teaching and coordinating physics and chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CHM 540 or PHS 540
PHS	542	Integrated Mathematics and Physics	Mathematical models and modeling as an integrating theme for secondary mathematics and physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	556	Astrophysics	Structure and evolution of stars, galaxies, and the universe. For secondary school teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	560	Matter and Light	Interactions of light with matter. Lasers and spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CHM 560 or PHS 560
PHS	570	Spacetime Physics	Special and general theories of relativity with implications for space and time travel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	581	Structure of Matter and its Properties	Models of matter and its properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CHM 581 or PHS 581
PHS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
PHS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1		
PHS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1		
PHS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	101	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	
PHY	101	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	
PHY	101	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	
PHY	111	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	Prerequisite(s): MAT 170 or higher with C or better, or minimum score of 56% on the Mathematics Placement Test, or Corequisite(s): MAT 210 or higher

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PHY	111	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3	SQ	Prerequisite(s): MAT 170 or higher with C or better, or minimum score of 56% on the Mathematics Placement Test, or Corequisite(s): MAT 210 or higher
PHY	111	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	Prerequisite(s): MAT 170 or higher with C or better, or minimum score of 56% on the Mathematics Placement Test, or Corequisite(s): MAT 210 or higher
PHY	112	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	Pre-requisites: PHY 111 with C or better
PHY	112	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3	SQ	Pre-requisites: PHY 111 with C or better
PHY	112	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	Pre-requisites: PHY 111 with C or better
PHY	113	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	113	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	113	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	114	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	114	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	114	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	118	Explorations in Science Teaching	Examines the field of physical science education via in-class meetings and classroom settings. Discusses the theory, pedagogy and practice of teaching physical science. Reviews various curricula available for the teaching of physical science with a focus on state and national standards. Students work with course instructor(s) to design three lessons that work toward some of the objectives of each cooperating teachers' class. Students are aided in developing materials, guided in planning to teach the lesson, and given time to prepare and practice the lesson.	N	SEM	N	GNA	Liberal Arts and Sciences	Department of Physics	1		Pre-requisite: Mathematics or Physics or other science major
PHY	121	University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisite: MAT 266 or MAT 271 with C or better if completed
PHY	121	University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisite: MAT 266 or MAT 271 with C or better if completed
PHY	122	University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	Pre/Co-requisite: PHY 121 with C or better if completed
PHY	122	University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1	SQ	Pre/Co-requisite: PHY 121 with C or better if completed

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PHY	131	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	Pre-requisites: MAT 266 or MAT 271 with C or better; PHY 121 with C or better; Pre/Co-requisite: MAT 267 or MAT 272 with C or better if completed
PHY	131	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3	SQ	Pre-requisites: MAT 266 or MAT 271 with C or better; PHY 121 with C or better; Pre/Co-requisite: MAT 267 or MAT 272 with C or better if completed
PHY	132	University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY	132	University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY	150	Physics I	Introductory physics for majors. Kinematics, Newton's Laws, basic forces, energy, momentum, special relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	Pre-requisites: MAT 265 or MAT 270 with C or better; Pre/Co-requisites: MAT 266 or MAT 271 with C or better if completed
PHY	151	Physics II	Continuation of PHY 150. Electromagnetic fields; Ampere's and Faraday's Laws; Maxwell's equations; basic circuit elements.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	Pre-requisites: MAT 266 or MAT 271 with C or better; PHY 150 (or PHY 121 and PHY 122) with C or better; Pre/Co-requisite: MAT 267 or MAT 272 with C or better if completed
PHY	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHY	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	201	Mathematical Methods in Physics I	Differential equations, linear equations, vectors, matrices, Fourier series, and numerical methods.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Physics	3	CS	Prerequisite(s): MAT 267 or 272 with C or better; PHY 151 or PHY 131 and 132 with C or better
PHY	241	University Physics III	Thermodynamics, kinetic theory, physical and wave optics, relativity, photons, matter waves, atomic physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 131
PHY	252	Physics III	Continuation of PHY 151. Wave physics, oscillations, harmonic systems, physical optics, thermodynamics, kinetic theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	Prerequisite(s): MAT 267 or 272 with C or better; PHY 151 or PHY 131 and 132 with C or better
PHY	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHY	302	Mathematical Methods in Physics II	Continuation of PHY 201. Vector calculus, complex variables, partial differential equations, special functions, numerical methods.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY201 with C or better
PHY	310	Classical Particles, Fields, and Matter I	Particle kinematics, mechanics, conservation laws, particle motion in force fields, dynamics of two-body systems, reference frames, rigid body motion, relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 201 with C or better; PHY 252 with C or better. Co-requisite: PHY 302
PHY	311	Classical Particles, Fields, and Matter II	Electrostatic and gravitational fields, Poisson and Laplace equations, dielectric materials, magnetic fields and materials, magnetic induction, Faraday's Law.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 302 with C or better; PHY 310 with C or better
PHY	312	Mechanics and Electromagnetism	Covers two major topics in physics, both dealing with forms of energy and momentum and how they are transmitted in space. Covers mechanics and dynamics, describing how bodies with mass move under various types of forces. Also covers electromagnetism, which describes how electric charges and magnets, and their motions, generate fields of force. Also describes how time-varying electric and magnetic fields are associated with electromagnetic waves, which include light.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 150, 151, and 252 (or PHY 121, 122, 131 and 132) with C or better
PHY	314	Quantum Physics I	Photons, models of the atom, wave properties of matter, introduction to wave mechanics, 1-D systems in quantum mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisites: PHY 201 with C or better; PHY 252 with C or better
PHY	315	Quantum Physics II	General principles of quantum mechanics, 3-D problems, approximation methods, spin, introduction to many-particle systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 302 with C or better; PHY 314 with C or better

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PHY	321	Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
PHY	321	Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	331	Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
PHY	331	Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	333	Electronic Circuits and Measurements	Basic principles of electronic circuit analysis and measurement techniques using modern instrumentation and computer-aided analysis of data.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 (or PHY 131 and PHY 132) with C or better
PHY	334	Advanced Laboratory I	Selected experiments from contemporary physics. Emphasizes modern instrumentation, computer-assisted acquisition and analysis of data, and report form writing.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Physics	3	L	Prerequisite(s): MAT 267 or 272 with C or better; PHY 151 (or PHY 131 and 132) with C or better; Pre- or Corequisite(s): PHY 314, 361, CHM 345 or EEE 434
PHY	361	Introductory Modern Physics	Special relativity and introductory quantum theory with applications drawn from atomic, nuclear, and solid-state physics.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		PHY 131 or PHY 151 with C or better; MAT 272 or MAT 267 with C or better
PHY	361	Introductory Modern Physics	Special relativity and introductory quantum theory with applications drawn from atomic, nuclear, and solid-state physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		PHY 131 or PHY 151 with C or better; MAT 272 or MAT 267 with C or better
PHY	371	Driving Forces in Biology	What are the stable states of biomolecules? How do molecules interact? What forces drive molecules to bond and associate, to adsorb, to permeate through membranes, to undergo chemical reactions, to undergo conformational changes? Why are some changes gradual, as in the weakening of a ligand interaction with temperature, and others sudden (cooperative) such as protein folding or the insolubility of oil in water? Addresses these questions by statistical thermodynamics, a collection of principles and models that when combined with thermodynamics, aim to explain molecular forces and flows.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: PHY 252
PHY	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
PHY	412	Classical Particles, Fields, and Matter III	Electromagnetic fields of moving charges, Maxwell's equations, harmonic phenomena, oscillations, waves, electromagnetic radiation, covariant electromagnetism, introduction to general relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: PHY 311 with C or better
PHY	416	Quantum Physics III	Introduces the quantum theory of atoms, molecules, solids and nuclei, Dirac's equation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: PHY 315 with C or better
PHY	441	Statistical and Thermal Physics	Statistical and experimental basis of heat, temperature, and entropy. Mechanical and statistical basis of the laws of thermodynamics. Applies macroscopic thermodynamics. Phase equilibrium.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	444	Fundamentals of Nanoscience	For senior science majors and beginning graduate students teaching the cross-disciplinary subject of nanoscience. There is a strong emphasis on basics, so the course starts with a fairly rigorous introduction to quantum mechanics, statistical mechanics and chemical kinetics, though enough material is provided to allow nonphysics majors to come up to speed in these areas. This is followed by a survey of experimental techniques in nanoscience: microscopy, optical spectroscopy and scanning probe methods, and nanofabrication methods including "top down" and self assembly. Finally we survey applications: electrons in nanostructures, molecular electronics, nanomaterials and bio-nanoscience.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: Junior or Senior standing; Credit is allowed for only PHY 444 or 494 (Intro to Nanoscience)
PHY	452	Physical Optics	Principles of reflection, refraction, diffraction. Additional topics from contemporary optics may include Fourier transform spectroscopy, linear systems theory, holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 302 with C or better; PHY 311 with C or better
PHY	456	Laser Optics	Theoretical and experimental aspects of applied optics including basic concepts of lasers, properties of optical beams, resonators and interferometry. Course consists of two parts: preparatory labs and applied projects. Preparatory labs provide theoretical and technical background for understanding of general features of electromagnetic wave propagation and technical features of optical lasers including high-power laser systems. Applied projects give students the opportunity to use laser optical systems to solve real-world problems.	N	LEL	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): PHY 361; Credit is allowed for only ABS 494 (Advanced Laser Laboratory), ABS 494 (Laser Optics) or PHY 456
PHY	460	Numerical Methods in Modern Physics	Advanced numerical methods with an emphasis on electromagnetism, quantum mechanics and materials science with computer labs on a multiprocessor cluster.	N	LEL	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): PHY 315; Pre- or corequisite(s): PHY 361

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
PHY	462	Particle and Nuclear Physics	Nuclear properties, models, decays and reactions; fundamental forces, field theories, symmetry principles; hadrons, quarks, and leptons; the Standard Model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	465	Advanced Laboratory II	Continuation of PHY 334. Students may substitute a short laboratory research project for one of the elective experiments of the course, in consultation with a faculty sponsor and the course instructor.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 334 with C or better
PHY	472	Advanced Biophysics Lab	Offers selected experiments from contemporary biophysics. Emphasizes modern instrumentation, computer-assisted acquisition and analysis of data, and report writing. Emphasizes the importance of good notebook keeping.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): PHY 371
PHY	473	From Molecules to Cells	Offers selected subjects from biological physics covering the length scales from biomolecules to cells. Builds on knowledge acquired from thermodynamics and statistical mechanics to formulate basic principles behind the working of life systems. Free energy, entropic forces, chemical potentials and electrostatic interactions rule the "nanometer soup" of a living cell. Proton gradients across cell membranes are behind all the energy consumed by life. Random walks, dissipative dynamics, and hydrodynamic fluxes rule time-dependent phenomena. Covers systems including biomolecules, membranes, cells and nerves.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: PHY 371 with C or better; Pre/Co-requisite: PHY 472 with C or better if completed
PHY	480	Methods of Teaching Physics	Evaluates various approaches to the teaching of high school physics. Preparation of demonstrations and experiments. Organization of a lab. Designed for secondary school physics teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	481	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better; Credit is allowed for only MSE 526, NAN 511, PHY 481 or 511
PHY	482	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 481 with C or better. Credit is allowed for only MSE 527, NAN 512, PHY 482 or 512
PHY	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHY	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Prerequisite(s): Barrett Honors student
PHY	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Prerequisite(s): minimum 45 hours
PHY	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		Prerequisite(s): minimum 45 hours
PHY	495	Project Research	Supervised project in physics or astrophysics. May be repeated for credit.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		
PHY	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHY	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		
PHY	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		Prerequisite(s): minimum 45 hours
PHY	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		Prerequisite(s): minimum 45 hours
PHY	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	511	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: Degree- or nondegree-seeking graduate; Credit is allowed for only MSE 526, NAN 511, PHY 511

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
PHY	512	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 511; Credit is allowed for only MSE 527, NAN 512, PHY 482 or PHY 512
PHY	521	Classical and Continuum Mechanics	Variational principles, Lagrange's and Hamilton's equations, canonical transformations, Hamilton-Jacobi theory, introduction to chaos and nonlinear dynamics, fundamentals of elasticity theory and fluid mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	523	General Relativity	Special and general theories of relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	531	Electrodynamics	Special theory of relativity, covariant formulation of electromagnetic interactions, Maxwell's equations, electrostatics and magnetostatics, dielectric media, inhomogeneous wave equations, Lienard-Wiechert potentials, interactions of charged particles and electromagnetic waves, scattering and diffraction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	541	Statistical Physics	Postulates of statistical mechanics, equilibrium ensembles, Bose and Fermi statistics, density matrix, modern theory of phase transitions, fluctuations, and linear response theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	542	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	544	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CHM 544, NAN 544, PHY 444 or PHY 544
PHY	546	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 546, NAN 546 or PHY 546
PHY	552	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 552, NAN 552, SEM 552, or PHY 552
PHY	553	Electron Microscopy Laboratory I	Lab support for PHY 552.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Corequisite(s): MSE 552 or PHY 552; Credit is allowed for only MSE 553 or PHY 553
PHY	554	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent beam diffraction, and electron holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE or PHY 554
PHY	555	Electron Microscopy Laboratory II	Lab support for PHY 554.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	571	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples from physics, chemistry and nanoscience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 571, NAN 571 or PHY 571
PHY	576	Quantum Theory	Operator methods in quantum mechanics, time-independent perturbation theory, variational methods, angular momentum and group representation theory, identical particles; quantum dynamics, including time-ordered operators, time-dependent perturbation theory, and Fermi's golden rule.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	577	Introduction to Quantum Field Theory	Explains necessity of generalizing quantum mechanics to a field theory viewpoint. Studies properties of scalar, spinor, and gauge fields; incorporates interactions; and learns to compute amplitudes, cross sections, and decay rates using formalism of Feynman diagrams.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PHY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	581	Quantum Theory of Solids I	Band structure models: pseudopotentials, density functional theory; optical and magnetic response; elementary excitations; transport theory, electron-photon interactions and superconductivity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	582	Quantum Theory of Solids II	Continuation of PHY 581: broken symmetry; phase transitions; disorder, topological defects; nano-structures topics; soft condensed matter and current research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
PHY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1		
PHY	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PLA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
PLA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
PLA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
PLA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
PLA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
PLA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
PLA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
PLA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
PLA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		

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PLA	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
PLA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
PLA	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
PLA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
PLB	108	Concepts in Plant Biology	Introduces concepts of plant biology that are of human relevance using commercially important, edible, and medicinal plants as examples. Not for majors in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SQ	

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PLB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	300	Plant Diversity and Evolution	An examination of the major groups of land plants, emphasizing evolutionary history, comparative data, and phylogenetic methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	L or SG	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200) with C or better or BIO 281 and BIO 282 with C or better; Credit is allowed for only LSC 307 or PLB 300
PLB	300	Plant Diversity and Evolution	An examination of the major groups of land plants, emphasizing evolutionary history, comparative data, and phylogenetic methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	L or SG	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200) with C or better or BIO 281 and BIO 282 with C or better; Credit is allowed for only LSC 307 or PLB 300
PLB	302	Plants and Civilization	Plants and plant products used by people throughout the world. Cultivation, processing, and uses in modern life (beverages, fibers, foods, medicinals, and perfumes).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	302	Plants and Civilization	Plants and plant products used by people throughout the world. Cultivation, processing, and uses in modern life (beverages, fibers, foods, medicinals, and perfumes).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	305	Cacti and Succulents	Adaptive biology of desert annuals, cacti, and succulents, analyzing diverse traits that permit survival in deserts: reproduction, structure, and physiology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 with C or better
PLB	306	Plant Anatomy	Development and mature structure of tissues of vascular plants; patterns and modifications of the leaf, stem, root, and flower.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	308	Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 with C or better
PLB	308	Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 with C or better
PLB	310	The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) OR BIO 281 and 282 with C or better
PLB	310	The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) OR BIO 281 and 282 with C or better
PLB	350	Applied Genetics	Introduces molecular genetics with emphasis on application of genetics to solve biological questions and to engineer organisms for biotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 340 or MBB 247 or MBB 347 with C or better; Credit is allowed for only MBB 350 or PLB 350
PLB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): minimum 45 hours

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PLB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): minimum 45 hours
PLB	401	Mycology	Fungal morphology and systematics with an introduction to fungal cell biology, ecology, economic significance, and growth and development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	407	Plant Fossils and Evolution	Broad survey of plant life of the past, including the structure of plant fossils, their geologic ranges, geographic distribution, and paleoenvironment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	414	Plant Pathology	Identification and control of biotic and abiotic factors that cause common disease problems to plants.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	414	Plant Pathology	Identification and control of biotic and abiotic factors that cause common disease problems to plants.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	419	Physiological Plant Ecology	Physiological and morphological responses and adaptations of plants to their environment, emphasizing mechanisms that influence carbon and water balance, growth, and population distributions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 320 or PLB 308 with C or better; Credit is allowed for only BIO 419, PLB 519, BIO 519 or PLB 419
PLB	420	Plant Ecology: Organisms and Populations	Factors and controls on the physiological ecology and organization of plants and plant populations using empirical and theoretical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 320 with C or better
PLB	422	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 181, GPH 111 or PLB 200 with C or better; Credit is allowed for only GPH or PLB 422
PLB	432	Computer Applications in Biology	Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 406 or PLB 432
PLB	440	Photobiology	Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 464 or PLB 440
PLB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
PLB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
PLB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
PLB	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters,	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Junior or senior standing; Credit is allowed for only MBB 496, BIO 496, MIC 496 or PLB 496
PLB	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
PLB	502	Perspectives in Plant Biology	Introduces major areas of research within the department with the goal of broadening knowledge to enable multidisciplinary research and communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
PLB	519	Physiological Plant Ecology	Physiological and morphological responses and adaptations of plants to their environment, emphasizing mechanisms that influence carbon and water balance, growth, and population distributions	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student; Credit is allowed for only PLB 419, BIO 419, BIO 519 or PLB 519
PLB	525	Microclimate Methods	Techniques to measure and quantify microclimate and mass transfer. Supporting principles.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
PLB	558	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
PLB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		
PLB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLB	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		
PLB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLC	101	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
PLC	102	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
PLC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
PLC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	201	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
PLC	202	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Pre-requisites: PLC 201 with D
PLC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	311	Advanced Polish I	Develops writing ability and oral expression.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: PLC 202 with C or better; Credit is allowed for only PLC 311 or 394, Polish Comp and Conversation
PLC	312	Advanced Polish II	Develops writing ability and oral expression.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: PLC 311 with C or better
PLC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	11-12		
PLC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
PLC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
PLC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	101	Elementary Portuguese	Basic grammar with intensive drills in class and lab directed toward conversational fluency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
POR	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
POR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	201	Intermediate Portuguese	Continuation of POR 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: POR 101 with C or better
POR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	313	Portuguese Composition and Conversation	Develops skill in written Portuguese and corrected oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: POR 201 with C or better
POR	314	Portuguese Composition and Conversation	Continuation of POR 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: POR 313 with C or better
POR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	472	Luso-Brazilian Civilization	Lectures, readings, and discussion of important aspects of Luso-Brazilian civilization. Topics from music, art, folklore, literature, history, and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisites: POR 313 with C or better; Credit is allowed for only POR 472 or 598 (Luso-Brazilian Civilization)
POR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12	G	Pre-requisite: Junior standing; Credit is allowed for only GCU 485, GPH 485, LAP 485, POR 485, PUP 485 or 585
POR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
POR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student

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POR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
POR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POS	110	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	110	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	110	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	112	Foundations of Democracy	Introduces an interdisciplinary study of democracy with special attention to its historical development as a form of government.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Credit is allowed for only HST 112 or POS 112 or HST 194 (Foundations of Democracy)
POS	112	Foundations of Democracy	Introduces an interdisciplinary study of democracy with special attention to its historical development as a form of government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Credit is allowed for only HST 112 or POS 112 or HST 194 (Foundations of Democracy)
POS	150	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
POS	150	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	150	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	160	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Credit is allowed for only POL 160 or POS 160 or POS 360 or POS 362
POS	160	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Credit is allowed for only POL 160 or POS 160 or POS 360 or POS 362
POS	160	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only POL 160 or POS 160 or POS 360 or POS 362
POS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		Pre-requisites: Freshman status; Maximum 25 hours
POS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Prerequisite(s): maximum 25 hours
POS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		Prerequisite(s): maximum 25 hours

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POS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): maximum 25 hours
POS	210	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
POS	210	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	210	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS	211	Arizona Constitution and Government	Constitution and government of the State of Arizona. Meets the Arizona constitution requirement for teacher certification. May not be counted for the major or a teaching major or minor in Political Science.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	2		Credit is allowed for only POS 211 or POS 216 or POS 417
POS	211	Arizona Constitution and Government	Constitution and government of the State of Arizona. Meets the Arizona constitution requirement for teacher certification. May not be counted for the major or a teaching major or minor in Political Science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	2		Credit is allowed for only POS 211 or POS 216 or POS 417
POS	216	State and Local Government	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Credit is allowed for only POS 211 or POS 216 or POS 417
POS	216	State and Local Government	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only POS 211 or POS 216 or POS 417
POS	230	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or SB	
POS	230	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	L or SB	
POS	230	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L or SB	
POS	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
POS	245	Introduction to South Asia	Provides an introduction to the history and major contemporary political, economic, social, religious and cultural features of the South Asia region at large and of selected South Asian nations in particular.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HST 245 or POS 245 or REL 245 or SGS 245 or SLC 245
POS	247	Introduction to Latin American Politics	General introduction to the politics and socioeconomic structures of Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	260	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & G	
POS	260	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	(L or SB) & G	
POS	260	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(L or SB) & G	
POS	270	American Legal System	Concepts, institutions, classifications, and functions of law. Role of the courts and impact of judicial decision making on social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
POS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
POS	300	Contemporary Global Controversies	Explores key controversies in global politics including security, economic stability, poverty, gender, race, and the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	301	Empirical Political Inquiry	Logic of political inquiry, including research problems, concepts, hypotheses, theories, measurement, data collection, and analysis.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
POS	301	Empirical Political Inquiry	Logic of political inquiry, including research problems, concepts, hypotheses, theories, measurement, data collection, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	305	Politics and Film	Examines portrayal of political events, ethnic groups, and sociopolitical situations in film, a major medium addressing questions of human values. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	310	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	310	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	310	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	313	The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only POL 313 or POS 313
POS	313	The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only POL 313 or POS 313

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	314	The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	314	The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS	315	The Supreme Court	Role of the Supreme Court in American society and politics; examines decision-making process and impact of decisions; restraint versus activism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	317	History of Postwar U.S. Conservatism	Traces the origins of U.S. conservatism as it developed in the work of U.S. and European thinkers, intellectuals and authors after WWII	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only HST 294 (American Conservatism), 317 or POS 317
POS	325	Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
POS	325	Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	331	Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	331	Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS	332	American Political Parties	Development of the American party system. Party organization and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	333	Interest Groups	Examines how minority, corporate, labor, farm, consumer, environmental, health, education and public interest groups, and single-issue movements influence government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	336	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
POS	336	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	336	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
POS	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
POS	340	History of Political Philosophy I	Western political philosophers and their theories to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H	
POS	341	History of Political Philosophy II	Western political philosophers and their theories from the 17th to the 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H	
POS	342	Political Theory	Surveys ancient, modern, and contemporary political theorists and ideas in European and American contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU or SB	
POS	346	Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	
POS	346	Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU	
POS	350	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
POS	350	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	350	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	351	Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
POS	351	Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
POS	352	European Democracies	Addresses questions such as, How has the relationship between European citizens and the democratic process changed in the post-WWII period? How do domestic political institutions influence this process? Explores different approaches to some of the most important questions facing the study of comparative and European politics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: Minimum 25 hours. Credit is allowed for only POS 394 (European Pol Democracies), 498 (European Democracies), or POS 352
POS	353	Comparative Politics of the Middle East	Examines the historical, social, and economic context of contemporary Middle East politics; explores political dynamics of selected Middle Eastern regimes; and offers a comparative examination of key political trends and themes.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): junior standing or minimum 45 hours; Credit is allowed for only POS 353 or POS 360 (Politics of the Middle East)
POS	353	Comparative Politics of the Middle East	Examines the historical, social, and economic context of contemporary Middle East politics; explores political dynamics of selected Middle Eastern regimes; and offers a comparative examination of key political trends and themes.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): junior standing or minimum 45 hours; Credit is allowed for only POS 353 or POS 360 (Politics of the Middle East)
POS	354	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356
POS	356	European Union	History and workings of EU member states, including single market, Euro, legal system, ethnonationalism, immigration, expansion, trade wars, and defense.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	357	South Asia Politics	Political culture and systems of South Asia examined through study of political writings, novels, and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Prerequisite(s): minimum 45 hours
POS	357	South Asia Politics	Political culture and systems of South Asia examined through study of political writings, novels, and poetry.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours
POS	358	Southeast Asia	Political background, governmental institutions, political dynamics, and developmental problems of Southeast Asian nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	359	African Politics and Society	Comparative analysis of socioeconomic forces, political processes, government institutions, and political novels in Sub-Saharan Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	360	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras. Emphasis may vary with instructor, but cannot be repeated for credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Pre-requisites: Minimum 25 hours; Credit is allowed for only POS 160 or POS 360
POS	360	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras. Emphasis may vary with instructor, but cannot be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Pre-requisites: Minimum 25 hours; Credit is allowed for only POS 160 or POS 360
POS	360	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras. Emphasis may vary with instructor, but cannot be repeated for credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Pre-requisites: Minimum 25 hours; Credit is allowed for only POS 160 or POS 360
POS	361	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Prerequisite(s): minimum 45 hours
POS	361	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Prerequisite(s): minimum 45 hours
POS	361	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours
POS	362	World Politics Theory	Theoretical examination of one or more aspects of international politics, e.g., foreign policy, negotiations, alliances, crises, wars, and international systems.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only POL 160 or POS 160 or POS 362
POS	364	National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
POS	364	National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	367	World Politics and Global Inequalities	Examines the topic of global inequality and the numerous challenges that arise from it, including perspectives and theories pertaining to third world development, the historical background to the political and economic relations between the wealthy countries of the world and the poorer countries, and policies and strategies designed to promote development and alleviate poverty. Studies some contemporary issues that are related to global inequality including ethics and third-world development, sweatshop labor, corporate responsibility, and the tension between globalization and the movement of people across sovereign borders.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3	G	Pre-requisite: Minimum 25 hours; Credit is allowed for only POS 360 (Current Issues International Politics), (International Security), (Organizational Studies) or POS 367
POS	368	Ethics and Human Rights	Explores issues of ethics, morality, and human rights in the global community.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
POS	370	Law and Society	Analyzes debates among social scientists and legal theorists concerning the relationship between law and society.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
POS	370	Law and Society	Analyzes debates among social scientists and legal theorists concerning the relationship between law and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	374	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only ASB 374, POS 374, SBS 374 or SOC 374
POS	378	Religion, War and Peace	In-depth study of the religious, political and ethical dimensions of violence and war. Compares perspectives of Christian, Jewish and Islamic traditions as well as secular viewpoints.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only POS 378, REL 378 or 394 (Religion, War and Peace)
POS	388	Religion, Ethics, and International Politics	Religious and ethical dimensions of international politics. Addresses historical and contemporary ideas, movements, issues and events.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only POS or REL 388
POS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
POS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
POS	401	Political Statistics	Basic concepts in statistics as they facilitate the description, explanation, and prediction of social and political phenomena.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Prerequisite(s): POS 301 or SGS 305 with C or better; Credit is allowed for only POS 401 or SGS 401
POS	401	Political Statistics	Basic concepts in statistics as they facilitate the description, explanation, and prediction of social and political phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	CS	Prerequisite(s): POS 301 or SGS 305 with C or better; Credit is allowed for only POS 401 or SGS 401
POS	410	Governing American Cities	Reviews modern urban problems, their sources, and potential solutions, including structural and policy alternatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	414	Political Thought and Leadership	Research seminar in political values and leadership. Combines lecture, readings and guest lectures by leaders in business, public affairs and the media. Culminates in a substantial written research effort.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; HST 112 with C or better; minimum 55 hours; Credit is allowed for only HST 414 or POS 414
POS	414	Political Thought and Leadership	Research seminar in political values and leadership. Combines lecture, readings and guest lectures by leaders in business, public affairs and the media. Culminates in a substantial written research effort.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; HST 112 with C or better; minimum 55 hours; Credit is allowed for only HST 414 or POS 414
POS	417	Arizona Politics	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisite: Minimum 25 hours; Credit is allowed for only POS 211, 216 or 417
POS	417	Arizona Politics	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Pre-requisite: Minimum 25 hours; Credit is allowed for only POS 211, 216 or 417
POS	417	Arizona Politics	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: Minimum 25 hours; Credit is allowed for only POS 211, 216 or 417
POS	426	Elements of Public Policy	Each section may cover one of the following topics: consumer protection, natural resources, criminal justice, environmental protection, science and technology, or theories of public policy. May be repeated for credit when topics vary.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
POS	426	Elements of Public Policy	Each section may cover one of the following topics: consumer protection, natural resources, criminal justice, environmental protection, science and technology, or theories of public policy. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	431	Campaigns and Elections	Examines campaigns from a multitude of perspectives including the politician, reporter, campaign strategist, and voter.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
POS	431	Campaigns and Elections	Examines campaigns from a multitude of perspectives including the politician, reporter, campaign strategist, and voter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	434	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
POS	434	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
POS	434	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS	435	Women and Politics	Focuses on the uniqueness of women in modern political systems and political thought. Emphasis may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & C	
POS	436	Gender, Sexuality, Nation-States	Issues and problems related to the interface of gender, sexualities, nationalisms, and states in various world contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
POS	437	Women, Power, and Politics	The roles and treatment of women within various political contexts. Specific focus may vary with instructor.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	
POS	438	Latino Politics	Examines contemporary political issues in the diverse Latino community.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	
POS	439	Minority Group Politics in America	Role of minority groups in American politics.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Prerequisite(s): minimum 45 hours
POS	439	Minority Group Politics in America	Role of minority groups in American politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & C	Prerequisite(s): minimum 45 hours
POS	442	American Political Thought	Political theories and movements from the colonial period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU	
POS	442	American Political Thought	Political theories and movements from the colonial period to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU	Prerequisite(s): minimum 45 hours
POS	443	Topics in Contemporary Political Theory	Major problems and theories in contemporary political thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU	
POS	446	Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU	
POS	447	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB 447, POS 447, or SBS 447
POS	451	China, Japan, and the Koreas	Comparative analysis of the political modernization experiences of China, Japan, and the two Koreas, focusing on their differing reactions to the West.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	452	China	Background of the Communist revolution, political processes, and developmental problems in China from a comparative perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	453	Latin America	Political institutions, process, and developmental problems of South American states examined through comparative analysis, novels and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Prerequisite(s): minimum 25 hours
POS	454	Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	454	Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	456	Latin American Cities	Urban studies of Latin American world cities, e.g., Mexico City, Santiago, emphasizing integration with U.S. cities, including Los Angeles, Phoenix.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	464	Border Cities: Action Research on Globalization	Examines the effects of globalization on U.S.-Mexico border cities and towns with particular emphasis on Mexican border cities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	465	International Organization and Law	History, practical political significance, and future of international institutions, transnational regimes, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	467	International Security	Examines issues affecting the international security of states and peoples, e.g., military, economic, technological, environmental, and demographic.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Prerequisite(s): minimum 45 hours
POS	467	International Security	Examines issues affecting the international security of states and peoples, e.g., military, economic, technological, environmental, and demographic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Prerequisite(s): minimum 45 hours
POS	468	Comparative Asian Foreign Policies	Foreign policies of the Asian states, emphasizing their security relations and movements toward regionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	470	Law and the Political Order	Investigates concepts of justice, political rights, adjudication and legislation, legal ordering, constitutional law, law as an instrument of change.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only POS 470, CMN 598 (Law and the Political Order), JHR 598 (Law and the Political Order) or MAS 598 (Law and the Political Order)
POS	471	Constitutional Law I	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; jurisdiction and organization of the federal courts; judicial review; separation of powers; federalism; the commerce clause; national taxing and spending power; state police power.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
POS	471	Constitutional Law I	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; jurisdiction and organization of the federal courts; judicial review; separation of powers; federalism; the commerce clause; national taxing and spending power; state police power.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	472	Constitutional Law II	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; due process; equal protection of laws; individual rights; civil liberties.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
POS	472	Constitutional Law II	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; due process; equal protection of laws; individual rights; civil liberties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
POS	473	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	GRD	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only REL 482, JUS 473 or POS 473
POS	475	Morality and Politics	Should morality play a role in politics? Machiavelli gives us one sort of answer, urging politicians to be dishonest, deceptive and even cruel. Kant disagrees, arguing instead that politicians should adhere to their personal morality over political calculations. Explores this question in two ways. First, looks more at the disagreement between great thinkers in the Western political tradition. Second, investigates contemporary political actors who bring moral concerns to the fore, including dirty politicians and extremist citizens (for example, radical animal rights activists, militant environmentalists or global poverty zealots). Seminar course that incorporates in-class discussion and writing, options-based grading and creative assignments.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only POS 394 (Morality and Politics) or POS 475
POS	475	Morality and Politics	Should morality play a role in politics? Machiavelli gives us one sort of answer, urging politicians to be dishonest, deceptive and even cruel. Kant disagrees, arguing instead that politicians should adhere to their personal morality over political calculations. Explores this question in two ways. First, looks more at the disagreement between great thinkers in the Western political tradition. Second, investigates contemporary political actors who bring moral concerns to the fore, including dirty politicians and extremist citizens (for example, radical animal rights activists, militant environmentalists or global poverty zealots). Seminar course that incorporates in-class discussion and writing, options-based grading and creative assignments.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only POS 394 (Morality and Politics) or POS 475
POS	480	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	Credit is allowed for only POS 480, SBS 480, CMN 598 (Global Justice), JHR 598 (Global Justice) or MAS 598 (Global Justice)
POS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
POS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
POS	485	Political Economy	Problems, policies, and possibilities of various political-economic systems and the interrelationship of capitalism, socialism, and democracy.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
POS	485	Political Economy	Problems, policies, and possibilities of various political-economic systems and the interrelationship of capitalism, socialism, and democracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	486	International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	486	International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Prerequisite(s): Barrett Honors student
POS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
POS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Prerequisite(s): Barrett Honors student
POS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
POS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
POS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
POS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Prerequisite(s): Barrett Honors student
POS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7	L	
POS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7	L	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
POS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
POS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
POS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
POS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	503	Empirical Political Inquiry	Research methods and techniques of the discipline, emphasizing empirical foundations and analytic methods employed in subfields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: Political Science student
POS	527	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
POS	530	American Politics	Examines major debates in the study of American political processes and institutions. Covers parties, media, elections, public opinion, interest groups, and the three branches of government.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	540	Ancient Political Theory	Surveys the historical and philosophical developments in political thinking from the ancient Greeks up to the Renaissance. The world studied predominantly is one of profound political conflict and change. Moves from the Greek cities to the edge of modern political developments. The movement encompasses the political transformation from city-states to empires to the establishment of an overarching Christian world order that balances secular and sacred power, only to be challenged if not foundationally shaken by Machiavelli and realism.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: Graduate Political Science major
POS	541	Modern Political Theory	Surveys the development of modern political thought from Machiavelli--through Hobbes, Locke, Hume, Rousseau, Burke, Kant, Montesquieu, Constant, Bentham, Mill, and Hegel--to Marx. Focuses on the primary writings of these thinkers as well as reading secondary literature. In addition to focusing on the distinctive contribution and relevance of individual thinkers, further explores certain recurring themes among which are the following: Are freedom and equality foes or friends? What allegiance do we owe the state and why? Do we have rights against the state? What is a just state? Is private property essential to individual liberty? Do laws enhance or threaten liberty? Is self-interest an adequate basis for political allegiance? Why should we pursue the common good, if at all? Are self-interest and the common good reconcilable?	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: MA or PhD major; Credit is allowed for only POS 541 or 591 (Modern Political Thought)
POS	545	Themes in Political Thought	Examines a particular theme or problem in political thought from both a historical and contemporary perspective. May be repeated with approval of the director of graduate studies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	550	Comparative Politics	Surveys major approaches across topical areas such as revolutions, authoritarianism, policy processes, interest groups, and electoral politics. Focus varies with instructor.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	552	Women and Politics	Serve as an introduction to the comparative study of women and politics. Not a course on feminist theory; instead focuses on questions such as: Does the descriptive representation of women guarantee their substantive representation? Which electoral rules favor the election of women? Do the negative effects of gender quotas outweigh their impressive ability to increase the number of women in office? Have the news media helped or harmed female candidacies? Once in power do women govern differently than men? Focuses on the obstacles that women face in obtaining positions of power.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only POS 552 or 598 (Women and Politics)
POS	560	International Relations	Surveys major theoretical approaches and debates in international relations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	563	Comparative Asian Security Policies	Analyzes domestic and international constraints, belief systems, and economic components in security decisions by major powers and Asian nations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	570	The Politics of Public Policy	Examines the political dimensions of public policymaking. Emphasizes major theoretical explanations of the policy process--particularly elements such as agenda setting, implementation, and policy change--rather than on the substance of particular policies. Focuses primarily on U.S. domestic policy, with some comparative reference to other developed democracies.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only POS 570 or 598 (Politics of Public Policy)
POS	571	Science and Technology Policy	Provides an in-depth introduction to theoretical perspectives on the role and place of science in democratic societies and democratic governance. Emphasizes how the ideas, ideologies, and practices of science are integrated into the design and implementation of government decision making, as well as how science both shapes and is shaped by the political organization and ordering of society. Pursues such questions in the context of U.S. politics, comparatively between the U.S. and Europe, and in emerging regimes of international governance.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HSD 501 or POS 571
POS	572	Advanced Science and Technology Policy	Focuses on the role of knowledge and expertise in political and policy decision making. Particular emphasis is placed on the analysis of knowledge systems (formalized institutional approaches to the production, validation, and use of knowledge and expertise in policy decision making), their modes of failure, and the design of approaches that may be able to prevent, avoid, or reduce the frequency of such failures.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: HSD 501 or POS 571 with B or better. Credit is allowed for only HSD 502 or POS 572
POS	573	Governing Emerging Technologies	Examines the governance of science and technology through a focus on emerging technologies whose potential consequences in society are apparent only in anticipation and whose manifestations are still being shaped by local, domestic, and international institutions. These emerging technologies include nanotechnologies, synthetic biology, and other technologies associated with genetic modification, and information and cognitive science and neuro-technologies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PAF 550, HSD 503 or POS 573
POS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	586	International Political Economy	International political economy (IPE) focuses on the relationship between the pursuit of wealth and power during the development and evolution of the global political economy. Assigned readings take an analytical approach to the subject, drawing on methods and theories developed in political science, economics, history and sociology. In addition to an overview of the methods and theories employed in the study of IPE, also examines a variety of current empirical research programs in the subfield. This seminar should enable students to read the academic literature, conduct independent research in the subfield, and understand contemporary problems in the global political economy.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
POS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		

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POS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1		
POS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	601	Advanced Experimental Research	Introduces experimental and quasi-experimental research designs in political research, including lab techniques and topics in the analysis of variance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	603	Polimetrics I	Introduces theory and practice of linear regression analysis. Provides skills to read, understand, and evaluate professional literature using regression analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	604	Polimetrics II	Applies quantitative techniques to research topics producing publishable papers through exposure to time-series, logit and probit, and simultaneous equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	606	Qualitative and Textual Analysis	Method and theory for the analysis of qualitative materials, systematic approaches for case studies, content analysis, critical analysis of texts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	636	Electoral Behavior	Introduces fundamental concepts of electoral behavior. Emphasizes presidential elections and examines why people vote and how their votes are determined.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	638	Law and Politics	Emphasizes research into such topics as constitutional law, women and the law, American legal system, judicial process, and judicial selection.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	652	Religion and Politics	Analyzes the complicated and often conflictual relationship among major religious faiths, religious activists, and the state in the 20th and 21st centuries. Cover topics: secularization theory and its problems; religion as a cultural or attitudinal variable in politics; the rationality of religion, organized religions and their activists; the bases for conflicts between religion and the state; religion's role in conflict; the terms of reconciliation and collaboration; the conditions under which religion is politicized and becomes the basis of a political movement or party; and the means by which organized religions and/or their adherents seek to maintain an influence in 20th- and 21st-century politics and society. Does not provide a survey of religion and politics for all major world religions, or other religions.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: MA or PhD student; Credit is allowed for only POS 652 or 598 (Religion and Politics)
POS	664	War, Peace, and Conflict Processes	Systematic analysis of the causes of war, the preconditions for peace, and approaches to the resolution of conflict.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	671	HSD I: Human Dimensions of Science and Technology	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HSD 601 or POS 671
POS	672	HSD II: Science, Power and Politics	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HSD 602 or POS 672
POS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1		
POS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
POS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1		
POS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		
PPE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
PPE	210	Teaching Fitness Activities for K-12 Students	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
PPE	215	Teaching Team Sports	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
PPE	220	Teaching Lifetime Activity K-12	Participating in and teaching sequenced activities K-12.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
PPE	225	Teaching Cooperative and Initiative Games	Participating in and teaching sequenced adventure-based activities.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
PPE	230	Teaching Group Exercise	Introduces instructional strategies appropriate for the teaching of group exercise classes in secondary school settings.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Credit is allowed for only PPE 230 or 294 (Teaching Group Exercise)
PPE	235	Teaching Strength and Conditioning for Health	Fundamental principles, strategies and assessments of strength training and conditioning methodologies that are necessary to effectively operate in a school-based setting. Most secondary schools offer some form of strength training in a physical education setting, either as a stand-alone course or as part of a traditional class structure. Therefore, new physical education teachers should be well informed on the scientific rationale for the use of strength and conditioning programs in schools, and be able to design and implement these programs safely. Provides prospective physical education teachers with the knowledge and skills needed to safely and effectively operate in a school-based strength training setting, whether it is for physical education or sport performance.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Credit is allowed for only PPE 235 or PPE 294 (Teaching Strength Conditioning for Health)
PPE	240	Physical Activity	Recognizing individual interests and abilities, the program provides courses covering a wide variety of physical activities. We make an effort to address contemporary trends and student, faculty and staff interests. Offerings may include but are not limited to classes in the areas of: aquatics, artistic and social dance, fitness development, martial arts, mind/body, outdoor recreation, resistance training, sports and games.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		
PPE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
PPE	300	Introduction to Physical Education, Fitness and Sport	Introduces the fields of physical education, exercise science, sports medicine, and related fields. Discusses the history and trends of physical education as well as key concepts, programs, problems, and issues related to teaching physical education. Teaches essential background knowledge, better preparing for career success. The online (blackboard) component of this class provides practical experiential learning and assesses knowledge and comprehension of the key concepts presented in the course.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Minimum 60 hours; Junior or senior standing; Credit is allowed for only PPE 300 or 394 (Intro to Physical Education, Fitness & Sport)
PPE	310	Health Literacy: Creating Healthy and Active Schools	Signature course for elementary educators and special education educators in order to prepare future teachers with the knowledge, skills, and dispositions to teach healthy and active content knowledge and to create healthy and active school environments.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Co-requisites: One of the following: ECD/EED/SED/SPE /BLE 396/397/478/496, PPE 474/484 or TEL 484. Credit is allowed for only PPE 310 or HSC 310
PPE	315	Pediatric Movement Sciences for Physical Educators	Provides a general overview of the functional anatomy of the human body as it relates to movement and the biomechanical principles underlying the execution of a given motor skill. Also examines the influence of physical growth and maturation on the development of motor skills.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: BIO 201; BIO 202; Credit is allowed for only PPE 315 or 394 (Apld Pediatric Functional Anat)
PPE	320	Exercise Physiology Concepts for Physical Educators	Provides an introductory-level understanding of how the body responds prior to, during, and after participation in dynamic and static exercise. Examines the physiological basis of human movement, with emphasis on reviewing what exercise physiologists have learned about the diversity of physical activity, specifically in children. Although many physiological responses to activity are predictable, the magnitude and pattern of responses are unique depending on the age, gender, and previous experience of the individual. Also examines the role an active lifestyle plays in the overall health and well-being of school-aged children and adolescents.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: BIO 201; BIO 202; Credit is allowed for only PPE 320 or 394 (Pediatric Exercise Physical)

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PPE	335	Movement and Physiology Principles of Children and Youth in Physical Activity Environments	Provides an introductory-level understanding of mechanical principles underlying human movement, the developmental patterns reflected in human movement birth through childhood and adolescence, basic principles of motor learning and the physiological basis of human movement. Covers how these principles directly affect the development of physical activity opportunities in in community-based sport and recreation settings with a specific eye toward the role an active lifestyle plays in the overall health and well-being of children and youth between the ages of 6 and 18.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
PPE	340	Understanding Children in Physical Activity Environments	Teaches students an understanding of elementary-aged children and how to implement a curriculum in a physical activity environment. Students learn effective teaching techniques, how to effectively manage students, and ways to improve the physical skill and activity level of students. Prospective facilitators use authentic assessment techniques to assess and prescribe activities for improving motor skills in kindergarten through 6th grade youngsters. Prospective facilitators leave with requisite knowledge to implement a comprehensive physical activity program and the physical skills necessary for successful instruction.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
PPE	345	Adolescents in Physical Activity Environments: Understanding and Practices	Gives an understanding of the changing scope of physical education in an era of education reform. Students learn about and teach a variety of curricular models and styles. Uses technology and assessments in authentic settings. Focuses on increasing the physical activity levels of secondary students during physical education and also promotes physical activity outside of the school setting. Covers strategies for advocating the importance of quality physical education to school and district personnel during a time when local administrators are pressured to allocate more time to core subject areas.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
PPE	351	Coaching of Children and Adolescents in Physical Activity Environments	Provide introductory-level understanding of the skills and knowledge needed to deliver positive sport experiences in various nonschool settings that lead to positive youth development. Effective use of these skills enhances the chance that children and youth come to programs that are fun, engaging, safe and positive challenges; while having clear rules, requiring personal responsibility and demanding respect for self and others.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
PPE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
PPE	396	Clinical Experience: Physical Education Elementary (Grades 1-8)	Applies course content in elementary physical education classrooms grades 1-8; emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Prerequisite(s): admission to the Professional Program
PPE	397	Clinical Experience: Physical Education Secondary (Grades 6-12)	Applies course content in secondary physical education classrooms grades 6-12; emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Prerequisite(s): admission to the Professional Program
PPE	397	Clinical Experience: Physical Education Secondary (Grades 6-12)	Applies course content in secondary physical education classrooms grades 6-12; emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Prerequisite(s): admission to the Professional Program
PPE	430	Analysis of Skill and Game Performance	Develops analytic skills for informal and formal assessment of student learning in physical activity settings.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Junior or senior standing; Credit is allowed for only PPE 494, 598 (Analysis of Skill and Game Play Performance) or PPE 430
PPE	450	Physical Education for the Elementary School	Scope and values of physical education in elementary schools. Methods, materials, and practices in teaching for primary through upper grades.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only PPE 450 or PPE 550
PPE	451	Innovative Programming in Elementary Physical Education	Provides students with an understanding of current trends and issues in elementary school physical education curriculum and how to implement the curriculum in a school environment. Students also become familiar with a variety of best practices in curriculum and instruction specific to elementary children in physical activity settings. Emphasizes incorporating methods of effective teaching and activity organization, enhancing student learning, and effectively managing student behavior and the learning environment.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Junior or senior standing; Credit is allowed for only PPE 451 or 551
PPE	455	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only PPE 455 or PPE 555

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PPE	460	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only PPE 460 or PPE 560
PPE	465	Teaching Physical Activity Concepts	Focuses on teaching physical activity concepts in physical education settings and other settings such as fitness clubs or community health organizations. Analyzes and critiques state physical activity standards and national guidelines for promoting physical activity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Prerequisite(s): minimum 45 hours. Credit is allowed for only PPE 465 or PPE 565
PPE	477	Student Teaching: Physical Education Elementary (Grades 1-8)	Student teaching in elementary physical education setting grades 1-8: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	6		Prerequisite(s): admission to the Professional Program
PPE	478	Student Teaching: Physical Education Secondary (Grades 6-12)	Student teaching in middle/secondary physical education setting grades 6-12: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	6		Prerequisite(s): admission to the Professional Program
PPE	480	Professional Seminar for Physical Education	Methods of instruction, organization, and presentation of appropriate content in elementary and secondary physical education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
PPE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): admission to the Professional Program
PPE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
PPE	495	Research on Teaching in Physical Education	Contemporary research and theory on teaching across fields with an emphasis on physical education pedagogy; provides a practical research experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
PPE	501	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
PPE	535	Introduction to Sport Education	Introduces a grade 5-12 school physical education curriculum that focuses on providing more complete and more authentic sport experiences.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate (Degree or non-degree) students; Credit is allowed for only PPE 494, 598 (Sport Education) or PPE 535
PPE	550	Physical Education for the Elementary School	Scope and values of physical education in elementary schools. Methods, materials, and practices in teaching for primary through upper grades.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Students who have credit for PPE 450 may not enroll in PPE 550
PPE	551	Innovative Programming in Elementary Physical Education	Provides an understanding of current trends and issues in elementary school physical education curriculum and how to implement the curriculum in a school environment. Students become familiar with a variety of best practices in curriculum and instruction specific to elementary children in physical activity settings. Emphasizes incorporating methods of effective teaching and activity organization, enhancing student learning, and effectively managing student behavior and the learning environment.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate (degree or non-degree) students; Credit is allowed for only PPE 451 or 551
PPE	555	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate students (Degree and non-degree); Credit is allowed for only PPE 455 or PPE 555
PPE	560	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate students (Degree and Non-degree); Credit is allowed for only PPE 460 or PPE 560
PPE	565	Teaching Physical Activity Concepts	Teaching physical activity concepts in PE settings. Analyzes and critiques state and national physical education standards.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate (degree or non-degree) student; Credit is allowed for only PPE 465 or 565
PPE	567	Clinical Experience: Physical Education Elementary (Grades 1-8)	Applies course content in elementary physical education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-2		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	568	Clinical Experience: Physical Education Secondary (Grades 6-12)	Applies course content in secondary physical education classrooms grades 6-12: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-2		Prerequisite(s): degree- or nondegree-seeking graduate student

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PPE	570	Research on Teacher Education in Physical Education	Discusses current research on teacher education across fields, with an emphasis on physical education pedagogy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate (degree or non-degree) student; Credit is allowed for only PPE 370 or 570
PPE	576	Research on Curriculum in Physical Education	Discusses and applies research findings on curricular models for physical education and physical activity in school settings and beyond.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	593	Applied Project		Y	LEC	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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PRM	120	Leisure and the Quality of Life	Conceptual foundations for understanding the role of leisure in the quality of life. Social, historical, psychological, cultural, economic, and political foundations of play, recreation, and leisure.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	SB	
PRM	150	Outdoor Pursuits	Theories and practical applications related to outdoor recreation pursuits. Interdisciplinary approach to wilderness issues and philosophies, culminating in an outdoor experience.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
PRM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		Pre-requisite: Maximum 25 hours; Credit is allowed for only CRD, PRM or TDM 191
PRM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
PRM	201	Introduction to Community Sports	Examines the role of community sports at the local, national and international levels.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only CSM 201 or PRM 201
PRM	210	Community Services and Professions.	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD or NLM or PRM or TDM 210
PRM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
PRM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
PRM	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301
PRM	302	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	C	Pre-requisites: ENG 102; MAT 142; NLM 160 (or PRM 120) with C or better; minimum 2.50 GPA; minimum 45 hours. Credit is allowed for only CRD, NLM, PRM or TDM 302
PRM	303	Program Planning	Effective program planning in varied leisure delivery systems.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only CSM or PRM 303
PRM	304	Recreation Planning and Facility Development	Surveys development and management of public, private, and commercial recreation areas and facilities with a focus on meeting program needs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	L	Prerequisite(s): CRD 210(or NLM 210,PRM 210 or TDM 210) with C or better; MAT 142, C or better; Nonprofit Leadership & Management (or Parks & Recreation Management or Recreation & Tourism Management) major; minimum 2.50 cumulative GPA; minimum 45 hours
PRM	310	Volunteer Management	Studies volunteer administration practices integral to community organizations providing an introduction to management techniques including program organization, recruitment, interviewing, placement, supervision, recognition and evaluation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only NLM or PRM 310
PRM	315	Community Recreation Systems	Explores and assesses community recreation delivery systems in the United States.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: PRM120 (REC120) with C or better
PRM	335	Sports and Recreation for Youth Development	Provides an overview of definitions, statistics, theories and models, and types of programs surrounding youth development in relation to sports, recreation and leisure services. Addresses current trends related to youth development and collaborative partnerships in sports, recreation and leisure services at various levels within local, state, national and/or international systems.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 45 hours. Credit is allowed for only CSM 335 or PRM 335
PRM	340	Outdoor Survival	Interdisciplinary approach to outdoor survival, including attitudes, psychological stress, physiological stress, preparation, hypothermia, navigation, flora, and wildlife.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		

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PRM	350	Tourism, Recreation and Sports Marketing	Critical examination of marketing principles in leisure and related industries in diverse settings, including local, national, and international.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or CSM 201 or TDM 205; minimum 45 hours. Credit is allowed for only CSM 350 or PRM 350 or TDM 350
PRM	364	Foundations of Recreation Therapy	Overview of therapeutic recreation and its concepts, practices, service models, and settings. Explores the provision of recreation and treatment services for individuals with disabilities.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	SB	Prerequisite(s): minimum 45 hours
PRM	370	Public Lands Management	Introduces outdoor recreation resource delivery systems; history of wilderness and outdoor recreation resources; the role of outdoor recreation in society; outdoor recreation agencies; related environmental issues.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): minimum 45 hours
PRM	380	Wilderness and Parks in America	Examines the American Conservation Movement and the relationships between the environment and recreation behavior.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	SB & H	
PRM	384	Child Life Practicum	Combines clinical field exposure with classroom instruction to maximize understanding and skill mastery.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3-12		Pre-requisite: PRM 364 with C or better; Admission to Child Life Certificate program
PRM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
PRM	400	Intervention Techniques in Recreation Therapy	In-depth analysis of theoretical and philosophical approaches to therapeutic recreation practice with emphasis on various facilitation techniques used in therapy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 364
PRM	401	Management of Parks and Recreation Services	Analyzes administrative function, structure, and policies. Successful application in administrative situations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CSM 305 (or PRM 304) with C or better; ENG 102 with C or better; MAT 142 or higher; CSM or PRM major; minimum 2.50 cumulative GPA; minimum 45 hours. Credit is allowed for only CSM 401 or PRM 401
PRM	402	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre- or corequisite(s): CSM 401, NLM 410, PRM 401, or TDM 401 with C or better if completed; Credit is allowed for only CSM 402 or NLM 402 or PRM 402 or TDM 402
PRM	403	Leadership and Professional Development	Examines leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: NLM, PRM or TDM 210 and NLM, PRM or TDM 301 with C or better; Senior standing ; 2.50 GPA. Credit is allowed for only CRD, NLM, PRM or TDM 403
PRM	406	Program Design & Administration in Recreation Therapy	In-depth analysis of assessment, treatment planning, program implementation, documentation, and evaluation strategies employed in therapeutic recreation practice.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s) with C or better: PRM 364, 400 (or PRM 455)
PRM	413	Leadership and Professional Development in Recreation Therapy	Examines therapeutic recreation leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 301, NLM 301, PRM 301, or TDM 301 with C or better; Pre- or corequisite(s): PRM 303 with C or better if completed
PRM	422	Entertainment, Protocol, and Programming for Special Events	In-depth analysis of the theoretical and philosophical aspects of special event management relative to talent and entertainment, protocol, etiquette, ethics, and programming. Requires some field work in event management.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: PRM 486 with C or better
PRM	423	Special Event On-Site Operations	Expands on the concepts of event programming with in-depth examination of the theoretical and philosophical aspects of event operations, festival site design, and working with subcontractors and vendors.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: PRM 486 with C or better
PRM	427	Revenue Generation for Special Event Management	Examines theoretical and philosophical aspects of revenue generation relative to special events through in-depth exploration of budgeting, accounting, and sponsorship opportunities. Requires field work at an event.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: PRM 486 with C or better
PRM	450	Leisure and Aging	Examines the factors influencing leisure among older adults, including policy issues and program service implications. Involves fieldwork.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		

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PRM	451	Grant Writing	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only NLM 451, 565 or PRM 451
PRM	454	Human Services for At-Risk Youth	Overview of policy and programs affecting at-risk youth; examines risk factors and programmatic solutions to them.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
PRM	455	Play in Child Life	In depth study of the techniques, principles and theories of play applied in clinical practice to enhance healing, growth and development with children and families.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CDE 232 with C or better. Pre- or corequisite(s): PRM 364 with C or better if completed
PRM	460	Assessment & Documentation in Recreation Therapy	In-depth study of the therapeutic recreation assessment process, including examination of interview techniques, assessment instruments, treatment planning, outcomes, evaluation, research, and documentation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: PRM 364 with C or better
PRM	463	Senior Internship	Supervised guided experience in selected agencies.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	6-12		Prerequisite(s) with C or better: CRD 403 or PRM 413; CSM 402 or NLM 402 or PRM 402 or TDM 402. Credit is allowed for only CSM 463 or NLM 463 or PRM 463 or TDM 463
PRM	470	Environmental Communication	Park interpretation and environmental education that includes theories, principles and techniques.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 60 hours
PRM	475	Entrepreneurial Recreation and Tourism	Explores basic business principles and innovative processes involved in starting a small business in the commercial recreation and tourism industry.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 60 hours; Credit is allowed for only PRM or TDM 475
PRM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; Minimum 72 hours; Minimum 2.50 GPA; Non-SCRD majors
PRM	485	Sports Events	Expands the basic concepts of recreation, leisure or tourism program planning and leadership as they are specifically related to sport events management.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only CSM 485 or PRM 485
PRM	486	Special Events Management	Principles of programming and managing special events for diverse populations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
PRM	487	Advanced Special Events Management	Advanced principles of special event sponsorship, public relations, marketing, contracting, risk management, and financial management.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: PRM 486 with C or better. Credit is allowed for only PRM 487 or RTM 487
PRM	488	Event Marketing and Promotion	In-depth look at the influence and role of print and social media in special event management. Studies theory, strategies, and planning relative to experience marketing, including the use of promotions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: PRM 486 with C or better
PRM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
PRM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6	L	Prerequisite(s): Barrett Honors student
PRM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
PRM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
PRM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-7	L	
PRM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
PSB	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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PSB	501	Basic Principles of Applied Behavior Analysis	Fundamental principles of behavior including the history, theory, definitions, processes, concepts and characteristics of applied behavior analysis.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		
PSB	510	Basic Principles of Experimental Analysis of Behavior	Practical applications of research methodology to examine the effects and evaluate the efficacy of behavioral interventions. Provides an empirical science approach to designing, conducting and critically evaluating research involving applications of the experimental analysis of behavior in the use of graphic displays, single-case, ABAB, multiple baselines, changing criterion and alternating treatment designs.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	2		
PSB	511	Advanced Research Methods	Focuses on research techniques such as time-series methods for single-case assessment, behavior measurement and the effectiveness of treatment interventions on behavior. Topics include conducting component and parametric analyses and use of experimental designs such as withdrawal, reversal, criterion and multiple baselines.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	2		Pre-requisite: PSB 501; PSB 510
PSB	520	Ethical Issues and Professional Standards in Applied Behavior Analysis	Ethical standards and legal responsibilities including regulatory requirements and Arizona licensing statutes for ABA professionals who provide services to individuals with special needs and their families.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		
PSB	530	Behavioral Observation and Functional Assessment	Focuses on how to conduct behavioral observations and functional analyses using various methods for assessment and for data collection, organization and interpretation.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Pre-requisite: PSB 501; PSB 510
PSB	540	Development of Applied Behavioral Intervention Programs	Techniques for conducting task analyses; developing target intervention outcomes; determining alternative behaviors and environmental changes; use of behavior change procedures such as reinforcement, extinction, punishment, shaping, modeling, training and teaching.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSB 501, 510. Corequisite(s): PSB 530
PSB	563	Basic Principles of Organizational Behavior Management	Overview and the use of Behavioral Systems Analysis (BSA) and Performance Management (PM) as they relate to the identification and modification of environmental variables that can affect and improve individual and organizational performance as a system. Basic techniques include analysis of antecedents, behavior and consequences and development of interventions to support the desired performance improvements and increase system productivity.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	2		
PSB	573	Advanced Principles of Learning and Analysis of Behavior	Provides an in-depth review of the philosophy and theory of behaviorism and its scientific application. Includes Skinner's conceptual framework plus fundamental elements of behavior change and procedures.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		
PSB	578	Applied Behavior Analysis in Developmental Disorders	Provides an overview of the major theories and research related to the development of psychological disorders of childhood and adolescence including autism, attention deficit disorder, behavior disorders and intellectual disabilities.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): MS Applied Behavior Analysis major
PSB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
PSB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSB	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSB	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSB	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1		
PSY	101	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
PSY	101	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	
PSY	101	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
PSY	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-3		Prerequisite(s): Freshman; maximum 25 earned hours
PSY	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		Prerequisite(s): Freshman; maximum 25 earned hours
PSY	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	222	Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	222	Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	230	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Prerequisite(s): PSY 101 (PGS 101) with C or better; MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291 with C or better
PSY	230	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	CS	Prerequisite(s): PSY 101 (PGS 101) with C or better; MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	230	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	CS	Prerequisite(s): PSY 101 (PGS 101) with C or better; MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291 with C or better
PSY	231	Honors Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology for honors students. Lab includes learning to use statistical software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4	CS	Prerequisite(s): Barrett Honors student; MAT 119, 170, 242, 251 or higher with C or better; PSY 101 (PGS 101) with C or better
PSY	244	Introduction to Directed Child Study	Developmental theories and methods of social interaction with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		
PSY	290	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	L or SG	Prerequisite(s): ENG 102, 105 or 108 with C or better; PSY 101 (PGS 101) with C or better; ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390 or STP 226 with C or better
PSY	290	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4	L or SG	Prerequisite(s): ENG 102, 105 or 108 with C or better; PSY 101 (PGS 101) with C or better; ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390 or STP 226 with C or better
PSY	290	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	4	L or SG	Prerequisite(s): ENG 102, 105 or 108 with C or better; PSY 101 (PGS 101) with C or better; ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390 or STP 226 with C or better
PSY	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
PSY	304	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): MAT 119, 170 or higher or PSY 230 with C or better
PSY	304	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	L	Prerequisite(s): MAT 119, 170 or higher or PSY 230 with C or better
PSY	304	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): MAT 119, 170 or higher or PSY 230 with C or better
PSY	304	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Prerequisite(s): MAT 119, 170 or higher or PSY 230 with C or better
PSY	306	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	306	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	306	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	315	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	315	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	315	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
PSY	315	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	320	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): PSY 290 with C or better
PSY	320	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 290 with C or better
PSY	320	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY	320	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	323	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Integrates theory, research, and application.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): PSY 290 with C or better
PSY	323	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Integrates theory, research, and application.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 290 with C or better
PSY	323	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Integrates theory, research, and application.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY	323	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Integrates theory, research, and application.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	324	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 290 with C or better
PSY	324	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY	324	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	325	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	325	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	325	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	330	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	CS	Prerequisite(s): ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390, 395 or STP 226 with C or better
PSY	330	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	CS	Prerequisite(s): ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390, 395 or STP 226 with C or better
PSY	330	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	CS	Prerequisite(s): ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390, 395 or STP 226 with C or better
PSY	341	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	341	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better

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PSY	341	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	344	Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): CDE 232, ECD 211 or PSY 341 (PGS 341) with C or better
PSY	344	Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): CDE 232, ECD 211 or PSY 341 (PGS 341) with C or better
PSY	350	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Credit is allowed for only PSY 351 (PGS 351) or PSY 350 (PGS 350)
PSY	350	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Credit is allowed for only PSY 351 (PGS 351) or PSY 350 (PGS 350)
PSY	350	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Credit is allowed for only PSY 351 (PGS 351) or PSY 350 (PGS 350)
PSY	350	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Credit is allowed for only PSY 351 (PGS 351) or PSY 350 (PGS 350)
PSY	351	Honors Social Psychology	Critical analysis of human social behavior for honors students; topics include stereotyping, social influence, attraction, aggression, helping, groups, and attitudes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): Barrett Honors College student; PSY 101 (PGS 101); Credit is allowed for only PSY 350 (PGS 350) or PSY 351 (PGS 351)
PSY	360	Cognitive Science	Examines cognition from the varied perspectives of philosophy, linguistics, psychology, computer science (artificial intelligence), and neuroscience.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	360	Cognitive Science	Examines cognition from the varied perspectives of philosophy, linguistics, psychology, computer science (artificial intelligence), and neuroscience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	360	Cognitive Science	Examines cognition from the varied perspectives of philosophy, linguistics, psychology, computer science (artificial intelligence), and neuroscience.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	365	Community Psychology	Mental health and psychological well-being in the community, emphasizing current issues and related research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 315 (PGS 315), PSY 350 (PGS 350) or PSY 351 (PGS 351) with C or better; PSY 290 with C or better
PSY	365	Community Psychology	Mental health and psychological well-being in the community, emphasizing current issues and related research.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 315 (PGS 315), PSY 350 (PGS 350) or PSY 351 (PGS 351) with C or better; PSY 290 with C or better
PSY	366	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	366	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	366	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	369	Biology of Human Sexuality	Biology of Human Sexuality	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 101 (PGS 101) with C or better; completed one semester of Biology
PSY	370	Interpersonal Relationships	Development of personal skills for competent functioning in interpersonal relationships across multiple social contexts. Principles of mental health adjustment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better

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PSY	385	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
PSY	390	Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	L	Prerequisite(s): PSY 290 with C or better
PSY	390	Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 290 with C or better
PSY	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-4		Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 30 hours
PSY	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 30 hours
PSY	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 30 hours
PSY	395	Religion and Psychology	Examines religious experience from various psychological viewpoints and explores the relationship between religion and psychology in theory and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; PSY 101 (or PGS 101) with C or better
PSY	399	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	Y	RSC	Y	YGB	Ira A. Fulton Engineering	Human Systems Engineering	1-3		
PSY	399	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	Y	RSC	Y	YGB	Liberal Arts and Sciences	Department of Psychology	1-3		
PSY	399	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	Y	RSC	Y	YGB	Liberal Arts and Sciences	Department of Psychology	1-3		
PSY	399	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	Y	RSC	Y	YGB	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
PSY	399	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	Y	RSC	Y	YGB	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
PSY	414	History of Psychology	Historical development of psychology from its philosophical beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): PSY 290 with C or better
PSY	420	Analysis of Behavior	Research, applications, and philosophy of the analysis and control of human behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 290 and 320 with C or better
PSY	424	Genetic Psychology	Introduces the concepts, methodologies, and findings of behavioral genetics for Psychology majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 290 with C or better
PSY	425	Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 325 with C or better
PSY	425	Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Prerequisite(s): PSY 325 with C or better
PSY	426	Neuroanatomy	Structure and function of mammalian brain, including sheep brain dissection.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Psychology	4		Prerequisite(s): PSY 325 with C or better; Credit is allowed for only PSY 426 or 526
PSY	427	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): BIO 353, 462, 467, MIC 420, or PSY 325, 425 with C or better. Credit is allowed for only MIC 427 or PSY 427
PSY	430	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): MGT 301 or PSY 101 (PGS 101) with C or better
PSY	430	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): MGT 301 or PSY 101 (PGS 101) with C or better
PSY	432	Embodied Cognition	Do left-handers think differently from right-handers? Do paraplegics perceive the world differently from those who can walk? If you say about a potential date, "He leaves me cold," do you literally feel cold? And does a Botox treatment to alleviate frown lines makes it difficult to understand sentences about sadness? The surprising answer to all of these questions is YES! Embodied cognition proposes that thinking is based on neural and bodily systems of perception, action and emotion. Explores this claim through readings, discussions, debates and embodied interactions, and considers implications of embodied cognition across areas of psychology and applications in education.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better; Credit is allowed for only PSY 432 or PSY 498 (Embodied Cognition) or PSY 529
PSY	434	Cognitive Psychology	Human organism as a processor of information, from perception to cognition. Abstract concepts, semantic memory, attention, and mental imagery.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 323 or 324 with C or better
PSY	434	Cognitive Psychology	Human organism as a processor of information, from perception to cognition. Abstract concepts, semantic memory, attention, and mental imagery.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Prerequisite(s): PSY 323 or 324 with C or better
PSY	437	Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	L	Prerequisite(s): PSY 290 with C or better

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PSY	437	Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 290 with C or better
PSY	440	Industrial/Organizational Psychology	Examines personnel selection, performance assessment, job and workplace design, job satisfaction, organizational behavior, management systems, and industrial safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	441	Cognitive Development	Experimental and theoretical literature in child development and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY	443	Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): PSY 315 (PGS 315), 341, or PSY 366 (PGS 466) with C or better; PSY 290 with C or better
PSY	443	Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L or SB	Prerequisite(s): PSY 315 (PGS 315), 341, or PSY 366 (PGS 466) with C or better; PSY 290 with C or better
PSY	444	Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY	444	Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY	446	Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY	446	Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L or SB	Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY	447	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 290 with C or better
PSY	447	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 290 with C or better
PSY	451	Stereotyping, Prejudice, and Discrimination	Critical investigation of the processes underlying, and the factors contributing to, stereotyping, prejudice, and discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 350 (PGS 350) or PSY 351 (PGS 351) with C or better; PSY 290 with C or better
PSY	453	Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 350 (PGS 350) with C or better; Credit is allowed for only PSY 453 or 598 (Organizational Behavior)
PSY	453	Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 350 (PGS 350) with C or better; Credit is allowed for only PSY 453 or 598 (Organizational Behavior)
PSY	458	Group Dynamics	Theories and methods of group leadership, group effectiveness, communication within groups, and relations between groups and individual members.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 350 (PGS 350) or PSY 351 (PGS 351) with C or better; PSY 290 with C or better
PSY	461	Interpersonal Influence	Principles and procedures that affect the process of social influence; consideration of attitudinal, compliance-inducing, and perceptual influences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 290 with C or better; PSY 350 (PGS 350) or 351 with C or better
PSY	462	Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY	462	Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	465	Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 315 (PGS 315), 350 or 351 with C or better; PSY 290 with C or better
PSY	465	Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 315 (PGS 315), 350 or 351 with C or better; PSY 290 with C or better
PSY	468	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better

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PSY	468	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	470	Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 325 or one of the following: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	470	Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 325 or one of the following: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	471	Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY	471	Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	472	Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better; PSY 366 (PGS 466) or 443 with C or better
PSY	472	Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better; PSY 366 (PGS 466) or 443 with C or better
PSY	473	Psychology and Politics of Child Maltreatment	Examines psychological literature on child maltreatment in the context of development. Explores interactions between professionals responding to maltreatment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 101 (PGS 101) with C or better; PSY 230 (PGS 341) with C or better; PSY 290 with C or better
PSY	475	Multicultural Issues in Clinical Psychology	Discussion-based course that focuses on cross-cultural conceptions of mental illness, diagnosis and treatment approaches, and beliefs and practices of specific ethnocultural groups in the United States. Encourage students to critically think about diversity issues in clinical psychology, one's own attitudes, and culture and psychology more broadly. Students achieve these objectives through reading empirical articles and chapters; taking quizzes and exams; completing hands-on exercises, essays and other writing assignments; and actively participating in and facilitating class discussions.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): Minimum 45 hours; Credit is allowed for only PSY 475 or 498 (Clinical Psychology: Multicultural Issues)
PSY	482	Social Influence and Consumer Behavior	Discusses social influence principles, emphasizing strategies employed by professionals that affect consumer behavior. Analyzes consumer defenses against manipulations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 350 (PGS 350) with C or better
PSY	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
PSY	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
PSY	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-6		Prerequisite(s): Barrett Honors student
PSY	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-6		Prerequisite(s): Barrett Honors student
PSY	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
PSY	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-6	L	Prerequisite(s): Barrett Honors student
PSY	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	Department of Psychology	1-6	L	Prerequisite(s): Barrett Honors student
PSY	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
PSY	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-4		Prerequisite(s): PSY 290 with C or better
PSY	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Prerequisite(s): PSY 290 with C or better
PSY	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): PSY 290 with C or better
PSY	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-6		Prerequisite(s): Barrett Honors student
PSY	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-7		Prerequisite(s): PSY 290 with C or better

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PSY	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-7		Prerequisite(s): PSY 290 with C or better
PSY	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-3		Prerequisite(s): PSY 399
PSY	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-3		Prerequisite(s): PSY 399
PSY	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		Prerequisite(s): PSY 399(PGS 399) with C or better
PSY	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	501	Supervised Teaching	Experience in and examination of perspectives on teaching undergraduate psychology.	N	PRA	N	OPT	Liberal Arts and Sciences	Department of Psychology	4		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	512	Advanced Learning	Principles and theories of learning, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	515	Quantitative Research Methodology and Statistics I	Introduces advanced experimental and quasi-experimental research design and analysis. Focuses on group-based design and univariate analysis of variance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): Psychology MS student
PSY	516	Quantitative Research Methodology and Statistics II	Advanced experimental and quasi-experimental research design and analysis. Focuses on principles underlying linear regression and related statistical techniques.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 515 with B or better; Credit is allowed for only PSY 516 or 598 (Psychological Methods II)
PSY	526	Neuroanatomy	Covers the structure and function of the mammalian brain, including sheep brain dissection.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Psychology	4		Prerequisite(s): graduate; Credit is allowed for only PSY 426 or PSY 526
PSY	528	Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	528	Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	529	Embodied Cognition	Do left-handers think differently from right-handers? Do paraplegics perceive the world differently from those who can walk? If you say about a potential date, "He leaves me cold," do you literally feel cold? And does a Botox treatment to alleviate frown lines make it difficult to understand sentences about sadness? The surprising answer to all of these questions is YES! Embodied cognition proposes that thinking is based on neural and bodily systems of perception, action and emotion. Explores this claim through readings, discussions, debates and embodied interactions, and considers implications of embodied cognition across areas of psychology and applications in education.	N	SEM	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): graduate standing in Psychology; Credit is allowed for only PSY 432 or PSY 529 or PSY 591 (Embodied Cognition)
PSY	530	Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	530	Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	531	Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		
PSY	531	Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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PSY	532	Analysis of Multivariate Data	Matrix algebra for multivariate procedures, component and factor analysis, canonical and discriminant analysis, classification, MANOVA, logistic regression, hierarchical linear model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	533	Structural Equation Modeling	Path analysis; exploratory and confirmatory factor analysis; recursive and nonrecursive latent variable models; mean and covariance structures; latent growth models.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	534	Psychometric Methods	Theory and practice of psychological measurement using classical and modern test theories. Reliability assessment, test validation, test construction, test usage.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	535	Cognitive Processes	Theoretical/empirical treatment of the human organism as a processor of information, including abstraction, memory structure, problem solving, and thinking.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	536	Statistical Methods in Prevention Research	Statistical methods used in prevention research including epidemiological methods, logistic regression, program effect estimation, estimation, and mediation analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	537	Longitudinal Growth Modeling	Growth modeling methodology to describe individual variation in development over time. Employs multilevel and structural equation modeling frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	538	Advanced Structural Equation Modeling	Mean and covariance structure analysis. Includes multiple-group modeling, two-level hierarchical modeling, longitudinal growth modeling, analysis with categorical outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	539	Multilevel Models for Psychological Research	Multilevel (i.e., hierarchical linear) modeling, as described by Raudenbush and Bryk (2002) and others. Covers analytic strategies for analyzing a variety of different nested data structures (e.g., couples data, clients nested within group therapy settings, children nested within classrooms, longitudinal data). Covers two- and three-level models for cross-sectional and longitudinal data and also addresses related topics such as centering and estimation. Students perform and interpret the results of these models using a variety of statistical software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Pre-requisite: PSY 531; Credit is allowed for only PSY 539 or 591 (Multilevel Modeling)
PSY	540	Missing Data Analysis	Covers analytic strategies for analyzing data with missing values, with a special emphasis on modern approaches for dealing with missing data, in particular maximum likelihood missing data handling and multiple imputation, maximum likelihood estimation and multiple imputation. Familiarizes students with missing data theory, traditional analysis methods (e.g., deleting incomplete cases, single imputation methods), maximum likelihood estimation, multiple imputation, planned missing data research designs, and the inclusion of auxiliary variables. Students learn how to perform and interpret the results of these models using a variety of statistical software packages.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Pre-requisite: PSY 532; Credit is allowed for only PSY 540 or 591 (Missing Data)
PSY	541	Research in Cognitive Development	Theoretical and empirical issues in the study of children's knowledge and cognitive processes. Comparison of research in Piagetian and other traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	542	Social Development	Reviews and critiques major issues in the area of social development. Covers theory, research, and content.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	543	Statistical Mediation Analysis	Specifically covers the substantive motivations for mediating variables and third-variable effects (interaction, confounder, covariate and mediator) in general. Mediation represents a chain such that one variable causes a mediating variable and the mediating variable causes a dependent variable. Describes the single mediator model in detail including assumptions, estimators and geometric interpretations. Once the details of the single mediator model are understood, analysis is extended to multiple mediator models, path analysis, and models with moderators and mediators. Discusses modern causal inference approaches for mediation along with latent variable models, multilevel models and special models for longitudinal data. Also describes research designs for investigating mediating variables. Students learn how to perform and interpret the results of analysis using a variety of statistical software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 530; PSY 531; Credit is allowed for only PSY 543 or PSY 591 (Mediation) or PSY 591 (Statistical Mediation Analysis)
PSY	550	Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	550	Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	551	Advanced Social Psychology	Continuation of PSY 550.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	554	Item Response Theory	A collection of measurement models based on item response theory (IRT). The models express the probabilities of responses to test or questionnaire items as a function of latent respondent characteristics and item properties. IRT models form the basis for measurement in standardized educational testing, but generally are also now used in clinical, social and personality measurement in psychology, medicine and the social sciences. Assumptions underlying IRT models, methods of parameter estimation and fit evaluation. Also covers important applications of the models in computerized adaptive testing, the detection of measurement bias and multidimensional IRT. Uses several software tools useful in IRT modeling.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 534; Credit is allowed for only PSY 554 or 591 (Item Response Theory)
PSY	555	Experimental and Quasi-Experimental Designs for Research	Reviews research techniques. Analyzes lab and field research; applications to specific topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	560	Advances in Theoretical Psychology	Covers new empirical and theoretical work in psychology with emphasis on its applicability.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	561	Methods in Applied Psychology	Methods of particular value in applied settings, including usability testing, prototyping, and use of computers in data collection and analysis. May be repeated for credit up to 9 hours.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	562	Advanced Human Factors	In-depth study of the issues, methods, and findings in industrial and organizational psychology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	568	Stress and the Brain	Covers the fundamentals of stress and brain interactions. Presents a foundation from a historical perspective, then the basics of an organism's stress response, including the activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis. The stress response is highly conserved and allows organisms to respond and adapt to their environment. A highly effective and robust stress response facilitates adaptation and behavioral flexibility. However, a maladaptive stress response can produce detrimental outcomes. The ultimate goal is to understand the dynamic and reciprocal processes by which the stress response and brain interact to produce behavioral flexibility and resilience or detrimental outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	572	Psychological Assessment	Theory and research on assessment of personality, psychopathology, and intelligence; construction of psychological assessment instruments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	573	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	573	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	574	Psychotherapy	Detailed survey of the theoretical and empirical literature relating to verbal psychotherapy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	576	Dynamical Systems in Psychology	Analyzes patterns of behavior change in psychological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	578	Developmental Psychopathology	Covers major theories and research related to the development of psychological disorders of childhood and adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	582	Community Psychology	Community systems, intervention techniques, consultation models, history and current status of community mental health movement, and conceptualization of the roles of community psychologists in social system intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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PSY	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate
PSY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate
PSY	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
PSY	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
PSY	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
PSY	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
PSY	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Human Systems Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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PSY	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OP3	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OP3	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
PTX	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
PTX	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
PTX	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
PTX	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): minimum 45 hours
PTX	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): minimum 45 hours
PTX	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student; minimum 45 hours
PTX	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student; minimum 45 hours
PTX	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): minimum 45 hours

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PTX	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student; minimum 45 hours
PTX	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7		Prerequisite(s): minimum 45 hours
PTX	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		Prerequisite(s): minimum 45 hours
PUB	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman; maximum 25 hours
PUB	501	Introduction to Scholarly Publishing	Introduces the purpose, organization, and operation of scholarly publishing, including its history, societal role, and current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
PUB	502	Scholarly Editing	Publishing procedures, proofreading, and manuscript editing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	503	Advanced Scholarly Editing	Advanced manuscript editing, acquisitions, developmental editing, and indexing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	510	Research in Scholarly Publishing	Individual or group research projects on issues in scholarly publishing, including legal, economic, design, technological, and related topics.	N	REC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	580	Practicum		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	592	Research		Y	LEC	Y	CNV	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	N	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUP	190	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	(HU or SB) & G	Credit is allowed for only PUP 190 or SOS 111
PUP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
PUP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	200	Cities in Cinema	Environmental, aesthetic, social, economic, political cultural, and other factors influencing global cities seen through films from around the world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	HU & H & G	
PUP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	301	Introduction to Urban Planning	Theoretical and practical aspects of city planning. Interrelationships among physical planning, environment, government, and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	
PUP	361	Planning Workshop I	Basic site planning and design techniques. Collection and analysis of information and basic planning research. Report writing and public presentation skills.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisites: PUP 301 with C or better; Minimum 45 hours
PUP	363	History of Planning	Historical overview of western urban and regional planning and planning theory, focusing on the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: PUP 301 with C or better

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PUP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	410	Public Participation in Planning	Theory and practice of public participation in planning. Examines and critiques participation techniques and roles of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better
PUP	412	History of the City	The city from its ancient origins to the present day. Emphasizes European and American cities during the last five centuries. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as analytical essays and an in-depth research paper are required in addition to regular tests and quizzes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	(L or HU) & H	Prerequisite(s): minimum 45 hours; Credit is allowed for only MUD 598 (Great Cities) or PUP 412
PUP	420	Theory of Urban Design	Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	HU	Pre-requisite: PUP 301 with C or better
PUP	424	Planning Methods	Methods for urban planning research. Emphasizes research design, quantitative and qualitative methods, survey research, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisite: PUP 301 with C or better
PUP	425	Urban Housing Issues	Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: PUP 301; Minimum 45 hours; Credit is allowed for only PUP 525 or 425
PUP	430	Transportation Planning and the Environment	Overview of transportation planning from the perspective of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
PUP	432	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better
PUP	433	Zoning Ordinances, Subdivision Regulations, and Building Codes	Analyzes zoning ordinances, subdivision regulations, building codes, and other planning implementation techniques relative to local development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Senior student; PUP 301 with C or better
PUP	434	Economic Development Planning	Provides a broad overview of urban economic development planning in the U.S. This overview includes the role and goals of economic development planning in today's global information economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L or SB	Pre-requisite: PUP 301 with C or better
PUP	436	City Structure and Planning	Political structure and organization of government as it relates to planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better
PUP	441	Economics of Environmental Planning	Overview of environmental and ecological economics and how their concepts and tools are used in dealing with environmental planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better; Credit is allowed for only PUP 541 or PUP 441
PUP	442	Environmental Planning	Environmental planning problems, including floodplains, water quality and quantity, solid and hazardous waste, air quality, landslides, and noise.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better
PUP	444	Preservation Planning	History, theory, and principles of historic preservation. Emphasizes legal framework and methods practiced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students. Credit is allowed for only PUP 527 or PUP 444
PUP	445	Women and Environments	Examines the role women play in shaping the built environment; ways built/natural forms affect women's lives. Focuses on contemporary U.S. examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	C	Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	452	Ethics and Theory in Planning	Ethics and theory of professional planning practice in urban and regional communities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	Pre-requisite: PUP 301 with C or better
PUP	462	Planning Workshop II	Comprehensive planning. Synthesis of complex data- and community-based analyses. Advanced report writing and public presentation skills.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisites: PUP 301 and PUP 361 with C or better
PUP	465	Sustainable Urbanism	Examines the history, theory and practice of "sustainable urbanism," now defined by reform movements such as new urbanism, ecological urbanism, smart growth, and livable cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s) with C or better: Sustainability major in a sustainability concentration: SOS 110, 111 (or PUP 190); minimum 45 hours. All other majors: PUP 301. Credit is allowed for only PUP 465 or PUP 565 or SOS 465

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
PUP	481	Optimization Fundamentals for Spatial Analysis	Covers the fundamentals of optimization for spatial analysis. Reviews elements of calculus, matrices, and basic linear algebra. Introduces linear programming, integer programming and branch and bound, and heuristics. Provides the basics for use and application of GIScience and spatial analysis methods. Objectives include: reviewing basics of math, calculus and linear algebra; introducing optimization approaches, including linear programming, integer programming and heuristics; and applying these methods to structured problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: MAT 270 (or 271 or 272) with C or better; Credit is allowed for only GIS 461, 561, PUP 481, 581, GCU 494 (Optimization Fundamentals) or 598 (Optimization Fundamentals)
PUP	482	Location Analysis and Modeling	Provides a technical overview of location theory in the context of GIScience, focusing on analysis and modeling issues. Relies upon applications associated with emergency service planning, natural resource management, retail site selection, among others, to make connections among models, spatial information, and interpretation of findings. Explores utilization and implementation considerations using GIS. Objectives include: exposing a range of location analysis and modeling approaches; applying approaches in combination with GIS and optimization software; and carrying out an application-oriented study relying on acquired skills.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GPH 373 or GPH 481; Credit is allowed for only GPH 482, 582, PUP 482, 582, or 598 (Location Modeling)
PUP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban Planning undergraduate student
PUP	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12	G	Pre-requisite: Junior standing; Credit is allowed for only GCU 485 or GPH 485 or LAP 485 or POR 485 or PUP 485 or 585
PUP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
PUP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Prerequisite(s): Barrett Honors student
PUP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
PUP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	501	Planning History and Theory	Comprehensive review of planning profession within a political, governmental, multicultural, and gender framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	505	GeoDesign Principles	Systematic exploration and evaluation of alternative complex human-environmental systems using spatially and temporally explicit theories, data and methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): GIS 601 and 602, or PUP 576; Credit is allowed for only GIS 505 or PUP 505
PUP	515	International Planning and Development	Introduces globalization, international development, international planning practices and policies, urbanization and urban and regional planning in developing nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	520	Planning Practice, Ethics and Processes	Reviews past and current theoretical developments related to social change perspectives, the role and ethics of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	525	Urban Housing Issues	Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 425 or 525
PUP	526	Historic Preservation Planning Practice	In-depth study of practical applications of historic preservation theory and methods. Overview of the professional work of the preservation field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
PUP	527	Preservation Planning	Explores the field of historic preservation. Overview of its historic development and the principles that guide its professional practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student. Credit is allowed for only PUP 444 or 527
PUP	531	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	535	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 535 or GPH 535
PUP	541	Economics of Environmental Planning	Application and limitations of economics in environmental planning and policy making in the United States and internationally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 441 or 541
PUP	542	Environmental Planning	Environmental policies and their relationship to environmental planning practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only PUP 442 or PUP 542
PUP	544	Urban Land Use Planning	Theory and methods of urban land use planning, including the rational planning process, comprehensive, functional, and neighborhood plans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	547	Gender, Activism, and the Built Environment	Explores issues of gender in the built environment. Includes traditional attitudes toward gender underlying the physical form and continuing impacts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only WST 547 or PUP 547
PUP	548	Planning for Sustainable Communities	Theory and applications connecting sustainability sciences and practice to urban environmental planning. Sustainable urban development, restoration, and preservation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	550	Transportation and the Environment	Examines transportation planning from the perspectives of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	553	Urban Infrastructure Anatomy and Sustainable Development	Understanding how built environment infrastructure systems interact with ecosystem services is critical for policies and decisions directing urban sustainability. Brings together students from several disciplines to develop a semester-long research project focused on a particular urban sustainability problem in Phoenix. During the semester, students are given background on how infrastructure systems work and are interdependent, and explore tools and methods for urban sustainability assessment with peers from several disciplines. As a class, students evaluate a particular urban sustainability problem for Phoenix, interact with local policy and decision makers in developing solutions, and present their findings at the end of the semester to the ASU community.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit for only CEE 507 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or PUP553 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or SOS547 or SOS598 (Urban Infrastr Anatomy & Sustain Dev)
PUP	561	Urban Design Workshop	Workshop course focuses on applying knowledge and skills in a "real world" setting, developing meaningful planning and design proposals for existing urban areas.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	562	Tribal Community Planning	Study of tribal planning and best practice including underlying social, political and environmental issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	563	Urban and Regional Security	Advanced course that critically examines the security of urban and regional form, space and places.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): GIS 601 and 602 (or PUP 576)
PUP	565	Sustainable Urbanism	Examines the history, theory and practice of "sustainable urbanism," now defined by reform movements such as new urbanism, ecological urbanism, smart growth, and livable cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 465 or 565
PUP	571	Socio-Economic Impact Analysis	Theory, methods, and techniques of demographic and economic analysis utilized in urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	573	Survey Research and Multivariate Statistics	Methods of survey research design and primary data analysis for urban planning applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Pre-requisites: PUP 570 and PUP 571 with C or better; Graduate student (degree seeking or nondegree seeking)
PUP	575	Environmental Impact Assessment	Criteria and methods for compliance with environmental laws; develops skills and techniques needed to prepare environmental impact statements/assessments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): degree- or nondegree-seeking graduate student

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PUP	576	GIS Workshop	GIS as a tool to address large, multifaceted problems.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GIS 515 or PUP 576
PUP	577	Communication and Visualization Tools in Planning	Covers graphic and verbal skills required to effectively communicate planning information and ideas. Emphasizes digital graphics and other computer-based tools and presentation formats, focusing on applying visual strategies and tools most often used by planners to make a persuasive argument.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Pre-requisites: PUP 570 and 571 with C or better; Graduate student (degree seeking or nondegree seeking)
PUP	579	Qualitative Research	Covers key qualitative skills and techniques that planners require, including research design and the understanding of validity and reliability issues, case study research approaches, qualitative data collection strategies, and strategies for analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisites: PUP 570 and 571 with C or better; Graduate student (degree seeking or nondegree seeking)
PUP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	581	Optimization Fundamentals for Spatial Analysis	Covers the fundamentals of optimization for spatial analysis. Reviews elements of calculus, matrices and basic linear algebra. Introduces linear programming, integer programming and branch and bound, and heuristics. Provides the basics for use and application of GIScience and spatial analysis methods. Objectives include: (1) review basics of math, calculus and linear algebra; (2) introduce optimization approaches, including linear programming, integer programming and heuristics; and (3) apply these methods to structured problems.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only GIS 461, 561, PUP 481, 581, GCU 494 (Optimization Fundamentals) or 598 (Optimization Fundamentals)
PUP	582	Location Analysis and Modeling	Provides a technical overview of location theory in the context of GIScience, focusing on analysis and modeling issues. Relies upon applications associated with emergency service planning, natural resource management, retail site selection, among others to make connections among models, spatial information and interpretation of findings. Explores utilization and implementation considerations using GIS. Objectives include: (1) exposure to a range of location analysis and modeling approaches; (2) ability to apply approaches in combination with GIS and optimization software; and (3) capability of carrying out an application-oriented study relying on acquired skills.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GPH 581; Credit is allowed for only GPH 482, 582, PUP 482, 582, or 598 (Location Modeling)
PUP	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Urban/Environmental Planning MUJEP student
PUP	585	International Field Studies	Organized field study in specified international locations.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only GCU 485, GCU 586, GPH 485, GPH 585, LAP 485, LAP 585, POR 485, PUP 485 or PUP 585
PUP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Graduate student
PUP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

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PUP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Pre-requisites: Urban and Environmental Planning graduate student
PUP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	642	Urban and Regional Economic Analysis	Land use and locational impact of economic activity and the urban real property market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	644	Public Sector Planning	Urban fiscal problems and public goods provision in state and local governments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
PUP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		
PUP	701	Urban Planning Colloquium	Presents and discusses new research findings and methods in urban planning.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	710	Current Planning Theory and Practice	Explores and critically evaluates planning theories and approaches with the objective of articulating new ideas for planning research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	718	Econ Dev in Indian Country	Focuses on the unique legal, economic, and political issues confronting tribal governments in developing diversified reservation economies.	N	LEC	N	OP6	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2-3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)Credit is allowed for only LAW 718 or PUP 718
PUP	724	Planning Methods for Doctoral Students	Tools useful for urban planning research; emphasis on research design and survey methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
PUP	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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PUP	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
QBA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-3		
QBA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-6		Prerequisite(s): Barrett Honors student
QBA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Prerequisite(s): Barrett Honors student
QBA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-6		Prerequisite(s): Barrett Honors student
QBA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-7		
QBA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		
QBA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Students only (degree and non-degree seeking)
QBA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Degree Seeking Students only

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
QBA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		
QBA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		
QBA	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		
QBA	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey Graduate Degree Seeking Students only
QBA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		
QBA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		
QBA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		
RDG	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
RDG	291	Children's Literature	Focuses on selecting and using children's literature and related nonprint media to support the elementary school curriculum. Covers the elements, genres and applications of children's literature as well as the resources available for elementary classroom teachers. Constructs criteria for the selection of trade books for educational and personal use. Also explores the role of digital media in children's literature.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	HU	
RDG	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
RDG	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	322	Language Literacy 1 in Elementary Schools	Theoretical knowledge and pedagogical skills for implementing a high-quality reading program. Course objectives and topics are aligned to standards for reading and research from the International Reading Association (IRA), Arizona College and Career Ready Standards (ACCRS), Interstate Teacher Assessment and Support Consortium (InTASC) standards, and the National Reading Panel Report (2000). Focuses on emergent literacy, phonemic awareness, phonics, fluency, vocabulary and comprehension. Presents strategies and assessments to support students of a variety of ability levels and cultural backgrounds with a specific focus on the struggling readers and English language learners. For education majors only.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only RDG 322 or SPE 325
RDG	323	Literacy Processes in Content Areas	Principles and practices for planning subject matter units of instruction that explicitly address learning with texts across academic disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
RDG	413	Language Literacy 2 in Elementary Schools	Applies effective practices for literacy instruction in authentic classroom settings. Prepares teacher candidates to plan and deliver balanced literacy approaches with diagnostic assessment strategies and adaptations to support second language learners and struggling readers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
RDG	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): admission to the Professional Program
RDG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
RDG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
RDG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
RDG	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
RDG	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
RDG	505	Developmental Reading	For classroom and special reading teachers. Specific professional skills in decoding, comprehension, and evaluation. Required for Special Reading Endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	507	Content Area Literacy	Theory, teaching strategies, and practical application concerning learning from text across subject matter disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	508	Essential Elements of Elementary Content Area Literacy (K-8)	Presents theory, rationale, and teaching strategies concerning learning from oral, print, and electronic texts across subject-matter disciplines. Emphasizes practical application of content area literacy principles. Familiarizes participants with the literate lives of today's youth, facilitate participants' inquiry into strategies to motivate students in content learning, and provide strategies to improve students' comprehension and application of content material. Readings, online inquiries, and assignments focus on application of course content. Emphasizes implications of recent research and theory in content literacy and adolescent literacy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	509	Essential Elements of Secondary Content Area Literacy (6-12)	Presents theory, rationale, and teaching strategies concerning learning from oral, print, and electronic texts across subject-matter disciplines. Emphasizes practical application of content area literacy principles. Familiarizes participants with the literate lives of today's youth, facilitate participants' inquiry into strategies to motivate students in content learning, and provide strategies to improve students' comprehension and application of content material. Readings, online inquiries, and assignments focus on application of course content. Emphasizes implications of recent research and theory in content literacy and adolescent literacy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	512	Theoretical Foundations in Language and Literacy	Introduces theoretical lenses useful in understanding issues in language and literacy education and research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	520	Essential Elements of Elementary Literacy (K-8)	Intended for practicing teachers, focuses on the development of a comprehensive approach to Reading and Writing Instruction K-8.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
RDG	525	Emergent Literacy	Examines research on oral language and literacy development and effective strategies for teaching language and literacy in birth to grade 1, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	531	Language and Literacy I	Focuses on the theoretical knowledge and pedagogical skills necessary to equip future teachers to plan and implement high-quality reading and writing instruction in a classroom setting. Course objectives and topics are aligned to standards for reading and research from the International Reading Association (IRA), Arizona College and Career Ready Standards (ACCRS), Interstate Teacher Assessment and Support Consortium (InTASC) standards, and the National Reading Panel Report (2000). Focuses on reading readiness, language development, phonemic awareness, phonics, fluency, vocabulary and comprehension. Presents strategies and assessments to support struggling readers as well as a variety of ability levels and cultural and linguistic backgrounds to include English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Teachers College graduate student; Credit is allowed for only RDG 531 or SPE 538
RDG	532	Language and Literacy II	Builds on the theoretical knowledge and pedagogical skills presented in the previous course. Uses diagnostic assessments in the planning and implementation of intervention literacy lessons for struggling readers/writers in a classroom setting as part of the course case study assignment. Includes differentiated instructional and assessment strategies to address the needs of diverse learners to include English language learners. Also includes an emphasis on writing and composition to ensure future teachers have the knowledge necessary to teach all forms of writing in the elementary classroom. Includes an overview of the historical development of children's literature and the criteria necessary for analyzing and selecting all genres of quality children's literature.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Teachers College graduate student; Pre- or corequisite(s): RDG 531
RDG	550	Practicum Experiences in Elementary and Secondary Reading	Practicum experience utilizing assessment and instructional techniques for classroom settings. See RDG 557 for State of Arizona reading endorsement.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	555	Formal Measures of Literacy	Understanding the attributes of standardized tests and applying this information to analyze, select, and explore their use.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	556	Assessment and Procedures in Elementary and Secondary Reading	Techniques for classroom and clinical reading/literacy assessment and instruction. Emphasizes continuous assessment. May be taken concurrently with RDG 550 or 557. Recommended for State of Arizona reading endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	557	Advanced Elementary and Secondary Reading Practicum	Advanced practicum experience utilizing specialized reading and other assessment and instruction techniques for classroom and clinic settings. Lab sections. Recommended for State of Arizona reading endorsement. May be taken concurrently with RDG 556.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	563	Children's Literature	Selects and uses children's literature and related nonprint media to support the elementary school curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
RDG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
RDG	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
REA	300	Real Estate Analysis	Applies economic theory and analytical techniques to real estate markets. Topics include law, finance, appraisal, market analysis, investments, development.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: W.P. Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.
REA	380	Real Estate Fundamentals	Real estate for the student/consumer with an emphasis on the applied aspects of each area of real estate specialization. Not open to Real Estate majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: Minimum cumulative GPA of 2.00; Minimum 56 hours OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student
REA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
REA	401	Real Estate Appraisal	Factors affecting the value of real estate. Theory and practice of appraising and preparation of the appraisal report. Appraisal techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey BA or BS major OR non-business major with FIN 300 (or FIN 302 or 303 or REA 380) with C or better; 2.50 ASU GPA; 2.50 ASU business GPA; minimum 56 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
REA	411	Real Estate Law	Legal and ethical aspects of land ownerships, interests, transfer, finance development, and regulations of the real estate industry.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s) with C or better: FIN 300 or 302 or 303 or REA 380; W.P. Carey BA or BS Business major OR non-business student with minimum 56 hours and 2.50 ASU and business GPA OR non-degree graduate student. Credit is allowed for only LES or REA 411
REA	441	Real Estate Land Development	Neighborhood and city growth. Municipal planning and zoning. Development of residential, commercial, industrial, and special purpose properties.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s) with C or better: FIN 300 or 302 or 303 or REA 380; W.P. Carey BA or BS Business major OR non-business student with minimum 56 hours and 2.50 ASU and business GPA OR non-degree graduate student
REA	456	Real Estate Investments	Analyzes investment decisions for various property types. Cash flow and rate of return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey BA or BS major OR non-business major with FIN 300 (or FIN 302 or 303 or REA 380) with C or better; 2.50 ASU GPA; 2.50 ASU business GPA; minimum 56 hours
REA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		
REA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree OR Graduate student.
REA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
REA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Finance	1		
REA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		
RED	501	Urban Economic and Real Estate Development Principles	Explores the basic principles of urban economics and their application to real estate decision making.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RED	502	Real Estate Valuation-Finance and Capital Markets	Addresses the concepts of valuation applied to real estate and teaches how to apply these principles. Intermediate- to advanced-level course in mortgage finance, and associated capital market innovations.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only RED 691-Real Estate Fin/Analysis or RED 502
RED	503	Real Estate Market Analysis	Focuses on market analysis and market data gathering methods, means, and techniques necessary in identifying market opportunities and developing specific market strategies for successful real estate development.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only RED 503 or 591 (Real Est Site Analys/Dsg)
RED	504	Real Estate Site Analysis, Master Planning and Design	Analyzes the physical characteristics of a property, including the site and physical area, legal, political, economic, and financial facts that impact the highest and best use of a property and what can be built upon the property.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only RED 504 or 591 (Real Estate Develop Principles)
RED	505	Land Use Law and Public Entitlement Process	Covers a basic understanding of the legal and practical zoning and governmental land entitlement process. Examines the legal history, structure, and implications of zoning, as well as the fundamentals of "real life" situations that occur in the entitlement and real estate development field. Provides a broad overview of this process from a legal and development viewpoint, but is not intended to be a comprehensive analysis of all entitlement issues.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only RED 505 or 591 (Mkt Segmentation/Analysis)
RED	506	Real Estate Law for Developers	Covers the nature of property and the legal system as it relates to purchase agreements, title, surveys, declarations of covenants, defining easements, and licenses among other related topics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only RED 506 or 591 (Public Entitlement Process)
RED	507	Synthesis Project #1 Residential Development	Employs the students learning through application of developing a specific parcel of land.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for RED 507 or 591 (Mkt Segmentation/Analysis)
RED	508	Real Estate Engineering and Construction	Explores the basic principles of engineering and construction of real estate development projects. Reviews construction technologies within the framework of architectural design and engineering as well as construction means, methods, and systems.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only RED 508 or 598 (Compar Analys; in Fill Housing)
RED	509	Advanced Financial Analysis for Commercial Real Estate	Teaches more complex financial analysis of income-producing property, including various decision-making tools such as Monte Carlo, option pricing, assessing alternatives, and how to build these into financial models. Also teaches financial analysis of business structures to determine potential outcomes such as debt and equity structures, waterfalls, claw backs, and other business and ownership concepts. Emphasizes strategic alternatives, assessing risk and conversion events.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: MRED student; Credit is allowed for only RED 509 or 691 (Contemp Issues Real Estate Dev)
RED	510	Real Estate Development Business and Project Management	Teaches management of real estate development companies and process. Students learn the various aspects of project management, financial management and project accounting, lending relations and managing loans and pay applications as well as dispute resolution and strategic partnerships.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: MRED student; Credit is allowed for only RED 510 or 598 (Income Analys; Comm/Retail)
RED	511	Design of the Built Environment	Teaches the built environment and how that applies to creation of places, market positioning, capturing value and the importance of good design to the business of real estate.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: MRED student; Credit is allowed for only RED 511 or 691 (Real Estate Dev Project Mgmt)
RED	512	Real Estate Law for Developers	Teaches issues faced by developers such as various types of financing structures, including special districts, TIF and bond financing. Covers issues and process of raising capital and various forms of securing equity. Discusses private placement memorandums, limited liability companies, partnerships and public private partnerships. Students also learn about environmental law, income tax issues, negotiation, and alternative dispute resolution.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: MRED student; Credit is allowed for only RED 512 or 691 (Adv Real Estate Finance/Analys)
RED	513	Advanced Real Estate Engineering, Construction Management and Sustainable D 2	Covers various construction delivery methods, construction project management and scheduling, construction contracts, mechanics and materialmans liens, and pay applications. Students also learn about sustainability and the built environment.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: MRED student; Credit is allowed for only RED 513 or 691 (Real Estate Dev. Project Mgmt)

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RED	514	Synthesis Project #2 Income Property Development	Through application to a specific problem given by faculty, students work in teams to analyze and seek solutions to development of land for an income-producing property. Students investigate a specific parcel of land, performing due diligence, preparing a market and segmentation analysis, defining highest and best use(s), designing a solution, preparing residual land value analysis, defining a product offering, pricing points, building design, site planning and comparative valuation analysis.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Prerequisite(s): MRED student; Credit is allowed for only RED 514 or RED 691 (Adv Real Estate Finance/Analys)
RED	515	Synthesis Project #3 Capstone Project Mixed-Use Property Development	Employs all that the students have learned through application to a specific problem given by faculty. Students work in a team to analyze and seek solutions to development of land for a complex, mixed-use project. Students investigate a specific parcel of land and are required to perform due diligence, prepare a market and segmentation analysis, define highest and best use(s), design a solution, prepare residual land value analysis, define a product offering, price points, building design, site planning and comparative valuation analysis.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	4		Pre-requisite: Master of Real Estate Development major; Credit is allowed for only RED 515 or 598 (Ret Analys; High Dens Mix Use)
RED	520	Real Estate Development Business and Project Management Internship	Integrates the knowledge and skills cultivated in the MRED program (real estate business management, creative problem solving, team building, critical analysis and thinking). Helps students secure relevant functional and industry experience by providing hands-on work experience across a variety of internship sites demonstrating the varied and changing demands and possibilities of work within the real estate industry. Uses internship experiences to analyze the shifting landscape of work and to assess potential employment environments and career paths.	N	PRA	N	YGB	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: MRED student
RED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
RED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
RED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
RED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
RED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		
RED	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
RED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
RED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
RED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REL	100	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & G	Credit is allowed for only REL 100 or 200
REL	100	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Credit is allowed for only REL 100 or 200
REL	100	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Credit is allowed for only REL 100 or 200
REL	101	Religion, Culture and Public Life	Explores how religions are conditioned by cultural values and operate in the political sphere.	Y	LEC	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
REL	107	Religion and Globalization	Explores how different religions interact with the various processes of globalization, including how the world's major religions have been transformed by economic, political, cultural, and technological aspects of globalization. Topics include religious terrorism, human rights, religion, and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Credit is allowed for only REL 107, 194 (Religion and Globalization) or SGS 107
REL	111	Introduction to Asia	Offers a basic introduction to the geography, history, cultures, states, and societies of South and Southeast Asia as well as China, Japan, and Korea.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST 111 or REL 111

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	131	Biblical Hebrew I	Offers an introduction to Biblical Hebrew, the language in which most of the books of the Hebrew Bible/Old Testament have been written. Provides the basic tools to understand and translate Biblical Hebrew texts. Covers the Hebrew alphabet, basic vocabulary, morphology and syntax. Students learn idiomatic expressions, basic literary techniques in narratives and poetry, as well as specificities of Semitic languages. Emphasizes a critical approach to the ancient text. Also introduces the evolution of the biblical text, from ancient manuscripts to contemporary editions and translations. Includes an introduction to the development of writing and to the evolution of Hebrew, from earliest inscriptions to its revival in modern Israel. The texts translated in class are situated in the history of Israel, but also in their Jewish and Christian cultural and religious contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Credit is allowed for only HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I)
REL	132	Biblical Hebrew II	Completes the study of basic Biblical Hebrew grammar and vocabulary (Futato's Beginning Biblical Hebrew, chapters 21-40). Prepares students to translate narrative and legal texts from Hebrew Bible. Students learn to use dictionaries, grammars, paradigms and critical editions of the biblical text.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I) with C or better; Credit is allowed for only HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II)
REL	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
REL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	200	Exploring the World's Religions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & G	Pre-requisites: Maximum 75 hours; Credit is allowed for only REL 100 or 200
REL	200	Exploring the World's Religions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Pre-requisites: Maximum 75 hours; Credit is allowed for only REL 100 or 200
REL	200	Exploring the World's Religions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Pre-requisites: Maximum 75 hours; Credit is allowed for only REL 100 or 200
REL	201	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	
REL	201	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	
REL	201	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
REL	202	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & C	Credit is allowed for only FMS 202 or REL 202
REL	202	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	Credit is allowed for only FMS 202 or REL 202
REL	202	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C	Credit is allowed for only FMS 202 or REL 202
REL	203	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H	
REL	203	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	203	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	
REL	205	Life, Sex and Death	Ways that religions have understood birth, sexuality, death, and the passing of generations. Examples from traditions throughout the world.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
REL	205	Life, Sex and Death	Ways that religions have understood birth, sexuality, death, and the passing of generations. Examples from traditions throughout the world.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
REL	207	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	
REL	207	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	

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REL	207	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
REL	210	Introduction to Judaism	Beliefs, ceremonies, festivals, and institutions of Judaism emphasizing the contemporary era. Assumes no previous knowledge about Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only JST 210 or REL 210
REL	211	Jews and Judaism in America	Chronological analysis of Jews and Judaism in American history and letters.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Credit is allowed for only HST 211 or JST 211 or REL 211
REL	225	African American Religion	Introduces the history and development of the African American religious tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	
REL	230	Introduction to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST, JST or REL 230
REL	231	Biblical Hebrew III	Advanced study of Biblical Hebrew. Deepens understanding of the grammar and composition of the Hebrew Bible. Translates texts of different literary genres (narrative, legal, poetic, prophetic) and different periods. Introduces the basic principles of textual criticism and different approaches to interpret the texts of the Hebrew Bible.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II) with C or better; Credit is allowed for only HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III)
REL	232	Biblical Hebrew IV	Addresses advanced topics in Biblical Hebrew grammar and interpretation. The first half of the semester is devoted to texts from the Hebrew Bible; the second half on extra-biblical texts written in ancient Hebrew (for example: Dead Sea Scrolls, Rabbinic texts, ancient Hebrew poetry). Topics and texts change annually.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III) with C or better; Credit is allowed for only HEB, JST, REL 232 or HEB 294 (Biblical Hebrew IV)
REL	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
REL	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
REL	245	Introduction to South Asia	Provides an introduction to the history and major contemporary political, economic, social, religious and cultural features of the South Asia region at large and of selected South Asian nations in particular.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HST 245 or POS 245 or REL 245 or SGS 245 or SLC 245
REL	260	Introduction to Islam	Examines Islamic beliefs, ceremonies, festivals, and institutions. Assumes no prior knowledge about Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	
REL	270	Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	
REL	270	Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
REL	282	PreHispanic Native Am Wrlview	Surveys cosmological traditions of indigenous civilizations on the Pre-Columbian American continents	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
REL	287	Topics in Film, Media, and Religion	Explores specialized topics in the study of film, media and religion. Analyzes how religious values, identities and practices related to various cultural traditions are constructed, communicated and presented through films and media.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Credit is allowed for only FMS 287 or REL 287
REL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
REL	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
REL	300	The Future of Religions	Critical theorists of modern religious and secular beliefs argued that both theism and atheism have had their martyrs and tyrants. Nietzsche proclaimed "God" of the West dead, Marx unmasked religion as opium for the oppressed masses, and Freud analyzed religious future as an unconscious illusion. The future of secular progress has become equally suspect in the wake of the Holocaust, Hiroshima, the gulags, the killing fields of Cambodia, Rwanda. Globally motivated terror revealed itself as capable of religious as much secular justifications. The future of faith and reason has become a doubly open theoretical and practical question in philosophy, religious studies, literary study, critical theory, cultural and gender studies, and all sciences. Applies theoretical and methodological tools to critically exam beliefs, practices, and communities and their role in both generating and transforming the ethical and spiritual discontents of the global age.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; Credit is allowed for only HON 394 (The Future of Religions), PHI 303 or REL 300
REL	301	Comparative Mysticism	Comparative examination of Eastern and Western mystical traditions from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	307	Approaches to Religion	Examines the intellectual history of academic study of religion through various theoretical approaches, major themes, and thinkers.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Religious Studies student; ENG 102, 105 or 108 with C or better; REL 207 with C or better
REL	310	Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	310	Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	311	Israeli Society and Culture	Different partitions of the Israeli society, based on ethnic origin, by religious affiliation or by political association. Depicts how Israel is an absorbing immigration state. Israel is a welfare state and the course covers aspects of a welfare state, such as health, retirement, public transportation, art, higher education and more.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better. Credit is allowed for only HEB 348 or HEB 394 (Israeli Culture and Society) or JST 348 or REL 311 or SLC 348
REL	312	History and Memory of the Holocaust	In-depth study of the history of the genocide of Jews, the rise of modern antisemitism within the context of Nazi Germany, and the memory and memorialization of the Holocaust post 1945.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 369 or JST 369 or REL 312 or HST 304 (Shoah: History, Memory, and Representation) or HST 394 (History of the Holocaust)
REL	313	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
REL	314	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
REL	314	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
REL	315	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST or REL 315
REL	315	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST or REL 315

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
REL	316	Literary Readings of the Hebrew Bible	Literary analysis of two of the main genres of the Hebrew Bible: narrative art and poetry. Students learn the main literary conventions of biblical prose and poetry, and how these conventions are applied or subverted. Each class comprises the study of a literary aspect, close readings, and thematic discussions. Biblical texts are read only in translation. They are situated in the religious, literary and artistic traditions that have developed on their basis.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only ENG 316, HEB 316, JST 316, REL 316 or HEB 394 (Literary Readings of the Bible)
REL	317	Introduction to Rabbinic Judaism	Historical analysis of the thought, literature, and institutions of rabbinic Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST 317 or REL 317
REL	318	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST 318, REL 318 or SOC 375
REL	319	Religion, Violence and America	In-depth study of ways in which religion and violence have shaped American history, culture and identity.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only REL 319 or 394 (Religion, Violence & America)
REL	320	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	320	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	320	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	321	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	321	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	321	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	323	African American Religion: A Biographical Approach	Examines the experiences, motivations, and contributions of a number of figures associated with African American religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	324	Spirituals and the Blues	Multidisciplinary exploration of the African American religious and musical response to the North American diaspora experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	326	U.S. Latino Religion and Culture	U.S. Latino and Latin American religious history with special attention to what have become Hispanic mestizo hybrid cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only TCL 328 or REL 326
REL	330	Native American Worldviews	Presents worldviews through the art, architecture, writing, mythology, ritual and folklore of tribes in Native America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	Prerequisite(s): minimum 24 hours; ENG 102, 105, or 108 with C or better
REL	331	History of Native American Religions	Explores the role of religion in Native American history, including missionization; adaptation; and prophetic, messianic and religious revitalization movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 24 hours
REL	332	South American Indian Religions	Introduces the sacred stories, ceremonies, and beliefs of Native South American peoples in their historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): minimum 30 hours; ENG 102, 105, or 108 with C or better
REL	338	The Daoist Bible: Daode jing	At 5,000 words, the Daode Jing (Tao-te ching) is arguably the shortest religious book in the world. It is also the most widely translated, after the Christian Bible. Introduces the wisdom of the Old Boy, Laozi himself, and to some of the startlingly wide variety in which his short, gnomic utterances have been interpreted. No knowledge of Chinese required; all readings and lectures in English.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101, 105 or 107 with C or better; Credit is allowed for only CHI 338, 394 (Daoist Bible: The Dao De Jing) or REL 338
REL	343	Daoism	Introduces the history, doctrines, and practices of Taoism from the mid-second century CE up to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only CHI or REL 343

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
REL	344	Religion and Values in Japanese Life	Japanese values expressed in the life and annual cycles of the family, local and national identities, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	345	Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	345	Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	346	Chinese Religions	Examines the history and practices of Chinese religions with particular attention to culture, society, and history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	347	Peace and Conflict in India	In-depth analysis of major Indian religious traditions in historical and contemporary context, with attention to theologies, textual genres, doctrines, rituals, political and cultural expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 24 hours; Credit is allowed for only REL 347 or REL 394 (Religions of India)
REL	348	Religion and Culture in Southeast Asia	In-depth study of the religious diversity of Southeast Asia including Hinduism, Buddhism, Islam, Christianity, spirit cults and ancestral religions.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 24 hours; Credit is allowed for only REL 294 (Southeast Asia Global Crossroads) or REL 348
REL	350	Hinduism	Studies diverse forms of Hinduism through its institutions, literature, folklore, art, and architecture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	351	Buddhism	Doctrines, practices, and institutions of the Buddhist religion, emphasizing its role in the history and culture of Asian societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	352	Modern Buddhism	Focuses on modern issues related to Buddhism with special attention to colonialism, nationalism, the development of the nation-state and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only REL 352 or 394 (Modern Buddhism)
REL	354	Religions of Korea	Explores major religious traditions and folk religions in Korea. Covers diverse topics such as mythology, indigenous practices, doctrinal and meditation Buddhism, early and Neo-Confucianism and Christianity as well as the new religions of modern times. Discusses the development of religious ideas and practices in light of the political, cultural and social milieus. Focuses on cultural importation and adaptation as well as interaction and conflict among the different religious traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 24 hours; Credit is allowed for only KOR 354 or REL 354
REL	355	Japanese Cities and Cultures to 1800	Relations among ideas and literary, visual, and performing arts of the ancient aristocracy, medieval samurai, and early modern townspeople.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
REL	356	Buddhism in America	Examines diverse Buddhist traditions in the U.S. among Asian-American communities and converts to this religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	357	Theravada Buddhism in South and Southeast Asia	Examines Theravada Buddhist institutions, practices, and communities in ancient and contemporary south and southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	360	Ancient Greek Religion	Surveys ancient Greek religion, including its gods, ritual practices and festivals. Analyzes the development of the religion over time, and how both ancient and modern figures interpreted its meaning.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; Credit is allowed for only GRK 362, REL 360, SLC 362 or SLC 394 (Ancient Greek Religion)
REL	361	Roman Religion	Roman religion was never static, despite the best efforts of the Roman state to make it so. Understands the artifacts and procedures of Roman state cult from its earliest origins to the late empire, using ancient literary sources, archaeology throughout the ages and modern scholarly theories. Clarifies the forces that influenced development and change in Roman religion, both internal and external.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only LAT 361, REL 361, SLC 361 or SLC 394 (Roman Religion)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	362	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 372 (or AFS 372) or REL 362 or SGS 366 or AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History)
REL	363	Islam and World Affairs	Advanced examination of complex trends to construct the roles of Islam as a belief, its institutions, leaders and ordinary believers in contemporary world affairs. Studies different developments, including the rise of (political Islam) fundamentalism, to subsequent changes in the Muslim world, challenges Muslims face, and domestic and international conflicts. Challenges students to reconceptualize and broaden their understanding of the powerful presence of religion in this era of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 373 (or AFS 373) or REL 363
REL	364	Islam in Eurasia and Central Asia	Examines the changing role of Islam in Eurasia and Central Asia through history and interprets current transformations in the region.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only REL 364 or 394 (Islam in Eurasia & Central Asia)
REL	365	Islamic Civilization	Global historical survey of Islamic cultures and societies up to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105, or 108 with C or better
REL	366	Islam in the Modern World	Examines the worldwide transformations of Islamic religion, cultures, and societies in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	369	Women in Islam	Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
REL	369	Women in Islam	Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
REL	371	New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	
REL	371	New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
REL	372	Formation of the Christian Tradition	Origins, development, and expansion of Christianity; major themes and tensions from the New Testament world to the beginning of the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisite: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	373	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Minimum 24 hours; ENG 102, 105 or 108 with C or better or WST 100 or WST 300 with C or better; Credit is allowed for only JST 373, REL 373 or WST 372
REL	374	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours. Credit is allowed for only HST 361 or REL 374
REL	374	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours. Credit is allowed for only HST 361 or REL 374
REL	375	Lost Scriptures, Lost Christianities	Wide diversity of early Christianity and its suppressed and lost texts, which have been found in modern times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	376	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Pre-requisites: ENG 102, 105 or ENG 108 with C or better. Credit is allowed for only FMS 376 or REL 376
REL	377	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only HST 371 or REL 377

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REL	378	Religion, War and Peace	In-depth study of the religious, political and ethical dimensions of violence and war. Compares perspectives of Christian, Jewish and Islamic traditions as well as secular viewpoints.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only POS 378, REL 378 or 394 (Religion, War and Peace)
REL	379	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only REL 379 or SGS 343
REL	380	Theology of Terror	Historical background, theological foundations, and consequences of violent Islamist movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	381	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	
REL	381	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	
REL	381	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
REL	382	Magick, Religion and Science	Relationship and conflict among magic, religion and science in the West from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	384	The Bible and Archaeological Discoveries	Studies the Bible alongside the stories that architecture, pottery, metalwork, sculpture, tombs, and paintings of the ancient Near East have to tell. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only JST 384 or REL 384
REL	385	Contemporary Western Religious Thought	Introduces contemporary Jewish and Christian thought. Topics include religion and politics, problem of evil, interpretations of God, and feminist theology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	386	America and the Holocaust	Analyzes the historical and sociopolitical factors that shaped U.S. policy decisions regarding Germany's assault on Europe's Jews.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU or SB	
REL	387	Religion and Conflict: Theories and Cases	In-depth study of religion and conflict across multiple traditions and regions.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 24 hours; Credit is allowed for only REL 387 or 394 (Religion and Conflict: Theories and Cases)
REL	388	Religion, Ethics, and International Politics	Religious and ethical dimensions of international politics. Addresses historical and contemporary ideas, movements, issues and events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only POS or REL 388
REL	390	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only REL 390 or WST 390
REL	390	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only REL 390 or WST 390
REL	390	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only REL 390 or WST 390
REL	391	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or ENG 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357 or PHI 391 or REL 391
REL	391	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: ENG 102, 105 or ENG 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357 or PHI 391 or REL 391
REL	393	Religion and Sexuality	Examines what issues are involved in incorporating sexuality into religion and how/why religious traditions seek to control sexuality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
REL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
REL	396	Women in the Bible	Uses feminist criticism to reconstruct the remarkable women who stand in the shadow of the patriarchy in the bible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only JST or REL 396
REL	401	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Credit is allowed for only IAS 401, MAS 598 (Sacred Scriptures & Social Choices) or REL 401
REL	405	Problems in Religious Studies	Selected topics in religious studies; involves students in research interests of instructor.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: REL 307 with C or better; Religious Studies major
REL	406	Religious Studies Capstone I	Develops skills necessary for conducting and presenting in-depth research in the field of religious studies.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Prerequisite(s): REL 307 with C or better; Religious Studies major; senior standing
REL	407	Religious Studies Capstone II	Uses previously developed research to produce original research project in religious studies.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	2		Prerequisite(s): REL 406
REL	410	Judaism in Modern Times	Variety of expressions of Judaism and Jewishness in the modern period. Topics may include American Judaism or religious responses to the Holocaust.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	411	Judaism and the Beginnings of Christianity	Studies the beginnings of Christianity in relation to Judaism: their common context, the process of their distinction and their mutual influence. Through a historical and thematic approach, explores the parallel construction of Jewish and Christian identities. Combines readings from primary sources (Hellenistic Judaism, Qumran, New Testament, Early Christianity, Rabbinic Judaism) and up-to-date scholarly literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101 or 105 or 107 or 108 or HST 100 or 102 or REL 100 or SLC 142 or 202 with C or better; Credit is allowed for only HEB/JST/REL 411 or HEB 394 (Judaism and the Origins of Christianity) or HEB 494 (Judeo-Hellenistic Literature)
REL	420	Religion in American Life and Thought	Influence of religion on American society, culture, and ideas; the distinctive character of religion in America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
REL	427	American Religious Thought	Thought of representative American religious thinkers, e.g., Jonathon Edwards, William Ellery Channing, Horace Bushnell, and Reinhold Niebuhr.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	430	Shamans and Mesoamerica	Analyzes process of religious hybridization in Mesoamerica; examines symbolic interpretations of Amerindian religious practice and cosmological concepts of Mesoamerican priests.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better
REL	460	Studies in Islamic Religion	Issues in the interpretation and understanding of Islamic texts, history, society, culture, and rituals. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	
REL	461	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AFR 480 (or AFS 480) or REL 461 or SGS 442
REL	470	Religion in the Middle Ages	Religious aspects of medieval life and thought; variety of forms of dissent, heresy, and reform movements from the 4th to 13th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	471	Reformation and Modern Christianity	Protestant Reformation to contemporary Christian movements; includes factors in the dissolution of the Medieval Christian synthesis, variety of reform movements and reformation patterns, Catholic counter-reform measures, formation of liberal theology, ecumenical movement, and the World Council of Churches.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	480	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L & G	Credit is allowed for only REL 480 or SGS 441
REL	482	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only JUS 473, POS 473 or REL 482
REL	483	Religion and Science	Investigates the correlation between science and religion as an interdisciplinary study from a historical perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
REL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: Minimum CUM GPA of 2.00

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REL	486	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
REL	490	Senior Thesis	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student.	N	RSC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
REL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
REL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
REL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Prerequisite(s): Barrett Honors student
REL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
REL	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
REL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		
REL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		
REL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
REL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
REL	500	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	501	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on classical texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	502	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on contemporary texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	585	Philosophical and Spiritual Issues in Death and Dying	From Plato to Maimonides to Heidegger to Kubler-Ross, scholars, clinicians, and spiritual writers have recognized that attitudes about death and dying contribute to understandings of human existence. Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to integration of body-mind-spirit, this course introduces basic concepts and practices of care ethics and spirituality. Focuses on relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. Theoretically, the course is inter-faith in approach, holistic in scope, and specialized in content. Practically, students examine real-life issues in care ethics and spirituality from multiple perspectives.	N	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3-9		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MAS, PHI 550 or REL 585
REL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		

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REL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
REL	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
REL	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		
REL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	603	Teaching World Religions	Seminar designed to prepare participants to teach a course similar to ASU's REL 100.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Phd or Masters student in Religious Studies
REL	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
REL	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		
REL	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
ROM	101	Elementary Romanian	Basic grammar with intensive drills in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
ROM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	201	Intermediate Romanian	Continuation of ROM 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
ROM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	313	Romanian Composition and Conversation	Develops skills in written Romanian and correct oral expression. Must be taken in sequence with ROM 314.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ROM 201

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ROM	314	Romanian Composition and Conversation	Continuation of ROM 313. Develops skills in written Romanian and correct oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ROM 313
ROM	411	Advanced Spoken and Written Romanian I	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ROM 101, 201, 313, 314 with C or better
ROM	412	Advanced Spoken and Written Romanian II	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ROM 101, 201, 313, 314, & ROM 411 with C or better
ROM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ROM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	101	Elementary Russian	Structural grammar and basic vocabulary. Introduces and reinforces aural/oral reading and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
RUS	102	Elementary Russian	Structural grammar and basic vocabulary. Introduces and reinforces aural/oral reading and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
RUS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
RUS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	201	Intermediate Russian	Systematic review of grammar. Develops vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	
RUS	202	Intermediate Russian	Systematic review of grammar. Develops vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	
RUS	211	Basic Russian Conversation	Intensive aural/oral drill to supplement reading and grammatical skills acquired in RUS 101, 102, 201, and 202. Required of Russian majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	
RUS	212	Basic Russian Conversation	See RUS 211.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	
RUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	311	Russian Composition and Conversation	Develops writing ability and oral expression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: RUS 202 with C or better
RUS	312	Russian Composition and Conversation	See RUS 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: RUS 202 with C or better
RUS	321	Foundations of Russian Literature	An in-depth study from Early Kievan religious writings and the medieval epic "The Lay of Igor's Host", to folklore and 18th Century literary movements in prose, poetry and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
RUS	322	Scandals and Scoundrels: The Nineteenth-Century Russian Novel	An in-depth study of the Golden Age of Russian literature, including novels of Pushkin, Lermontov, Gogol, Khvoshchinskaia, Turgenev, Dostoevsky, Tolstoy, and Chekhov. Taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
RUS	323	Russian Literature and Revolution: The Twentieth Century	An in-depth study of 20th-Century Russian prose and poetry by Zinovieva-Annibal, Gorky, Bely, Babel, Mayakovsky, Platonov, Pasternak, Erofeev, Petrushevskiaia, and other writers. Taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Pre-requisites: ENG 102, 105 or 108; Credit is allowed for only RUS or SLC 323
RUS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	411	Advanced Composition and Conversation I	Improves aural discrimination and self-expression in oral and written skills, emphasizing vocabulary building. Subject materials drawn from current post-Soviet-Russian publications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: RUS 312 with C or better
RUS	412	Advanced Composition and Conversation II	See RUS 411.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: RUS 312 with C or better

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RUS	421	Pushkin	Pushkin's poetry, plays, and prose fiction, including Eugene Onegin, The Little Tragedies, Tales of Belkin, Queen of Spades and The Captain's Daughter. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	
RUS	423	Dostoevsky and Tolstoy	An in-depth study of Dostoevsky's and Tolstoy's major works, including "Crime and Punishment", "Brothers Karamazov", and "Ana Karenina". Taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
RUS	424	Tolstoy and War and Peace in Russian Literature and Cinema	In English, course includes Tolstoy's War and Peace, the Sebastopol Tales, and Hadji Murad; Babel's Red Cavalry (Russian Civil War); and classic films of War and Peace, World War II, and the war in the Caucasus.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
RUS	425	Chekhov and Russian Drama	An in-depth study of Chekhov's major works, representative short stories and major plays, including "The Cherry Orchard" and "Three Sisters". Taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only RUS or THE 425
RUS	430	Russian Short Story	Detailed study of representative works of the Russian short story genre. Includes authors from both Imperial and Soviet Russia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: RUS 312 with C or better
RUS	439	Art in Exile: Vladimir Vladimirovich Nabokov	In English. The scandalous success of Lolita (1955) allowed Vladimir Nabokov to retire from teaching at Cornell University and move to Switzerland to devote himself to fiction, translation, criticism and lepidoptery. This was only one of the many metamorphoses that Nabokov, a Russian noble, underwent while in exile, moving from Russia to the Crimea, Cambridge UK, Berlin, Paris, Cambridge MA, Ithaca, Hollywood and finally Montreux. Examines the Russian roots of Nabokov's Russian (in translation) and American novels about exile: his first novel, Mary (1926), The Defense (1929), Glory (1932), and his tribute to 19th-century Russian literature, The Gift (1938), which he considered his greatest Russian novel. These are followed by Lolita (1955), Pnin (1957) and Pale Fire (1962), his memoirs, Speak, Memory (1966), and some essays and short stories. Films include Lolita by Stanley Kubrick (1962) and Adrian Lyne (1997).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only RUS 439 or SLC 439 or ENG/RUS/SLC 494 (Art in Exile: Vladimir Vladimirovich Nabokov)
RUS	440	Russian Mass Media	Explores various aspects of modern Russian life through printed mass media, especially Internet media sources, and helps to develop advanced spoken, listening, reading and written skills in Russian. Students work with live television news broadcasts and investigate the most important general sources of electronic information, including electronic newspapers and the main Russian Web sites on a wide range of issues such as culture and the arts, government and politics, business and economics, armed conflicts, and accidents and catastrophes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): RUS 211; 212 with C or better. Credit is allowed for only RUS 440 or RUS 494 (Russian Mass Media)
RUS	441	Survey of Russian Culture	Interplay of artistic, social, and political forces in the development of Russian culture from the Kievan period to the present. Exclusive use of Russian language source materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G & H	Pre-requisites: RUS 312 with C or better
RUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
RUS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
RUS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
RUS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	495	Russian for Heritage Speakers	Generates professional proficiency by developing advanced communicative and written competency in standard literary Russian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
RUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
RUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
RUS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
RUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SAO	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SAO	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	196	Study Abroad Office Placeholder	Reserved for undergraduate participants in Study Abroad Office (SAO) Partnership and Exchange study abroad programs. This placeholder course remains on the student's academic record until the student's record is updated by SAO following the completion of the student's study abroad program. This course is then dropped and replaced with the ASU courses, credits, and grades equivalent to the coursework completed abroad. Students must register for at least the number of credits equivalent to full-time study at ASU (i.e., 12 hours during the fall and spring semesters, or 1-6 hours during the summer session). Students participating in an SAO Partnership program must register for the topic "SAO: Study Abroad Program"; participants in an SAO Exchange Program must register for the topic "SAO: Exchange Program." NOTE: This placeholder course is not an indication of the level of coursework or the total number of credits the student may complete abroad. Acceptance to an ASU Study Abroad Office program is required.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Office of the Provost	Office of the Provost	1-12		
SAO	494	International Program Courses	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	596	Study Abroad Office Placeholder	Reserved for graduate participants in Study Abroad Office (SAO) Partnership and Exchange study abroad programs. This placeholder course remains on the student's academic record until the student's record is updated following the completion of the student's study abroad program. This course is then dropped and replaced with the ASU courses, credits, and grades equivalent to the coursework completed abroad. Students must register for at least the number of credits equivalent to full-time study at ASU (i.e., 9 hours during the fall and spring semesters, or 1-6 hours during the summer session). Students participating in an SAO Partnership program must register for the topic "SAO: Study Abroad Program"; participants in an SAO Exchange Program must register for the topic "SAO: Exchange Program." NOTE: This placeholder course is not an indication of the level of coursework or the total number of credits the student may complete abroad. Acceptance to a Study Abroad program is required.	N	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	598	International Program Courses	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SBS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SBS	200	Introduction to Social and Behavioral Sciences	Overview of the social and behavioral sciences, indicating their contributions to society and emphasizing interdisciplinary integration	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SBS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SBS	300	Careers in Psychology	Professional and academic careers in psychology, with a focus on both career and adult development. Provides opportunities to enhance self-assessment and evaluation strategies for both academic planning and postbaccalaureate professional pursuits while also addressing current issues that affect us at any stage of development.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 45 hours
SBS	301	Cultural Diversity	Critical analysis of the complexities of the cultural politics of difference in the contemporary United States. Through interdisciplinary and comparative study, examines a range of theoretical and public/popular cultural discourses about the cultural contributions, experiences, perspectives of, by, and about U.S. residents of diverse racial, ethnic, class, gender, sexual, and transnational origins or identities. Analyzes the social conditions and historical precedents that have shaped current diversity concepts and debates, deepening knowledge and understanding of multiple perspectives on these issues and their relevance to social and behavioral sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(L or SB) & C	Pre-requisites: Minimum Junior standing; ENG 102, 105 or 108 with C or better
SBS	302	Qualitative Methods	Basic methodological issues in the systematic application of qualitative analysis of human social life. Surveys range of qualitative methods used by social and behavioral scientists.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SBS	303	Quantitative Methods	Concepts underlying design and implementation of quantitative research methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	304	Social Statistics I	Statistical techniques of the social and behavioral sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	CS	
SBS	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
SBS	342	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB, SBS or SOC 342
SBS	356	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356
SBS	374	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only ASB, POS, SBS or SOC 374
SBS	389	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 389 or SBS 389 or SOC 389
SBS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SBS	404	Social Statistics II: Multivariate Analysis	Analysis of variance, multiple regression, dummy variable regression, path analysis, and related topics. Computer application to problem solving.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	CS	Pre-requisites: SBS 303 with C or better; SBS 304 with C or better
SBS	410	Topics in Identity/Difference	Topics which focus on race/ethnic, gender, sexual or cultural identity/difference. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	430	Topics in Power/Knowledge	Selected topics concerning the effects of political and social institutions on perceptions of politics and political culture. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	440	Family Studies	Theoretical frameworks for analyzing the development of family systems. Impact of social and economic conditions on family forms. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	447	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB, POS or SBS 447
SBS	450	Topics in Local/Global	Examines links among social, political, economic changes at local, national, global levels. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
SBS	460	Urban Studies	Studies local and global urban issues such as social geography, political economy, culture and social space, urban social diversity.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours. Credit is allowed for only ASB 442 or SBS 460
SBS	480	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	Credit is allowed for only POS 480, SBS 480, CMN 598 (Global Justice), JHR 598 (Global Justice) or MAS 598 (Global Justice)
SBS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
SBS	490	Senior Thesis I	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. First part of a six-semester-hour sequence, followed by SBS 491.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	491	Senior Thesis II	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. Second part of a six-semester-hour sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
SBS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
SBS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SBS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-7	L	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SBS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
SBS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SCM	300	Global Supply Operations	Explores modern global integrated supply chain management. Covers traditional supply chain topics such as procurement, inventory management, operations, quality management, logistics and transportation. Also discusses issues related to sustainability, humanitarian logistics, ethical business practices and supply chain analytics in the context of evolving supply chains around the world. Students discover how business processes, performance metrics and modern supply chain IT tools aid in the management and growth of effective and efficient supply chains.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prereqs: WPC or Nonbus major with C or better: ACC 231, 232, 261; CIS 105, 236, CON 251; ECN 221, 231, IEE 380, STP 280; MAT 211, 266, 271; min 2.5 GPA OR Egr Mgmt major: CSE 110; IEE 380; MAT 266; Coreqs: ACC 241, 242, 271; Credit for OPM 301 or SCM 300
SCM	301	Introduction to Modern Global Supply Chain Management	Examines the purchasing, operations, and logistics functions from the customer, producer, and employer perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): non-Business major; minimum 2.00 ASU cumulative GPA; minimum 56 earned hours. Credit is allowed for only SCM 300 or SCM 301
SCM	303	Honors Global Supply Operations	Provides an overview of supply chain management, specifically for Barrett Honors students. Explains principles and concepts from a managerial perspective and how they are used for decision making. Course topics include supply management, operations management and logistics management as applied to a supply chain system. Discusses planning, forecasting, performance measurement and improvement, and collaboration from the perspective of providing excellent customer service. Current topics of interest include the impact of sustainability, security and globalization on managing today's supply chains. Class methodology focuses on an open-forum discussion of principles and a detailed analysis of case studies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey School of Business Honors student; ECN 221 or 231 with C or better; Pre- or corequisite(s): ACC 241 or 242 or 271
SCM	314	Analytics for Logistics	Focuses on practical tools for real-world decision making.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey BA or BS major; SCM 300 or SCM 303 with C or better
SCM	315	Business Decision Models	Introduces quantitative tools used to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisites: SCM 300 or SCM 303 with C or better
SCM	344	Applied Logistics Management	Presents a synthesis of the principles in logistics (and supply chain) activities emphasizing the operation and integration of activities such as transportation, inventory, warehousing, facility location, customer service, packaging and materials handling.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre- or corequisite(s): SCM 314 with C or better if completed
SCM	345	Logistics Management	Explores the many areas of supply chain management; in each case the logistics view is described and understood. Emphasizes movement of product/material, information and money in each section.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey Supply Chain Management BS major; Pre- or corequisite(s): SCM 315 with C or better if completed
SCM	354	Procurement of Services	Management of the supply function for logistics-based organizations. Allows students to better understand the nature of procuring a service, contracting that service and establishing appropriate performance metrics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): SCM 300 or SCM 303 with C or better
SCM	355	Supply Management	Management of the supply function, including organization, procedures, supplier selection, quality, inventory decisions, and price determination.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3	L	Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 300 or 303 with C or better
SCM	385	Business & Sustainability I	Focuses on sustainability practices at the organizational level. Describes how business and consumer products impact our physical environment and the communities that they interact with, and identifies ways to measure and improve the sustainability of products and the supply chains that deliver them. Students will examine organizational practices with regard to sustainability, evaluate the impact of products and services on the environment, and explore a business case for sustainability.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): minimum 60 hours; SCM 300 or SOS 110 with C or better; Credit is allowed for only SCM or SOS 385

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SCM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
SCM	432	Planning and Control Systems for Supply Chain Management	At the core of all supply chain management processes and essential to the determination and direction of the flow of resources needed to produce goods and services. Uses Microsoft Excel for supporting analysis. Includes processes and methods to forecast, manage inventory, plan needed capacity, determine resources needed for production, determine priority and sequencing of activities, perform master scheduling and material requirements planning.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey Supply Chain Management BS major; SCM 315 with C or better; SCM 345 with C or better; Pre- or corequisite(s): SCM 355
SCM	440	Quality Management/Measurement	Provides a broad introduction to quality management frameworks and tools, with an emphasis on supply chain and operations management issues. Introduces modern quality management approaches including Total Quality Management, Lean and Six Sigma. Students learn how to define quality for a product or service, develop appropriate measurement systems, and apply statistical and systems thinking to control and improve the underlying processes. Covers quality awards and performance excellence programs and quality management systems such as the ISO 9000 family of standards.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey Business (Retail Management) BA or Supply Chain Management BS major; SCM 300 or 303 with C or better
SCM	445	Advanced Logistics Management	Logistics processes account for approximately 10% of U.S. GDP; therefore, the efficient and effective execution of these processes is critical to supply chain managers in corporations, government entities and nonprofit organizations. Includes an overview of the processes involved, a survey of the institutions and players in the processes, and the analytical tools to evaluate their efficiency and effectiveness.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): SCM 344 with C or better
SCM	455	Research and Negotiation	Supply management ensures an organization has resources (i.e., materials, services, equipment) to deliver on promises to stakeholders. This happens by strategically designing supply systems for categories of spend and creating favorable supply agreements. A real-world class project and a real-time contract negotiation simulation helps students understand (1) the relationship among organizational, supply management and purchase category objectives; (2) frameworks and tools to analyze the supply conditions of a category, specifically spend analysis, market/demand analysis and price/cost analysis; (3) how to develop category strategies to ensure adequate and highest value resource supply into the future; (4) the translation of category strategies into manageable supply contracts; and (5) the requisite skills and processes for planning and executing successful contract negotiations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey Supply Chain Management BS major; SCM 355 with C or better
SCM	463	Global Supply Chain Management	With increased globalization and offshore sourcing, global supply chain management is becoming an important issue for many businesses. Like traditional supply chain management, the underlying factors behind the trend are reducing the costs of procurement and decreasing the risks related to purchasing activities. The big difference is that global supply chain management involves a company's worldwide interests and suppliers rather than simply a local or national orientation. Enables students to appreciate the challenges of operating supply chains across international boundaries including how to manage various salient issues including sociocultural, economic, technological and political factors that may shape decisions relating to sourcing and moving goods and services across different geographical boundaries.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3	G	Prerequisite(s): W.P. Carey BA or BS major; SCM 300 or 303 with C or better
SCM	479	Supply Chain Strategy	Discusses the management of supply chains at the strategic level and from a systems point of view. Views key supply chain functions, drivers and metrics within an integrated system. Topics include network design, innovation, sustainability, coordination and management of the critical areas of the supply chain. Class methodology focuses on an open-forum discussion of supply chain strategy and a detailed analysis of case studies. Student teams investigate and report on current news and trends in supply chain management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		L Prerequisite(s): W.P. Carey Supply Chain Management BS major; SCM 355 with C or better; SCM 432 with C or better
SCM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	485	Business and Sustainability II	Exposes students to a variety of ideas, concepts, theories, and models concerning sustainable technologies. Students learn to apply a systematic research process in order to assess a technology with potentially positive sustainability attributes; perform hotspot analysis on a technology in order to understand key environmental and social issues; forecast the future of a sustainable technology through application of technology forecasting models; predict how sustainable technologies are likely to get successfully adopted and diffused.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisites: SCM 385 or SOS 385 with C or better. Credit is allowed for only SCM 485, SCM 494 (Business and Sustainability II) or SOS 485
SCM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-6		L Prerequisite(s): Barrett Honors student
SCM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Pre-requisite(s): Minimum 60 hours
SCM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		Prerequisite(s): Barrett Honors student

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SCM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-7		
SCM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
SCM	502	Operations and Supply Management	Contemporary management issues, including environmental, project, and supply chain management; new product development; quality control; TQM.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey MBA students
SCM	511	Integrated Supply Chain Management	Management of sourcing, operations, and logistics as an integrated process.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	515	Decision Models for Supply Chain Management	Decision modeling approaches for supply chain management such as optimization, simulation, and decision analysis. Emphasizes spreadsheet-oriented approaches.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	516	Introduction to Applied Analytics	Provides a solid foundation and deeper understanding of the use of quantitative modeling tools and techniques to solve problems faced in modern supply chains. Uses Excel workbooks to implement the appropriate quantitative methods, including forecasting demand, determining the capacity of a manufacturing line and the cycle times of parts being processed on the line, and methods to manage inventory.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): Business Analytics MS major
SCM	517	Data-Driven Quality Management	Addresses the use of analytics tools and techniques to enhance the ability of quality management approaches to improve processes. Introduces modern quality management approaches including six sigma and design for six sigma. Covers the define, measure, analyze, improve and control (DMAIC) improvement cycle; the core process used to drive six sigma projects. DMAIC refers to a data-driven improvement cycle used for improving, optimizing and stabilizing business processes and designs. Provides an analytics roadmap to help users work through the DMAIC problem-solving process.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): Business Analytics MS major
SCM	518	Analytical Decision Modeling I	Covers the skills and knowledge necessary for mastery of the use of quantitative modeling tools and techniques to support a variety of business decisions. Deterministic optimization techniques, including linear programming, nonlinear programming, integer programming, network models and a brief introduction to metaheuristics. Covers the use of these models for a variety of common business problems. Requires implementation of these models using Excel and standalone software. Studies how to ensure that these solutions work in a wide variety of situations (what-if analysis).	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): Business Analytics MS major
SCM	519	Analytical Decision Modeling II	Addresses the skills and knowledge necessary to model situations where uncertainty is an important factor. Covers models including decision trees, queuing theory, Monte Carlo simulation, discrete event simulation and stochastic optimization. Uses these models for a variety of common business problems. Requires implementation of these models using Excel and stand alone software. Studies how to ensure that these solutions work in a wide variety of situations (what-if analysis). Describes each of these methods in detail.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): Business Analytics MS major
SCM	520	Strategic Procurement	Applies the principles, philosophies, and processes of supply management to the purchasing management process on a global basis and to facilitate the continuous improvement of the purchasing management system.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisites: SCM 502 with C or better
SCM	521	Supply Management and Negotiation	Selecting, developing, and executing appropriate sourcing strategies and processes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	532	Supply Chain Cost and Design Issues	Strategic design and development of supply chains. Focus on cost-management tools applied to supply chain design and supplier management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	541	Logistics in the Supply Chain	Critical issues for customer perception of supply chain performance, including inventory planning, transportation, warehousing, information technology, and integrated logistics service.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	542	Logistics, Globalization, and Economic Development	Global trade, global networks and the influence those networks have on economic development worldwide. Exposes geographic, economic and sociopolitical perspectives on these issues and invites students to draw conclusions from an increasingly informed perspective.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisite: SCM 502 and 541; Co-requisite: SCM 515
SCM	545	Cases in Global Logistics	Capstone experience for students in the MS in Global Logistics program. Synthesizes learnings from previous courses and applies this learning to specific issues that have a major global logistics component.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisite: SCM 502, 515, 541 and 542
SCM	551	Operations Planning and Execution	Managing the conversion of raw materials to finished goods, including scheduling, work-in-process inventory management, and postponement/customization.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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SCM	581	Management of Technology and Innovation	Technology life cycles, technology forecasting, new product development process, innovation teams, innovation best practices.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SCM	587	Project Management	Planning, scheduling, and controlling of projects in R & D, manufacturing, construction, and services. Project selection, financial considerations, and resource management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SCM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	N	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1		
SCM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCN	205	Introduction to Tropical Ecology: A Cultural Exchange	To better understand the astonishing diversity of tropical ecosystems, students work together to investigate the ecology and cultures of Neotropical ecosystems: how they were formed and how they are changing.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Credit is allowed for only SCN 205 or SCN 305 or SCN 505 or SCN 294 (Costa Rican Language, Culture, Society) or SCN 294 (Tropical Ecosystems of Costa Rica)
SCN	209	Introduction to Environmental Education Project	Covers topics in environmental education that assist students with being able to learn about and investigate their environment in order to make intelligent and informed decisions.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		
SCN	250	Physical Science by Inquiry	Laboratory-based development of concepts and reasoning skills in the physical sciences. Emphasizes open-ended investigations, dialogues between the instructor and individual students, and small group discussions. Helps students think of physical science as an active process of discovery in which they can participate. Helps preservice teachers understand inquiry and develop inquiry skills. Liberal arts students gain experience in the scientific process. Useful for students who wish to improve their science preparation before taking further science courses. Forms foundation for scientific literacy.	N	LAB	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	4	SQ	Credit is allowed for only SCN 250 or 294 (Physical Science by Inquiry)
SCN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SCN	300	Foundations of Environmental Education	Introduces environmental education, including the philosophy, historical development, resource identification, curriculum development, field trips and other activities designed to provide the structure and development of the field of environmental education. Explores the antecedents to the present-day field and connects the field of environmental education to curricular programs that are an outgrowth of perceived and actual need in the field of environmental education.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
SCN	301	Ecology and Natural History of the Sonoran Desert	Overview of the plants, animals, and geology of the desert ecosystem based on the Arizona K-12 Science Standards. Provides students with basic knowledge of the Sonoran Desert characteristics and its relationship to the total school curriculum.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
SCN	302	Outdoor Education	Develops a meaningful framework for those who wish to enhance their skills in teaching about outdoor education and personal knowledge of the desert. Whether it be for personal challenge, leadership training or professional certification, outdoor education offers all participants the experience, inspiration and encouragement to live more sustainable lifestyles. The best thing you can do for the natural environment is to discover it then show it to others.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	

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SCN	303	Environmental Education Internship	Provides opportunities to learn more about natural sciences and local history; outdoor education and field trip course facilitation and training; individual and group development; facility care and maintenance including landscaping, gardening and carpentry; and the restoration and maintenance of the grounds and teaching materials. Supports and/or develops education projects and programs as outlined by the locations' Educational Outreach office. Various other tasks include: field trip coordination, development of curriculum and classroom materials, hands-on fieldwork, school outreach, off-site outreach events support, and Outdoor Education event support.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Prerequisite(s): Minimum 45 hours
SCN	304	Sonoran Desert Flora	Plants and plant communities support much of the diversity of life in the Sonoran Desert and the surrounding regions. Covers the fundamentals of ecology from the perspective of plants including population, community and ecosystem ecology. Also includes identification and classification of plants and plant communities in the Sonoran Desert region. Incorporates practical field exercises designed to acquaint the student with plant community analysis, classification and description.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours
SCN	305	Tropical Ecology: A Cultural Exchange	To better understand the astonishing diversity of tropical ecosystems. Investigates the ecology and cultures of Neotropical ecosystems: how they were formed and how they are changing. Introduces language, culture and society of people and communities in tropical countries of Central and South America. Also examines cultural perspectives and beliefs. Focuses on four areas: (1) background on history and present day society of Central or South America, introductory conversational Spanish for interacting with Central and South Americans; (2) living in Central and South America, community, family and education: visiting families and private and public schools; (3) debriefing and reflecting on Central and South America language and culture and (4) the location of Central and South America countries, the rain forests' impact on the world, climate, cultures and contributions to science.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only SCN 305 or SCN 494 (Tropical Ecosystems of Costa Rica)
SCN	307	Learning from Nature: Biomimicry and STEM	Introduces biomimicry, an emerging discipline that seeks to learn from nature to solve human problems. "Biomimicry" (from bios, meaning life, and mimesis, meaning to imitate) is a new discipline that studies nature's best ideas and then imitates these designs and processes to solve human problems. With an emphasis on getting outside and exploring the land around, focuses on observing, appreciating and learning from nature and natural systems in our local environment.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only SCN 307 or SCN 494 (Learning from Nature: Biomimicry & STEM)
SCN	400	Sustainability Science for Teachers	Explores the challenges of sustaining human health and well-being on Earth due to human exploitation of natural resources. Seeks sustainable solutions through science, technology and society acting at global and local levels. Covers diverse approaches used by scientists, scholars and practitioners to study and assess human-environment interactions pertaining to sustainability challenges and solutions. Focuses on how to teach sustainability concepts in the K-8 classroom.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only SCN 400 or SCN 401 or SCN 494 (Sustainability for the Elementary Teacher)
SCN	401	Sustainability Science, Technology, and Society	Explores the challenges of sustaining human health and well-being on Earth due to human exploitation of natural resources. Prepares students to think and engage critically with the world around them. Seeks sustainable solutions through science, technology and society acting at global and local levels. Uncovers diverse approaches used by scientists, scholars and practitioners to study and assess human-environment interactions pertaining to sustainability challenges and solutions.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): non-Teacher Preparation student; minimum junior standing; Credit is allowed for only SCN 400 or SCN 401 or SCN 494 (Sustainability Science, Technology, and Society)
SCN	411	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 411 or SCN 411
SCN	411	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 411 or SCN 411
SCN	411	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 411 or SCN 411
SCN	411	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 411 or SCN 411

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SCN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
SCN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SCN	501	Ecology and Natural History of the Sonoran Desert	Gives students an opportunity to study the common plants and animals of the southwest Sonoran Desert. Study also includes their distribution, adaptations, behavior and ecology. Also includes the physical geography and geology of the region.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	502	Outdoor Education	Ignites question, wonder and reflection related to the ways we educate ourselves and the next generations as stewards of this planet. Through lived experiences, classroom exercises, relevant readings, individual and group projects and activities, students gain a wider and deeper appreciation of ecological, sustainability and science education. Explores the historical and philosophical foundations of the diverse emphases and uses of outdoor, experiential education and place-based education.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	505	Tropical Ecology: A Cultural Exchange	To better understand the astonishing diversity of tropical ecosystems, students work together to investigate the ecology and cultures of Neotropical ecosystems: how they were formed and how they are changing.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	507	Learning from Nature: Biomimicry and STEM	Offers an introduction to biomimicry, an emerging discipline that seeks to learn from nature to solve human problem. "Biomimicry" (from bios, meaning life, and mimesis, meaning to imitate) is a new discipline that studies nature's best ideas and then imitates these designs and processes to solve human problems. With an emphasis on getting outside and exploring the land, focuses on observing, appreciating and learning from nature and natural systems in our local environment.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	508	Urban Environmental Education	Environmental education and educators translate the complex web of earth systems science, sustainability, environmental issues and environmental change for the public. Gives students an opportunity to understand and experience the interface between humans and the planet to facilitate ecological literacy and ecologically responsible behavior. Assists in becoming more sensitive to and aware of earth systems and environmental change and also provides the knowledge, skills and motivation for understanding sustainable living in the urban environment.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	509	Environmental Education Project	Covers topics in environmental education that assist students with being able to learn about and investigate their environment in order to make intelligent and informed decisions.	Y	LEL	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	588	Solar Energy Colloquium	Discussion-oriented class focusing on topical issues in solar energy. Knowledge of thermodynamics or electric power systems is recommended to succeed in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	3		Prerequisites: Graduate Engineering major; credit is allowed for only MAE 588 or SEC 588
SEC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		
SEC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		
SEC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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SEC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-4		
SEC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		
SEC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report or publication. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	784	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		
SEC	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	111	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1		
SED	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SED	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SED	322	Classroom Leadership in Secondary Schools	Theories and practices for managing and maintaining secondary classrooms for learning; strategies for home/school communication; and leadership roles for teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Prerequisite(s): admission to the Professional Program
SED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): admission to the Professional Program
SED	396	Clinical Experience I	Applies course content in middle/secondary setting grades 6-12. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): admission to the Professional Program
SED	397	Clinical Experience II	Applies course content in a middle/secondary school setting grades 6-12. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-1		Prerequisite(s): admission to the Professional Program
SED	398	Clinical Experience	Applies course content in middle/secondary setting grades 6-12. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): admission to the Professional Program
SED	464	Middle-School Curr/Org	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SED	478	Student Teaching: Secondary Education (Grades 6-12)	Student teaching in middle/secondary setting grades 6-12: synthesized experience in curriculum, instruction, assessment and classroom management.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-15		Prerequisite(s): admission to the Professional Program
SED	480	Special Methods of Teaching Social Studies	Interdisciplinary approaches; production and collection of materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SED	481	English Teaching Methods for Secondary Schools	Instructional, organizational, and presentation methods for English in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SED	482	Science Teaching Methods for Secondary Schools	Methods of instruction, organization, and assessment of science for secondary and middle grade schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): admission to the Professional Program
SED	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
SED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	496	Clinical Experience III	Applies course content in middle/secondary setting grades 6-12. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): admission to the Professional Program
SED	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): admission to the Professional Program
SED	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	501	Introduction to Effective Instruction	Introductory course for certification program in secondary education. Emphasizes developing basic classroom management, instruction, and evaluation. Includes a field assignment of at least 120 hours.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	511	English/Language Arts Teaching Methods in Secondary School	Instructional, organizational, and presentation methods. This course, which focuses on the general content and pedagogy of Secondary English/Language Arts, is aligned directly with the State of Arizona Professional Teaching Standards and NCTE standards for teaching secondary English.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: enrolled in the MAC or InMAC program
SED	512	Math Teaching Methods for Secondary Schools	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: enrolled in the MAC or InMAC program
SED	513	Science Teaching Methods for Secondary School	Methods of instruction, organization, and assessment of science for secondary and middle grade schools. This course, which focuses on the general content and pedagogy of secondary science, is aligned directly with the State of Arizona Professional Teaching Standards and INTASC Principals.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: enrolled in the MAC or InMAC program
SED	520	Science Methods for Early Adolescence	Examines the interrelationships between theory and practice in teaching science.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	522	Secondary School Curriculum Development	Social processes, issues, principles, patterns, and procedures in curriculum development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
SED	533	Middle/Secondary Instruction, Management, and Assessment	Analyses of procedures, methods, techniques, and experiments in teaching in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Must be a graduate student
SED	544	Creating Classroom Climates	Emphasizes classroom management and instructional strategies for establishing positive classroom climates that facilitate learning. Includes field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	547	Teaching Mathematics in the Middle Grades (5-9)	Strategies and methodologies to teach mathematics in the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	560	Teaching Mathematics with Technology	Strategies and methodologies to teach mathematics with technology, focusing mainly on the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	561	Teaching Science with Technology	Strategies and methodologies for effective technology-enhanced science classrooms and improved learning. Models student-driven inquiry teaching throughout the course.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	567	Clinical Experience I	Applies course content in middle/secondary setting grades 6-12. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	576	Clinical Experience II	Applies course content in middle/secondary setting grades 6-12. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	578	Student Teaching: Secondary Education	Student teaching in middle/secondary setting grades 6-12; synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	579	Apprentice Teaching: Secondary Education (Grades 6-12)	Apprentice teaching in secondary school classrooms. Synthesized experience in classroom management, curriculum, instruction and assessment. Must be taken four times for a total of 12 semester hours.	N	PRA	Y	YGB	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	2-3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: postbaccalaureate undergraduate or graduate student (degree seeking or nondegree seeking)
SED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SED	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SEM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-3		
SEM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
SEM	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		
SEM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
SEM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		

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SEM	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		
SEM	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-15		Pre-requisites: Science & Engr of Materials PhD students
SEM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		
SEM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-15		Pre-requisites: Science & Engr of Materials PhD students
SER	100	Object-Oriented Software Development	Introduces problem solving with a state-of-the-art programming language. Expressions, statements, basic control flow and methods. Data, data aggregation and usage. Uses a structured personal software development process to implement solutions representative of common computing applications. Uses development kits for some course activities.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		
SER	101	Programming for Information Technology	Introduces problem solving with a state-of-the-art programming language. Expressions, statements, basic control flow and methods. Data, data aggregation and usage. Uses a structured personal software development process to implement solutions representative of common computing applications. Students create several small programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		
SER	102	Object-Oriented Programming for Information Technology	Introduces object-oriented programming, classes, objects, interfaces, encapsulation, inheritance, introduction to object-oriented design and object modeling, introduces data structures and collections. Project-based.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CSE 100 or CSE 110 or CST 100 or SER 100 or SER 101 with C or better
SER	105	Personal Computing Environment	Introduces computing devices and their ethical use for creativity, communication and organizing information; utilizes a range of devices and applications; program-ability for the end-user; approaches for organizing, sharing, securing and communicating information; managing a secure computing environment.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		
SER	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-3		
SER	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
SER	200	Core Data Structures with Object Oriented Programming	Design, implementation and use of core data structures; object-oriented software development: design, analysis and programming.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 100 or SER 100 with C or better; Credit is allowed for only ACO 102 or CSE 205 or CST 200 or SER 200
SER	215	Software Enterprise: Personal Process	Software engineering; personal software processes for individual professionalism; time and defect estimation, yield, and productivity. Software tools. Project based.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 200 or SER 200 with C or better
SER	216	Software Enterprise: Testing and Quality	Project-centered course covering testing and quality in software engineering; concepts, tools, and methods in testing and quality management; teamwork and communication in software engineering. Project based.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre- or corequisite(s) with C or better if completed: SER 215 and SER 222
SER	221	Programming Languages and Their Execution Environment	Introduces the fundamental programming language concepts of data, type, control, abstraction, and structure; software development and execution environments; programming language paradigms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 200 or SER 200 with C or better; Credit is allowed for only CST 220 or SER 221

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SER	222	Design and Analysis of Data Structures and Algorithms	Data structures and related algorithms for their specification, complexity analysis, implementation and application. Sorting and searching. Professional responsibilities that are part of program development, documentation and testing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 200 or SER 200 with C or better; MAT 243 with C or better; Credit is allowed for only CST 230 or SER 222
SER	232	Computer Systems Fundamentals I	Logic design, number systems and arithmetic, boolean algebra; digital systems components, and hardware description languages.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3	CS	Pre- or corequisite(s): CST 100 or SER 100 or SER 101; Mathematics Placement Test score of 50% or higher or MAT 170, 171, 210, 251, 265, or 270 with C or better if completed; Credit is allowed for only CST 150 or SER 232
SER	250	Microcomputer Architecture and Programming	Microcomputer architecture, instruction set, assembly language programming and debugging, I/O considerations, memory interface, peripherals and busses, exception/interrupt handling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 100 (or SER 100) with C or better; CST 150 or SER 232 with C or better
SER	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
SER	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	Z1	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student
SER	315	Software Enterprise: Design and Process	Software process from the design perspective. Engineering design process, user-centered design and software safety design. User interface, software architecture and design patterns and software design constraints.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 230 or SER 222 with C or better; Pre- or corequisite(s): SER 215 with C or better if completed
SER	316	Software Enterprise: Construction and Transition	Best practices in software construction in the context of a team project, including refactoring, defensive programming, unit testing, and configuration and release management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre- or corequisite(s): CST 315 or SER 315 with C or better if completed
SER	321	Principles of Distributed Software Systems	Design and implementation of distributed software components; process and memory management underlying software applications; sockets, protocols, threads, XML, serialization, reflection, security, and events.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 222 with C or better; Pre- or corequisite(s): SER 334 (or SER 234) with C or better if completed; Credit is allowed for only CST 420 or SER 321
SER	322	Principles of Database Management	Fundamental methods in modeling and managing data-oriented systems. Relational, object, and hierarchical data modeling techniques. Query languages including SQL. Semantics of transaction processing. Database system architectures including cloud-based, client-server, and embedded databases. Security and privacy issues. Modern trends in data management including managing data on the cloud, unstructured data type management, data mining, and business analytics, and NoSQL data management platforms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 222 with C or better; Credit is allowed for only CST 433 or CST 598 (Principles of Database Management) or IFT 433 or SER 322
SER	332	Introduction to Graphics and Game Development	Foundations of graphics as used in modern rendering and basic principles of the game development pipeline. Graphics and math concepts and their application in games, graphics and visualization.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 200 or SER 200 with C or better
SER	334	Operating Systems and Networks	Fundamentals of operating systems, process management, scheduling, synchronization techniques and file management. Network technology, topologies, protocols, application control; network and operating system security.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 250 or SER 250 with C or better; Pre- or corequisite(s): SER 222 with C or better if completed
SER	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
SER	401	Computing Capstone Project I	First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier coursework.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Applied Computer Science BS or Software Engineering BS major; senior standing or postbaccalaureate; CST 316 or SER 316 with C or better
SER	402	Computing Capstone Project II	Second half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier coursework.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 401 with C or better
SER	415	Software Enterprise: Inception and Elaboration	Third course in the four-course enterprise sequence. Students perform inception (project launch) and elaboration (requirements analysis) activities in project teams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3	L	Pre- or corequisite(s): CST 316 or SER 316 with C or better
SER	416	Software Enterprise: Project and Process Management	Project-centric course focusing on applying software process, project management, and technical leadership. Final course in the software enterprise sequence.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 415 or SER 415 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SER	421	Web-Based Applications and Mobile Systems	Distributed Web and mobile applications, their design, architecture and supporting technologies; user-interaction concepts and technologies; design and implementation of software servers for Web and mobile systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 321 with C or better
SER	422	Web Application Programming	Design and implementation of Web application. Languages, frameworks, technologies, tools and methods used to realize Web client and server solutions. Approaches for securing, testing as well as determining the quality and reliability of Web applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 433 or IFT 433 or SER 322 with C or better; SER 421 with C or better
SER	423	Mobile Systems	Mobile applications, their architecture, design, and supporting technologies; mobile device operating systems and frameworks; synchronizing mobile applications, support for inter-application data-exchange; accessing and manipulating special-purpose device capability such as location, orientation and input modality. Practices for securing mobile runtimes and optimizing run-time performance.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 421 with C or better
SER	431	Advanced Graphics	Topics in real-time rendering and graphics hardware. Uses graphics processing unit hardware to implement rendering of higher-order surfaces and special effects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 332 with C or better
SER	432	Game Engine Architecture	Functional requirements of a modern game engine architecture. Students work in teams to develop advanced features for a game engine.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 332 with C or better
SER	450	Computer Architecture	Price/performance analysis, instruction set design, RISC/CISC, processor design and implementation, pipelining, instruction-level parallelism, memory hierarchy, storage and I/O systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 250 or SER 250 with C or better
SER	456	Embedded Interfaces: Sensors and Actuators	Electromechanical sensors and electrical actuators, analog-to-digital and digital-to-analog conversion, hardware and software interfaces for embedded systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 150 or SER 232 with C or better; CST 200 or SER 200 with C or better
SER	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		
SER	486	Embedded C Programming	Programming concepts for embedded systems. Interfacing and controlling LED, LCD, keypads, buttons. Embedded OS concepts. Timers and interrupts. Serial communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 222 with C or better; SER 334 with C or better
SER	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student
SER	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Software Engineering	1-6	L	Prerequisite(s): Barrett Honors student
SER	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
SER	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-7		
SER	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-3		
SER	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	501	Advanced Data Structures and Algorithms	Advanced algorithms and how they are effectively applied to solve problems. Algorithm design, analysis, classification, optimization, and application. Practice implementing and employing algorithms to solve realistic problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Fulton Engineering graduate student
SER	502	Emerging Languages and Programming Paradigms	Emerging programming languages, their design, description, implementation, and advanced features; API design, including facilities for creating secure distributed applications, facilities supporting software services, naming and composition; language paradigms and the resulting implications on execution; run-time systems and storage management; approaches to compilation and execution. Requires ability to program in an object-oriented programming language and knowledge of data structures, algorithms, and analysis.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Fulton Engineering graduate student
SER	515	Software Enterprise: Inception and Elaboration	Project-centric course focusing on the relationship of software processes to entrepreneurship and business processes; requirements specification and requirements analysis; study of the context and evolution of the software enterprise. The first of a two-semester sequence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Master of Computing Studies or Software Engineering MS student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SER	516	Software Enterprise: Project and Process Management	Project-centric course focusing on software process, project management, and technical leadership. Study of the context and evolution of software enterprise project management. The second of a two-semester sequence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 515
SER	517	Software Factory I	First in a two-semester capstone culminating experience for graduate students. Student teams work through concurrent product and service offering lifecycles in a project context. Covers concepts including opportunity assessment, risk management, technology evaluation, licensing models, resource planning, delivery models such as hosted, turnkey, and Software as a Service (SaaS), technology acquisition, outsourcing, governance, quality assurance, software certification, and continuous process improvement.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Masters of Computing Studies or Software Engineering MS student
SER	518	Software Factory II	Second in a two-semester capstone culminating experience for graduate students. Student teams work through concurrent product and service offering lifecycles in a project context. Covers concepts including opportunity assessment, risk management, technology evaluation, licensing models, resource planning, delivery models such as hosted, turnkey, and Software as a Service (SaaS), technology acquisition, outsourcing, governance, quality assurance, software certification, and continuous process improvement.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 517
SER	520	Computer Architecture	Basics of computer architecture. RTN, RISC, CISC concepts; computer arithmetic; ALUs; memory systems; I/O.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Fulton Schools of Engineering student; CST 364 (CET 364) OR Graduate, Non-Degree, or Post Bacc student
SER	533	Database-Centric Enterprise Applications Development	Solutions for enterprise software systems based on relational database technology. Persistence solutions in middleware frameworks. O/R, XML, and scalability issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0; CST 433
SER	540	Internet-Enabled Embedded Devices	Accessing hardware devices through Internet, including Applets, HTTP, custom byte streams, XML-RPC, SOAP. Building network-based applications that interface hardware.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 420 with C or better
SER	552	Digital Systems Design	Digital system design techniques and applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CST 452
SER	554	Distributed Computing	Topics in distributed systems, including communications, distributed operating systems, fault-tolerance, and performance issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	556	Distributed Applications for Windows Platforms	Distributed Web-based applications using Windows frameworks such as .NET. Essential components, XML, remoting, Web services, windows services, user interfaces.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); CST 420 with C or better
SER	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0
SER	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		
SER	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
SER	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SER	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Software Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Software Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SER	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Software Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	100	Introduction to Exploration	Science and engineering of Earth, solar system, and space exploration. Experimental design, engineering design; teaming; the professions of science and engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	CS	Prerequisite(s): Mathematics Placement Test with a score of 50% or higher or Pre- or corequisite(s): MAT 170 (or MAT 171, 210, 251, 265 or 270) with C or better if completed
SES	106	Habitable Worlds	Are we alone in the Universe? If so, why? If not, where are our cosmic cousins? Such questions, once the domain of science fiction, are on the verge of being answered with science facts. Astronomers are discovering planets around other stars. Planetary scientists are exploring the worlds in our solar system. Biologists are unlocking the secrets of metabolism and evolution. Geoscientists are determining how the Earth supports life. And as we struggle to build a sustainable future for ourselves, all of us are finding out how technologically advanced civilizations rise and how they might fall. This course surveys these topics. In the process, students master basic concepts from across the major areas of science and learn what makes the Earth a habitable world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4	SQ	
SES	111	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1		
SES	121	Earth, Solar System, and Universe I	Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth. Both SES 121 and SES 123 must be taken together to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	Prerequisite(s): Mathematics Placement Test with a score of 50% or higher or pre- or corequisite(s): MAT 170 (or MAT 171, 210, 251, 265 or 270) with C or better if completed
SES	122	Earth, Solar System, and Universe II	Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): SES 121 with C or better
SES	123	Earth, Solar System, and Universe Laboratory I	Studies astronomical and geological processes through observations and measurements. Requires field trips and evening telescopic observing. Both SES 121 and SES 123 must be taken together to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SQ	Pre/Corequisite(s): SES 121 with C or better if completed
SES	124	Earth, Solar System, and Universe Laboratory II	Studies astronomical and geological processes and life through observations and measurements. Requires field trips and evening telescopic observing.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): SES 123 with C or better. Pre- or corequisite(s): SES 122 with C or better if completed
SES	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
SES	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	311	Essentials of Astrobiology: Exploration for Life in the Universe	Origin and evolution of life on Earth. Strategies to explore for life in the cosmos. Possible field trips to explore regional geological analogues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): BIO 181 (188), CHM 113 or PHY 121; MAT 265 or 270
SES	330	Practical Electronics and Instrumentation	Applied principles of electronics and mechanical design as used by the modern instrument builder, using a systematic approach to the design process: Identify a scientific problem, develop specifications necessary to solve the problem, develop a prototype solution, test solution for plausibility, break down problem into components, design and build the solution then test in a relevant environment. Builds on introduction to circuits and engineering concepts from prerequisite courses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4		Pre-requisites: PHY 131 and 132 with C or better

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SES	350	Engineering Systems and Experimental Problem Solving	Introduces integration of scientific and engineering computational methods into scientific research and successful exploration. Provides an active, project-based environment for learning science and engineering by means of a common set of computational tools. Also provides a detailed overview of procedural and object-oriented programming with an emphasis on problem solving. Students solve problems by developing software in an interpreted language (Python). Problems may include visualizing data, interfacing with hardware, or solving numeric problems. Covers procedural programming concepts including data types, variables, control structures, arrays, and data I/O. Covers object-oriented programming concepts including object creation and use, object interaction, and the design of simple classes. Covers software engineering concepts including testing, incremental development, understanding requirements, and teamwork.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): MAT 267, 272 or 275; PHY 131 and 132 (or 151) with a grade of C or better
SES	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	405	Exploration Systems Engineering	Provides an introduction to systems engineering with an emphasis on the following topics: the systems engineering process, requirements, design fundamentals, subsystem fundamentals, trade studies, integration, technical reviews, case studies and ethics. Prepares the student for the capstone spacecraft/mission design course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): SES 330 and SES 350 with C or better
SES	410	Senior Exploration Project I	Design and development of an Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: ENG 101, ENG 105 or ENG 107; Senior standing
SES	411	Senior Exploration Project II	Continuation of SES 410. Development of Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: ENG 101, ENG 105 or ENG 107; SES 410
SES	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
SES	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Prerequisite(s): Barrett Honors student
SES	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
SES	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Prerequisite(s): minimum 45 hours
SES	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
SES	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SES	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SET	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		
SET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
SET	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		
SGS	101	Thinking Globally: The Individual and Authority	Examines the changing notions of the individual and authority over history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only SGS 101 or SGS 301
SGS	107	Religion and Globalization	Explores how different religions interact with the various processes of globalization, including how the world's major religions have been transformed by economic, political, cultural, and technological aspects of globalization. Topics include religious terrorism, human rights, religion, and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & G	Credit is allowed for only REL 107, 194 (Religion and Globalization) or SGS 107
SGS	111	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H & G	Credit is allowed for only HST 101 or SGS 111
SGS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
SGS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	202	Technology and Nature in World Settings	Examines changing interactions among humans and nature, geographic systems, global demography, and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	G	
SGS	203	Contemporary Global Trends	Gives a grounding in patterns of international politics and global social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
SGS	204	Professional Global Career Development	Orients the student to working in global contexts and to thinking critically about careers in the global arena. Focuses on working in organizational settings distinctly global. Three modules: nation-state, corporations, and working international organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
SGS	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	(HU or SB) & G	Pre-requisites: Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
SGS	245	Introduction to South Asia	Provides an introduction to the history and major contemporary political, economic, social, religious and cultural features of the South Asia region at large and of selected South Asian nations in particular.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HST 245 or POS 245 or REL 245 or SGS 245 or SLC 245
SGS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	301	Principles of Global Studies	Presents current debates about globalization and subjects these to critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only SGS 101 or SGS 301
SGS	303	Global Trends	Analyzes the process of globalization across boundaries through the investigation of the determinants and ramifications of globalization from the vantage of modern social sciences. Students are expected to conduct and articulate independent critical analyses toward a more in-depth understanding of this social phenomena, global history, and particularly the global economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Pre-requisites: Minimum 30 hours; ENG 102 with C or better

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SGS	305	Research Methods	Broad introduction to social science research methodology and design, particularly the methods used to analyze global problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	L	Pre-requisite: SGS 101 (or 301) with C or better; Credit is allowed for only POS 301 or SGS 305
SGS	310	Global Urban Systems	Comparative approach focuses on relationship between development of comparative urban systems and environmental impacts at local, regional, global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: SGS 101 or 301 with C or better
SGS	311	Urbanization in China	Explores contemporary and future Chinese urbanization from economic, built form, and environmental perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102 with C or better
SGS	315	Energy Policy	Examines the regulation of energy production and consumption in the U.S. at the federal, state and local levels. Identifies energy stakeholders in the U.S. and examines how they have shaped U.S. policies around energy. Explains past and current U.S. energy policies and how energy needs have shaped U.S. relations with other countries. Compares U.S. energy policies to that of other countries in the world, as well as how Arizona's energy policies compare to other states within the U.S.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only PAF 394 (Energy Policy) or POS 394 (Energy Policy) or SGS 315 or SGS 394 (Energy Policy) or SOS 315 or SOS 394 (Energy Policy)
SGS	320	Mechanisms of Governance	One of the fundamental issues in the social sciences concerns the problematic attainment of social order, which is the principal aim of governance. Presents the five principal mechanisms purported to account for social order, and illustrates these by providing empirical examples of each; includes film clips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102 with C or better
SGS	321	International Institutions and Global Governance	Provides an in-depth examination as to how the international community organizes itself, through international institutions, to deal with serious international issues, and how the institutions of international governance can be improved. Studies diverse examples of international institutions primarily from the perspective of international relations (IR) theory and the role of international law (IL).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only SGS 321 or 394 (International Institutions)
SGS	324	Negotiating Global Trade	Practical aspects of global trade including historic background, negotiations, supply chain, global terms, transportation, chartering, marine insurance, international arbitration, foreign exchange, letters of credit, barter, ethics, leadership, networking, country analysis and introduction to global management theories.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): minimum 45 hours or junior standing; Credit is allowed for only SGS 324 or SGS 394 (Global Trade in Real Time) or SGS 394 (Global Negotiations)
SGS	325	Globalization and Socio-Economic Justice	Addresses a trend producing increasing interconnectedness of economies and societies, as well as creating new conflicts and divisions. Provides greater understanding of global forces, as well as the effect of these forces on global economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 2.00 GPA. Credit is allowed for only JUS 325 or SGS 325
SGS	330	Globalization and the Environment: Problems and Solutions	Assesses the impact of globalization on the earth's environment. Examines such issues as biodiversity loss to pollution to urbanization to climate change, among others, and assess how globalization has driven, impacted or improved these environmental problems. Emphasis on understanding the social, political and economic factors that have contributed to global environmental change and the degree to which globalization processes are something 'new', as well as on examining the ability of communities, nations and transnational institutions to manage these global problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102, 105 or 108 with C or better; 30 completed hours
SGS	340	Violence, Conflict and Human Rights	Interdisciplinary examination of the evolution and role of human rights in global society. Major themes include the political struggles over enforcement of human rights and curtailment of violence against individuals. Pays close attention to the role of non-governmental organizations and diplomacy in advancing human rights norms and also examines America's role in human rights, both at home and abroad. Focuses on the causes and effects of violence and human rights abuses in the context of torture, the "war on terror," and crimes against humanity.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: ENG 102, 105 or 108; SGS 101 (or 301); 30 minimum hours; Credit is allowed for only SGS 340 or 394 (Violence/Conflict/Human Right)
SGS	341	Humanitarian Crisis and International Intervention	Focuses on political, legal, and ethical issues raised by decision about military interventions in genocide and humanitarian crisis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
SGS	343	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only SGS 343 or REL 379
SGS	344	Facing the Past: Truth, Memory, Denial After Atrocities	The past has never been so present as it is today. Over the last two decades, the world has shown an increasing interest in uncovering the hidden and forgotten histories of state-sponsored atrocities and acknowledging the fate of victims and survivors. Studies this movement for the recovery of truth, memory, and moral responsibility includes a wide range of actors and takes a number of different forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		

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SGS	350	Economic Development and Globalization	Major issues and models in economic development. Studies development policy and foreign aid practiced since the 1970s and recent critique of these practices. Analyzes the mistakes made in the last 40 years, and potential for improving the practice of foreign aid. Contemporary issues in development economics, including the impacts of bad governance, foreign aid, corruption, war, military intervention and democracy on economic growth with emphasis on policy evaluations in health, education, microfinance and monitoring corruption.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only SGS 350 or 394 (Prin of Econ Dev Global)
SGS	360	Cultural Aspects of Globalization	Cultural aspects of globalization, starting with a theoretical discussion of what culture is and then weaving this discussion into an empirical examination of UNESCO's World Heritage program as a practical means of studying the role of culture in globalization. A number of questions guide our inquiry: What is culture? What forms does it take? Can culture be preserved? If so, what are the consequences? How is the UNESCO World Heritage Program structured? How does it conceive culture? What is its understanding of the global and the role of the local in it?	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only SGS 360 or 394 (Cultural Aspects of Globalization)
SGS	366	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 372 (or AFS 372) or REL 362 or SGS 366 or AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History)
SGS	381	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 391 or SGS 381
SGS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	401	Political Statistics	Basic concepts in statistics as they facilitate the description, explanation, and prediction of social and political phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	CS	Prerequisite(s): POS 301 or SGS 305 with C or better; Credit is allowed for only POS 401 or SGS 401
SGS	441	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	L & G	Credit is allowed for only REL 480 or SGS 441
SGS	442	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AFR 480 (or AFS 480) or REL 461 or SGS 442
SGS	454	Gender, Culture, and Development	In-depth analysis of gender roles related to health, family, work, education and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	(L or SB) & G	Prerequisite(s): WST 100 or 300 or minimum 45 hours; Credit is allowed for only SGS 454 or SOS 447 or TCL 447 or WST 447 or TCL 598 (Gender, Culture & Development)
SGS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
SGS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Prerequisite(s): Barrett Honors student
SGS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Prerequisite(s): Barrett Honors student
SGS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
SGS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Prerequisite(s): Barrett Honors student
SGS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7		
SGS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		

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SGS	501	Global Theory	Examines theoretical and analytical frameworks employed by institutions to frame action related to increased global uncertainty including economic, sociological, psychological, decision theory, gaming and institutional behavior frameworks. Uses case studies in key global issue areas such as climate change/natural hazards, energy security, urbanization, food security, security, failed states.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SGS	502	Global Institutions and Actors	Examines key types of global institutions, (1) multinational businesses, e.g., Toyota, (2) international development organizations, e.g., the World Bank, and (3) voluntary organizations, e.g., the Red Cross/Crescent, in terms of the roles that they play in shaping localized outcomes. Using case studies, explores the impact of international actors in terms of the power and influence that they exert through international treaties, standards, information diffusion, influence on local governments and other organizations, dissemination of international "best practice."	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SGS	503	Methods: Global Decision Making Under Uncertainty	Examines and critically assesses approaches and methods used in decision making and planning under uncertainty in global contexts, e.g., scenarios, SWOT, risk analysis, contingency planning, gaming, economic forecasting, anticipation-foresight techniques, decision making under complex conditions, and rapid assessment techniques. Explores the strengths and weaknesses of different approaches under varying conditions, synergies achievable through application of multiple methodologies, and normative assumptions underlying various methodologies. Students gain "hands-on" experience in the use of a variety of techniques through assignments based on real-world situations.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): SGS 501; SGS 502; Pre- or corequisite(s): SGS 504
SGS	504	The Individual As Decision Maker in Cross-Cultural Global Contexts	Focuses on the role of the Individual decision maker in cross-cultural contexts, acting in the context of globally engaged institutions. The individual is virtually always embedded in an institutional environment whether as manager, planner, advocate, frequently acting as part of a team. It is recognized that the various agents/stakeholders involved in addressing an issue, negotiating a deal, in a global context, almost invariably hold significantly different worldviews, cultural norms and decision-making styles. Deals with the individual decision maker in both public and private decision-making milieus. Discusses modes of intervention and initiative. Addresses issues of leadership, reconciliation of different decision-making modes, and acting effectively in cross-cultural environments. Emphasizes decision making under high uncertainty, using case studies, e.g., pending nationalizations or privatization.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): SGS 501; SGS 502; Pre- or corequisite(s): SGS 503
SGS	505	Preparation for the Global Field Project	Prepares students for the global field project. In addition to scheduled classes, each student meets with her/his advisor at regular intervals during the semester to prepare for the Global Field Project. During the semester, students prepare a work plan for their Global Field Project, including objectives of the exercise, specifications of deliverables. Network building is an important secondary objective, and development of an esprit de corps among Global Studies masters students.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): SGS 501; SGS 502; Pre- or corequisite(s): SGS 503; SGS 504
SHS	101	American Sign Language I	Basic receptive/expressive conversational skills; basic grammar and syntax rules. Orientation to deafness and deaf culture.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		
SHS	102	American Sign Language II	Further development of receptive/expressive conversation skills in ASL; finger spelling. Continued exploration of deaf culture.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): SHS 101 with C or better; taken within the past two years
SHS	105	Introduction to Human Communication Disorders	Introduces hearing, language, and speech problems in children and adults.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-3		Prerequisite(s): Freshmen; maximum 25 earned hours
SHS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-3		Prerequisite(s): Freshmen; maximum 25 earned hours
SHS	201	American Sign Language III	Continued development of fluency in ASL with emphasis on more abstract concepts and the ability to narrate events.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): SHS 102 with C or better and taken within the past two years
SHS	202	American Sign Language IV	Further development of fluency in ASL with emphasis on literature, folklore, and signing narratives with multiple characters.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): SHS 201 with C or better and taken within the past two years
SHS	250	Introduction to Phonetics	Introduces English phonetics with emphasis on phonetic transcription, articulation, phonology, and disorders of speech.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		

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SHS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		
SHS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-6		Prerequisite(s): Barrett Honors student
SHS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-6		Prerequisite(s): Barrett Honors student
SHS	310	Anatomical and Physiological Bases of Speech	Noncadaveric study of anatomical systems that underlie human speech and language, including respiration, phonation, articulation, and related nervous system processes.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): BIO 201; PHY 101; Pre- or corequisite(s): SHS 250
SHS	311	Hearing Science	Studies the physical characteristics of sound and of the structure and function of the human auditory system.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): BIO 201; PHY101; SHS 105
SHS	350	Brain Memory and Language	Covers memory and language and their associated brain areas, and the resulting behavioral consequences of injury and disease.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	367	Language Science	Normative aspects and integration of language structure, comprehension, and production in children and adults.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3	SB	
SHS	367	Language Science	Normative aspects and integration of language structure, comprehension, and production in children and adults.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3	SB	
SHS	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	375	Speech Science	Normative aspects of speech, hearing, and language.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 310; SHS 311; Pre- or corequisite(s): SHS 250
SHS	375	Speech Science	Normative aspects of speech, hearing, and language.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 310; SHS 311; Pre- or corequisite(s): SHS 250
SHS	376	Psychoacoustics	Introduces acoustics, cochlear anatomy and physiology, and the perception of sound.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	376	Psychoacoustics	Introduces acoustics, cochlear anatomy and physiology, and the perception of sound.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		
SHS	401	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 311; Credit is allowed for only SHS 401 or 501
SHS	402	Clinical Methods and Treatment of Communication Disorders	Principles and techniques for planning speech and language intervention, including observation experiences.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 250, 465
SHS	461	Accent Modification	Increases speech intelligibility in non-native English speakers by changing their English pronunciation skills. International students learn the pronunciation of American English vowels and consonants, intonation and stress patterns, and rhythm of speech. Conducts pre- and post-assessments of the students' intelligibility to determine the need for improvement on specific sounds and speech patterns.	Y	LEC	Y	GNA	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): minimum 45 hours
SHS	465	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3	SB	Pre- or corequisite(s): SHS 250; Credit is allowed for only SSH 465 or SHS 565
SHS	465	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3	SB	Pre- or corequisite(s): SHS 250; Credit is allowed for only SSH 465 or SHS 565
SHS	470	Developmental Speech and Language Disorders	Introduces the nature of speech and language disorders in children.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 465; Pre- or corequisite(s): SHS 250
SHS	470	Developmental Speech and Language Disorders	Introduces the nature of speech and language disorders in children.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 465; Pre- or corequisite(s): SHS 250
SHS	473	Implementation of Treatment Plans for Individuals with Communication Disorders	Students will learn to follow written treatment plans, individual education programs, individual support plans or protocols developed by the supervising speech-language pathologist. Opportunities to learn methods for eliciting therapy targets and to apply critical thinking and problem solving during therapy will be provided.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SHS	473	Implementation of Treatment Plans for Individuals with Communication Disorders	Students will learn to follow written treatment plans, individual education programs, individual support plans or protocols developed by the supervising speech-language pathologist. Opportunities to learn methods for eliciting therapy targets and to apply critical thinking and problem solving during therapy will be provided.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science
SHS	483	Professional Issues and Ethical Considerations for the SLPA	Studies licensure laws, professional conduct, and ethical practice in the field of speech language pathology.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science
SHS	483	Professional Issues and Ethical Considerations for the SLPA	Studies licensure laws, professional conduct, and ethical practice in the field of speech language pathology.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science
SHS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	485	Acquired Speech and Language Disorders	Introduces acquired speech and language disorders across the lifespan.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 310
SHS	485	Acquired Speech and Language Disorders	Introduces acquired speech and language disorders across the lifespan.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 310
SHS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-6		Prerequisite(s): Barrett Honors student
SHS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-6		Prerequisite(s): Barrett Honors student
SHS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-6	L	Prerequisite(s): Barrett Honors student
SHS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-6	L	Prerequisite(s): Barrett Honors student
SHS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		
SHS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		
SHS	496	Aural Rehabilitation	Approaches to aural rehabilitation of children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 311, 375 and 401; Credit is allowed for only SHS 496 or 596
SHS	496	Aural Rehabilitation	Approaches to aural rehabilitation of children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 311, 375 and 401; Credit is allowed for only SHS 496 or 596
SHS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-6		Prerequisite(s): Barrett Honors student
SHS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-6		Prerequisite(s): Barrett Honors student
SHS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-7	L	
SHS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-3		
SHS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-3		

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SHS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		Prerequisite: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		Prerequisite: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	501	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 311 with C or better; Credit is allowed for only SHS 401 or 501
SHS	501	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 311 with C or better; Credit is allowed for only SHS 401 or 501
SHS	502	Basic Audiometry	Covers the bases, purposes, rationales, and procedures for the core clinical tests of auditory function in adults and children.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	502	Basic Audiometry	Covers the bases, purposes, rationales, and procedures for the core clinical tests of auditory function in adults and children.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	504	Amplification I	Operation, electroacoustic measurement, selection, and prescriptive fitting of amplification devices.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	504	Amplification I	Operation, electroacoustic measurement, selection, and prescriptive fitting of amplification devices.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	505	Survival Sign Language	Facilitates effective manual and alternative methods of communication with deaf individuals in clinical settings.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	505	Survival Sign Language	Facilitates effective manual and alternative methods of communication with deaf individuals in clinical settings.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	508	Pediatric Audiology	Emphasizes the principles and procedures for early identification and management of congenital and early-onset hearing loss.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	508	Pediatric Audiology	Emphasizes the principles and procedures for early identification and management of congenital and early-onset hearing loss.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	510	Amplification II	Verification and validation of hearing aid performance, benefit, and satisfaction. Fitting considerations for pediatric and geriatric populations.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	510	Amplification II	Verification and validation of hearing aid performance, benefit, and satisfaction. Fitting considerations for pediatric and geriatric populations.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	511	Auditory Perception by the Hearing Impaired	Psychophysical methods and behavioral aspects of hearing, with an emphasis on the perceptual consequences of sensorineural hearing loss.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	511	Auditory Perception by the Hearing Impaired	Psychophysical methods and behavioral aspects of hearing, with an emphasis on the perceptual consequences of sensorineural hearing loss.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	512	Topics in Management of Medical Aspects of Speech-Language Pathology	Focuses on varying topics in management of medically based speech and language disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	512	Topics in Management of Medical Aspects of Speech-Language Pathology	Focuses on varying topics in management of medically based speech and language disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	513	Neurophysiology of the Auditory System	Focuses on the neurophysiology of the normal auditory system and on changes associated with hearing loss.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student

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SHS	513	Neurophysiology of the Auditory System	Focuses on the neurophysiology of the normal auditory system and on changes associated with hearing loss.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	515	Instrumentation and Calibration	Electronic instruments used to produce, modify, and measure characteristics of sound. Measurement standards and methods for calibration of audiologic equipment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	515	Instrumentation and Calibration	Electronic instruments used to produce, modify, and measure characteristics of sound. Measurement standards and methods for calibration of audiologic equipment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	516	Auditory Evoked Potentials	Electrophysiologic assessment of the peripheral and central auditory nervous system. Lecture, lab.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	516	Auditory Evoked Potentials	Electrophysiologic assessment of the peripheral and central auditory nervous system. Lecture, lab.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	517	Balance Assessment	Clinical analysis and treatment of balance disorders and dizziness.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	517	Balance Assessment	Clinical analysis and treatment of balance disorders and dizziness.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	518	Auditory Rehabilitation	Study and clinical application of assistive technology and rehabilitative services for managing the effects of hearing impairment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	518	Auditory Rehabilitation	Study and clinical application of assistive technology and rehabilitative services for managing the effects of hearing impairment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	519	Auditory Pathologies and Disorders	Familiarizes students with major diseases, pathologies, and disorders of the human auditory system.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	519	Auditory Pathologies and Disorders	Familiarizes students with major diseases, pathologies, and disorders of the human auditory system.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	520	Auditory Pathologies/Disorders and Otoneurologic Applications	Familiarizes students with major pathologies and disorders of the human auditory system. Examines advanced otologic, neurologic, and audiologic approaches in the differential diagnosis and treatment of peripheral and central disorders of the auditory system.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): Speech and Hearing Science graduate student
SHS	520	Auditory Pathologies/Disorders and Otoneurologic Applications	Familiarizes students with major pathologies and disorders of the human auditory system. Examines advanced otologic, neurologic, and audiologic approaches in the differential diagnosis and treatment of peripheral and central disorders of the auditory system.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): Speech and Hearing Science graduate student
SHS	521	Auditory Aging	Focuses on aging and related effects on the auditory system and audition.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	521	Auditory Aging	Focuses on aging and related effects on the auditory system and audition.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	522	Hearing Conservation/Instrumentation	Examines the prevention, identification, physiologic effects, and management of hearing loss due to noise exposure. Incorporates measurement standards and methods for calibration of electronic audiologic instruments used to produce, modify, and measure characteristics of sound.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Speech and Hearing Science graduate student
SHS	522	Hearing Conservation/Instrumentation	Examines the prevention, identification, physiologic effects, and management of hearing loss due to noise exposure. Incorporates measurement standards and methods for calibration of electronic audiologic instruments used to produce, modify, and measure characteristics of sound.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Speech and Hearing Science graduate student
SHS	523	Advanced Audiometry	Discusses assessment and intervention procedures beyond the basic audiologic test battery and for special populations. Examines relevant new audiologic tests and procedures. Prerequisites: SHS 502, 513; SHS major.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS major; SHS 502 and SHS 513
SHS	523	Advanced Audiometry	Discusses assessment and intervention procedures beyond the basic audiologic test battery and for special populations. Examines relevant new audiologic tests and procedures. Prerequisites: SHS 502, 513; SHS major.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS major; SHS 502 and SHS 513

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SHS	524	Counseling in Communication Disorders	Theories of counseling emphasizing the psychological and emotional impact and management of individuals with communication disorders and their families.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	524	Counseling in Communication Disorders	Theories of counseling emphasizing the psychological and emotional impact and management of individuals with communication disorders and their families.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	525	Audiology Practice Management	Business practice issues, quality assurance, and professional ethics for the practicing audiologist.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	525	Audiology Practice Management	Business practice issues, quality assurance, and professional ethics for the practicing audiologist.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	526	Launch to Clinical Methods in Audiology	In Launch-to-Clinic, students rotate through on-campus observations and group orientation to the ASU Speech and Hearing Clinic. Students learn the policies and procedures of the ASU Speech and Hearing Clinic, software specific to the clinic operations, report writing, and clinical documentation with practice to develop the skills needed to succeed in subsequent clinical rotations both on and off campus.	N	LEC	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	1		Prerequisite(s): Audiology major; Credit is allowed for only SHS 526 or SHS 580 (Audio Clinical Observation) or SHS 580 (Audiology Observation)
SHS	530	Development, Assessment, Intervention: Conception through 3 years	Covers development of children from conception to 3 years of age with a focus in early intervention. Includes child development of anatomical, neurophysiology, cognitive, motor, perceptual, speech, language and hearing aspects. Also addresses service delivery models in different contexts in children with atypical development in the different areas.	N	LEL	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	538	Clinical Methods in Speech-Language Pathology	Provides the knowledge and skills in clinical methods for treatment and diagnosis in speech-language pathology. Topics cover essential information to participate in screening and prevention opportunities, to structure and implement therapy goals and strategies, to apply for internships, and to administer and interpret informal and formal diagnostic tests.	Y	LEL	Y	GNA	College of Health Solutions	Department of Speech and Hearing Science	1		Prerequisite(s): MS Communication Disorders major.
SHS	539	Professional Issues in Speech-Language Pathology	Covers professional issues in speech-language pathology to ensure that students meet the professional knowledge requirements set forth in the American Speech-Language-Hearing Association (ASHA) certification standards. The topics cover essential information that the student needs to have in order to meet graduation requirements, comply with ASHA's ethical requirements, complete ASHA certification requirements, comply with Arizona state licensure requirements, prepare for a Clinical Fellowship Year and be involved in education and advocacy for the profession of Speech-Language Pathology.	N	LAB	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	1		Prerequisite(s): MS Communication Disorders major. Credit is allowed for only SHS 539 or SHS 580 (SLP Professional Issues)
SHS	540	Development, Assessment, Intervention: Preschool	Covers development, assessment and intervention of children from 3 years to 6 years of age, with a focus on preschool education. It includes child development of anatomical, neurophysiology, cognitive, motor, perceptual, speech, language and hearing aspects. Also it addresses service delivery models in different contexts in children with atypical development in the different areas.	N	LEL	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): SHS 530
SHS	550	Development, Assessment, Intervention: School-Age Children	Covers development, assessment and intervention of children from 6 years to 21 years of age, with a focus on school education. Includes child development of anatomical, neurophysiology, cognitive, motor, perceptual, speech, language, reading, writing and hearing aspects. Also addresses service delivery models in different contexts in children with atypical development in the different areas.	N	LEL	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	4		Pre-requisite: SHS 540
SHS	552	Physiological Measures of Auditory Function	Focuses on the measurement of otoacoustic emissions and acoustic immittance.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	552	Physiological Measures of Auditory Function	Focuses on the measurement of otoacoustic emissions and acoustic immittance.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	555	Cochlear Implants	Covers the research and clinical aspects of cochlear implantation with a focus on the principles of speech coding strategies.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	555	Cochlear Implants	Covers the research and clinical aspects of cochlear implantation with a focus on the principles of speech coding strategies.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology, or PHD Speech and Hearing Science student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SHS	560	Development, Aging, Assessment, Intervention in Adults	Covers development, aging, assessment and intervention in adults with a focus on the elderly and the contexts for their service delivery. Includes changes in the adults related to anatomy, neurophysiology, cognitive, motor, perceptual, speech, language, literacy and hearing aspects. Also addresses service delivery models in different contexts where elderly and young adults with acquired disabilities are served.	N	LEL	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	4		Pre-requisite: SHS 550
SHS	565	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Credit is allowed for only SHS 465 or SHS 565
SHS	565	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Credit is allowed for only SHS 465 or SHS 565
SHS	567	Neural Bases of Communication Disorders	Neuroscience and its application to matters of normal and disordered communication.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	567	Neural Bases of Communication Disorders	Neuroscience and its application to matters of normal and disordered communication.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	570	Communication Disorders and Multicultural Populations	Studies racial and ethnic biases and the communication behaviors and disorders in various cultural groups.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	570	Communication Disorders and Multicultural Populations	Studies racial and ethnic biases and the communication behaviors and disorders in various cultural groups.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	571	Augmentative Communication and Language Programming	Focuses on individuals across the age span who are unable or who are at risk for being unable to communicate with spoken language.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	571	Augmentative Communication and Language Programming	Focuses on individuals across the age span who are unable or who are at risk for being unable to communicate with spoken language.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	572	Language Assessment and Intervention in Infants and Toddlers	Focuses on the birth to 3-year-old population who are at risk for or who have communication and language disabilities.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	572	Language Assessment and Intervention in Infants and Toddlers	Focuses on the birth to 3-year-old population who are at risk for or who have communication and language disabilities.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	573	Language Assessment and Intervention with School-Age Populations	Focuses on later language development, linguistic demands of academic settings, assessment and intervention strategies for older children and adolescents.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	573	Language Assessment and Intervention with School-Age Populations	Focuses on later language development, linguistic demands of academic settings, assessment and intervention strategies for older children and adolescents.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student

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SHS	574	Management of Voice and Swallowing Disorders	Focuses on assessment and intervention of people with voice, swallowing, and craniofacial disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	574	Management of Voice and Swallowing Disorders	Focuses on assessment and intervention of people with voice, swallowing, and craniofacial disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	575	Aphasia and Related Neurogenic Language Disorders	Assessment and treatment of acquired neurolinguistic impairment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2-3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	575	Aphasia and Related Neurogenic Language Disorders	Assessment and treatment of acquired neurolinguistic impairment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2-3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	576	Neuromotor Speech Disorders	Evaluation and treatment of the dysarthrias and apraxia of speech. Emphasizes acquired adult disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2-3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	577	Communication Disorders in Autism	Addresses communication disorders in children and adults with autism, as well as evaluation and intervention across a variety of settings and theoretical frameworks.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	577	Communication Disorders in Autism	Addresses communication disorders in children and adults with autism, as well as evaluation and intervention across a variety of settings and theoretical frameworks.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	579	Feeding and Swallowing Disorders Across the Lifespan	Focuses on individuals across the age span who have feeding and/or swallowing disorders. Presents assessment and treatment strategies.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	579	Feeding and Swallowing Disorders Across the Lifespan	Focuses on individuals across the age span who have feeding and/or swallowing disorders. Presents assessment and treatment strategies.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	580	Clinical Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-6		
SHS	580	Clinical Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-6		
SHS	581	Right Hemisphere Syndrome, Traumatic Brain Injury, and Dementia	Studies the nature, characteristics, and clinical management of cognitive and communicative impairments accompanying right hemisphere damage, TBI, and dementia.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	581	Right Hemisphere Syndrome, Traumatic Brain Injury, and Dementia	Studies the nature, characteristics, and clinical management of cognitive and communicative impairments accompanying right hemisphere damage, TBI, and dementia.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	582	Differential Diagnosis of Communication Disorders	Procedures for assessing speech/language disorders in children and adults.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	582	Differential Diagnosis of Communication Disorders	Procedures for assessing speech/language disorders in children and adults.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	584	Clinical Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-6		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SHS	584	Clinical Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-6		
SHS	585	Articulation and Phonology: Assessment and Intervention	Assessment and treatment of developmental articulation and phonological disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2-3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	585	Articulation and Phonology: Assessment and Intervention	Assessment and treatment of developmental articulation and phonological disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2-3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	587	Language Assessment and Intervention with Preschool Populations	Focuses on preschool language disorders and assessment and intervention strategies for preschool children.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	587	Language Assessment and Intervention with Preschool Populations	Focuses on preschool language disorders and assessment and intervention strategies for preschool children.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	588	Spanish Language Acquisition	Examines Spanish language acquisition in children and adults in the context of monolingual and bilingual language acquisition.	N	SEM	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); Credit is allowed for only SHS 588 or APL 588
SHS	588	Spanish Language Acquisition	Examines Spanish language acquisition in children and adults in the context of monolingual and bilingual language acquisition.	N	SEM	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); Credit is allowed for only SHS 588 or APL 588
SHS	589	Audiology Grand Rounds	Grand Rounds bridges clinical and academic knowledge through case studies, application of emerging research, and clinical workshops.	N	SEM	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1		
SHS	589	Audiology Grand Rounds	Grand Rounds bridges clinical and academic knowledge through case studies, application of emerging research, and clinical workshops.	N	SEM	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1		
SHS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	Department of Speech and Hearing Science	1		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SHS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	Department of Speech and Hearing Science	1		
SHS	596	Aural Rehabilitation	Approaches to aural rehabilitation in children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Credit is allowed for only SHS 496 or 596
SHS	596	Aural Rehabilitation	Approaches to aural rehabilitation in children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Credit is allowed for only SHS 496 or 596
SHS	597	Bilingual Speech-Language Pathology	Reviews speech and language assessment and intervention practices with bilingual populations from infants to adults.	N	SEM	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	597	Bilingual Speech-Language Pathology	Reviews speech and language assessment and intervention practices with bilingual populations from infants to adults.	N	SEM	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		
SHS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		
SHS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-15		
SHS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-15		
SHS	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SHS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	Department of Speech and Hearing Science	1		
SHS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	Department of Speech and Hearing Science	1		
SHS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	Department of Speech and Hearing Science	1-15		
SHS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	Department of Speech and Hearing Science	1-15		
SLB	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		
SLB	510	Amateur Sports Law	Studies law, policy and problem solving in the amateur sports context, focusing primarily on interscholastic and intercollegiate athletics. Title IX and racial equality in sports.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-3		Prerequisite(s): College of Law student; Credit is allowed for only SLB 510 or LAW 791 (Amateur Sports Law)
SLB	511	Strategic Career Planning	Focuses on examining job opportunities in the sports industry and the development of strategies for obtaining a position suitable to the talents and abilities of individual students. Students refine their skills in terms of searching for a job. Students also develop a career plan, beginning with an entry-level position for those who have worked in the industry or a next-level position for students currently working in the area.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-2		Prerequisite(s): College of Law student; Credit is allowed for only SLB 511 or LAW 598 (Strategic Career Planning)
SLB	512	Professional Sports Law	Studies law, revenue, branding and problem solving in the professional sports context, focusing primarily on professional sports league governance and regulation, labor relations, representing and marketing players and coaches, and issues of equity and race. Also examines international issues related to professional sports.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-3		Prerequisite(s): College of Law student; Credit is allowed for only SLB 512 or LAW 691 (Professional Sports Law)
SLB	513	Sports Law and Business	Studies law, policy and problem solving in the context of the sports industry at all levels. Exposes professional, amateur and international sports law issues, examining those issues in a problem-focused manner.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	2-4		Prerequisite(s): College of Law student
SLB	514	Contracts: Negotiation and Drafting in the Sports Industry	Provides a working or basic knowledge of contract law, with in-depth instruction with regard to negotiating and drafting in the sports context. As their final project, students select a player, coach, university or club and then negotiate a contract. Negotiation sessions are held during class sessions and students evaluate each other, as well as receiving evaluation from the professor. Replicates the negotiation process in the sports industry.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	2-4		Prerequisite(s): College of Law student; Credit is allowed for only SLB 514 or LAW 598 (Contracts in the Sports Industry)
SLB	515	Sports Business Strategy and Industry Dynamics	Sports can involve a jog around campus or big business. Sports are interesting, important and a vivid context to learn about consumers, organizations, diverse stakeholders, media and entertainment, partnerships and sponsorship, highly competitive strategies in finance and marketing, managing community venues, big events, and other relevant business topics. Maintains a pragmatic, experiential, yet well-grounded focus, studying the role, nature and dynamics of sports business both in and around "sports industries" and in and around "conventional businesses." Builds and "tests" knowledge and exercise skills related to sports business analysis, decision making, communication and both strategy development and execution. Intellectually rigorous, yet fun. Develops a sophisticated, yet practical understanding of the nature, contexts and dynamics of sports business.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	2-4		Prerequisite(s): College of Law student; Credit is allowed for only SLB 515 or MKT 591 (Sports Business Strategy and Industry Dynamics)
SLB	516	Sports Business Development	Develops an appreciation for and understanding of the multiple stakeholders and diverse interests in and around sports business, and of their constantly changing and interactive impact on sports business practice and performance. Gives broad exposure to the major revenue generating domains in the sports industry. Explores the fundamentals of marketing and applies those fundamentals to the domains of sponsorship, endorsement, media, ticketing, merchandising and fundraising as means to create and maintain revenue streams.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-3		Prerequisite(s): College of Law student; Credit is allowed for only SLB 516 or MKT 591 (Sports Business Development)
SLB	517	Marketing for Sports Organizations	Studies the role, nature and dynamics of sports business and builds knowledge and skills related to sports marketing analysis, decision making and strategy development and execution. Intellectually challenging and demanding, yet fun.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	2-4		Prerequisite(s): College of Law student; Credit is allowed for only SLB 517 or MKT 598 (Sports Marketing)

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SLB	518	Sports Analytics	Develops and applies analytical skills that are useful in nearly every career. Although the course focuses on applications in the sports context and uses approaches that are rapidly becoming important in the business of sports analytics, this is not a survey course about issues in sports. Instead, this class is about curiosity, storytelling and logic. An understanding and interest in both sports and numbers make this class good. General curiosity makes it great.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-3		Prerequisite(s): College of Law student; Credit is allowed for only SLB 518 or MKT 591 (Sports Analytics)
SLB	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
SLB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic or writing a literature review of a topic.	Y	REC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SLB	591	Seminar	A small class emphasizing discussion, presentations by students and written research papers.	Y	SEM	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SLB	592	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
SLB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
SLB	598	Special Topics	Topical courses not offered in regular course rotation (e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand).	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
SLB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Law	Sandra Day O'Connor College of Law	1-12		
SLC	120	Introduction to Chinese Culture	Introduces geographical, historical, literary, and intellectual premises of Chinese culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: ENG 101, 105, or 107; credit is allowed for only CHI 120 or SLC 120
SLC	140	Greek and Latin Roots in Bioscientific Terminology	Introduces students to the ancient Greek and Latin root words most commonly used in biological, medical, and other scientific terminology, and gives practice identifying them in context. The knowledge of these root words enables students to memorize with greater ease and increased retention the bioscientific terminology they encounter in other coursework as well as in their medical or scientific profession.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SLC	142	Ancient Greek Civilization	Ancient Greek civilization and culture. Studies (in roughly equal parts) the art, archaeology, literature, culture and history of ancient Greece from prehistoric times until after the conquests of Alexander the Great (the Hellenistic Age).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H	Credit is allowed for only GRK 142, GRK 194 (Ancient Greek Civilization) or SLC 142
SLC	144	The Ancient Mediterranean	Provides a comprehensive introduction to the Mediterranean world, focusing on (but not limited to) the period of the classical Greeks and Romans. Provides some history of the area, but focuses on the classical world and its interaction with the cultures that surrounded it, including Semitic, Near Eastern, and North African cultures, as well as some of the lost cultures of the area such as the Minoans and Etruscans. Introduces the sources that provide information about these cultures (literary, art historical and archaeological sources), and teaches students to think critically and write persuasively about these sources.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101, 105, or 107 with C or better; Credit is allowed for only SLC 144 or SLC 194 (The Ancient Mediterranean)
SLC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: maximum 25 hours
SLC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	201	Introduction to Linguistics	Examines the nature and diversity of world languages, linguistic structures and functions of language, language variation, pragmatics, and language acquisition.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU or SB	
SLC	202	Introduction to Literary and Cultural Theory	Interdisciplinary approaches to understanding culture and cultural production (literature and critical theory, film, visual art, and performance, among others) in different cultures and regions. Classes are taught by a primary instructor aided by several guest lecturers in their area of academic specialization.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 102, 105, or 108 with C or better
SLC	221	Survey of Ancient Greek Literature	Introductory survey of ancient Greek literature. Familiarizes students with the important literary genres, texts, and authors of the ancient Greeks from Homer to the Hellenistic period. All readings in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only GRK 221, SLC 221 or 294 (Ancient Greek Literature in Translation)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SLC	222	Survey of Roman Literature	Introductory survey of Roman literature. Familiarizes students with the literary genres, texts and authors of the Romans from the origins of the Latin language to the Silver age. All readings in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only LAT 222, SLC 222, LAT 294 (Roman Literature in Translation) or SLC 294 (Roman Literature in Translation)
SLC	223	Introduction to Greek and Roman Mythology	Familiarizes students with the characters and events of ancient Greek and Roman myths through their literary manifestations, and moves beyond mere narrative to consider the possible interpretations and functions of these myths, thus revealing the central concerns of ancient society and giving insights into the working of our own society and its literary and artistic traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only GRK 223, LAT 223, SLC 223, GRK 294 (Greek and Roman Mythology)
SLC	245	Introduction to South Asia	Provides an introduction to the history and major contemporary political, economic, social, religious and cultural features of the South Asia region at large and of selected South Asian nations in particular.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HST 245 or POS 245 or REL 245 or SGS 245 or SLC 245
SLC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	321	Korean Literature in Translation	Introduces various genres of Korean literature written from the seventeenth century to the present in English translation. Aims to help students to understand the history of modern Korean literature in transnational and transdisciplinary contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only KOR 294 (Korean Lit in Translation), 321, 394 (Korean Lit in Translation) or SLC 321
SLC	323	Russian Literature and Revolution: The Twentieth Century	An in-depth study of 20th-Century Russian prose and poetry by Zinovieva-Annibal, Gorky, Bely, Babel, Mayakovsky, Platonov, Pasternak, Erofeev, Petrushevskaia, and other writers. Taught in English. An in-depth study of 20th-Century Russian prose and poetry by Zinovieva-Annibal, Gorky, Bely, Babel, Mayakovsky, Platonov, Pasternak, Erofeev, Petrushevskaia, and other writers. Taught in English.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Pre-requisites: ENG 102, 105, or 108; Credit for RUS 323 or SLC 323
SLC	333	China	Political, economic, social, and cultural history of the Chinese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 333, HST 383 or SLC 333
SLC	335	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only CHI 335, HPS 325, HST 385 or SLC 335
SLC	336	Interpreting China's Classics	Study of selected Confucian and/or Taoist classics and ways they have been read in both Asian and Western scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 336, HST 386 or SLC 336
SLC	344	Classics and Comics	Explores the connections between the classical tradition of Ancient Greek and Roman literature and the modern American superhero comic book tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GRK 344 or LAT 344 or SLC 344 or GRK/LAT/SLC 394 (Classics and Comics) or SLC 494 (Classics and Comics)
SLC	345	Ancient Greece I: Bronze Age through the Peloponnesian War	Traces Greek History from its prehistoric beginnings through the Peloponnesian War (431-404 B.C.), with a special focus on the Archaic (ca. 800-480 B.C.) and Early Classical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only GRK 347 or HST 347 or SLC 345
SLC	347	Modern Israeli Literature in Translation	Modern Hebrew, or Israeli Hebrew, started at the end of the 19th century in Europe and today it is the language of the State of Israel. During this short period modern Hebrew developed literature with its unique local characteristic, as well as universal ideas. Reads and examines four books against their social and historical background.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HEB 347 or JST 347 or SLC 347 or ENG/HEB/JST/SLC 394 (Modern Hebrew Literature in Translation)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SLC	348	Israeli Society and Culture	Different partitions of the Israeli society, based on ethnic origin, by religious affiliation or by political association. Depicts how Israel is an absorbing immigration state. Israel is a welfare state and the course covers aspects of a welfare state, such as health, retirement, public transportation, art, higher education and more.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better. Credit is allowed for only HEB 348 or HEB 394 (Israeli Culture and Society) or JST 348 or REL 311 or SLC 348
SLC	360	Greece and Rome at War	Familiarizes students with the major battles, leaders and tactics of Classical Greece and Rome. Supplements lectures with student participation including study of original sources, group presentations, and gaming battle simulations. This multifaceted approach gives a greater sense of the evolution of the leaders, armies and tactical systems of the Greeks and Romans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 360, HST 397, LAT 360, SLC 360 or SLC 394 (Greece and Rome at War)
SLC	361	Roman Religion	Roman religion was never static, despite the best efforts of the Roman state to make it so. Understands the artifacts and procedures of Roman state cult from its earliest origins to the late empire, using ancient literary sources, archaeology throughout the ages and modern scholarly theories. Clarifies the forces that influenced development and change in Roman religion, both internal and external.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only LAT 361, REL 361, SLC 361 or SLC 394 (Roman Religion)
SLC	362	Ancient Greek Religion	Surveys ancient Greek religion, including its gods, ritual practices and festivals. Analyzes the development of the religion over time, and how both ancient and modern figures interpreted its meaning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; Credit is allowed for only GRK 362, REL 360, SLC 362 or SLC 394 (Ancient Greek Religion)
SLC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	401	Translation Theory and Practice	Translation theories and professional practices and ethics; bibliography, computer technology, and sample texts for natural and social sciences and humanities.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SLC	420	Foreign Literature in Translation	Not for language majors (except in Asian languages and Russian); open to language majors as a related-area course. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	
SLC	421	Japanese Literature in Translation	Readings selected by theme or genre or period from various works of Japanese literature in English translation. May be repeated when topics vary. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	
SLC	429	Studies in European Literature and Culture	Literary, cultural, and historical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better; Credit is allowed for only ENG, SLC or THE 429
SLC	439	Art in Exile: Vladimir Vladimirovich Nabokov	In English. The scandalous success of Lolita (1955) allowed Vladimir Nabokov to retire from teaching at Cornell University and move to Switzerland to devote himself to fiction, translation, criticism and lepidoptery. This was only one of the many metamorphoses that Nabokov, a Russian noble, underwent while in exile, moving from Russia to the Crimea, Cambridge UK, Berlin, Paris, Cambridge MA, Ithaca, Hollywood and finally Montreux. Examines the Russian roots of Nabokov's Russian (in translation) and American novels about exile: his first novel, Mary (1926), The Defense (1929), Glory (1932), and his tribute to 19th-century Russian literature, The Gift (1938), which he considered his greatest Russian novel. These are followed by Lolita (1955), Pnin (1957) and Pale Fire (1962), his memoirs, Speak, Memory (1966), and some essays and short stories. Films include Lolita by Stanley Kubrick (1962) and Adrian Lyne (1997).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only RUS 439 or SLC 439 or ENG/RUS/SLC 494 (Art in Exile: Vladimir Vladimirovich Nabokov)
SLC	440	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440
SLC	441	Fairy Tales	Foundational fairy tale texts collected by the Brothers Grimm and written by Hans Christian Andersen and their modern permutations reflect basic human desires, fears and aspirations as well as the values of the period in which they are written. These stories and their variants in popular culture across the globe permit students to reflect critically on the functions of fairy tales in both past and present civilizations. Students perceive the ways in which ancient tales can be utilized for various purposes and understand the contemporary theoretical debate on the study of fairy tales and their role in popular culture. Course taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ENG 102, 105 or 108 with C or better; one other ENG or GER upper-division course with C or better. Credit is allowed for only GER 441, GER 494 Fairy Tales, or SLC 441

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SLC	444	Heroes, Ancient and Modern	Explores the heroic literature of the ancient Greeks and Romans, then traces the classical tradition and reception of the classical hero in medieval and modern texts. Incorporates history, art history and material culture from the relevant societies to supplement study of the texts involved.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 444, LAT 444, SLC 444 or SLC 494 (Heroes: Ancient and Modern)
SLC	445	The Holocaust in German-Mediated Memory	Examines representations of the Holocaust from across different media (literature, film, architecture, memoir, photography) and from across multiple generations of German engagement with this period in history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or ENG 201 or ENG 202 or ENG 204 or FMS 100 or FMS 200 or JST 210 or JST 230 or SLC 202 with C or better; Credit is allowed for only FMS/GER/JST/SLC 445 or GER 494 (Holocaust & German Media or Holocaust & German Mediated Memory)
SLC	446	Weimar-Era German Film	Examines early film production in Germany during the period of the Weimar Republic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only FMS 446 or GER 446 or SLC 446 or GER 494 (Weimar German Cinema) or GER 494 (Studies in German Film)
SLC	447	German Modernism	Examines examples of modernism in literature, art and film from German-speaking Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only GER 447 or SLC 447 or GER 494 (German Modernism)
SLC	450	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200; one ENG 200-level literature course, or SLC 202 or FMS 100 and FMS 200; Credit is allowed for only ENG 447, FMS 442 or SLC 450
SLC	451	Chinese Cultural History I	China's classics in translation studied both for their intrinsic ideas and for the origins of Chinese thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(HU or SB) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 451, HST 451 or SLC 451
SLC	452	Chinese Cultural History II	Evolution of Confucian thought, its synthesis with Taoism and Buddhism, and modern reactions against, and uses of, Confucian traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & G & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 452 or HST 452 or SLC 452
SLC	455	Multi-Kulti: Multiculturalism Through Film	Examines how ethnic identities are perceived, constructed and marketed as well as how they perceive themselves and the "others." Critically engages with such concepts as migration, assimilation, citizenship, hybridity and authenticity. Focuses on exemplary films, including comparisons with minority experiences in other countries. Through film and other material on the topic, will learn to contextualize recruitment of guest workers, xenophobia and racism, citizenship law, immigration and national identity, the institutions of multiculturalism, religion, the private sphere, multilingualism, popular culture and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GER 455 or SLC 455 or GER 494 (Multi-Kulti: Multiculturalism in Central Europe) or SLC 494 (Multi-Kulti: Multiculturalism in Central Europe)
SLC	479	Introduction to Teaching Foreign Languages	Introduces teaching methodologies, language learning, and current best practice in teaching foreign languages in U.S. middle and high schools.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SLC	480	Methods of Teaching Foreign Languages	Teaching foreign languages and literatures at secondary and college levels. Does not meet the Liberal Arts and Sciences General Studies requirement for humanities and fine arts. Required for admission to SED 478.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: SLC 479 with C or better

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SLC	481	Technical and Scientific Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as engineering, architecture, agriculture, computer technology, electronics, and physical and biological sciences.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: SLC 401
SLC	482	Business and Financial Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as economics, finance, insurance, management, marketing, accounting, advertising, and real estate.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: SLC 401
SLC	483	Medical and Legal Translation	Resources and strategies for translation of professional texts in subjects such as medicine, nursing, public health, criminal justice, and international law.	N	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SLC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	491	Crossing Languages and Cultures	Interdisciplinary and cross-cultural study in two or more world languages or cultures.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: SLC 201 and 202 with C or better
SLC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SLC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
SLC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SLC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		Pre-requisite: minimum 56 hours
SLC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLC	510	Computer-Assisted Language Learning Praxis	Offers graduate students an in-depth practical experience in Computer-Assisted Language Learning (CALL) praxis, including tools, approaches to using technology in the language classroom, the techniques and best practices of online instruction, and the development of a teaching portfolio.	N	LEC	N	GNA	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 557
SLC	515	Second-Language Acquisition	Discusses and applies theories of second-language acquisition.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: SLC 400
SLC	551	Global Approaches to Translation	Familiarize students with various approaches to translation practice. Examines issues related to the cultural role of translation. Students [re]prepare a translation, justification of translation choices, and discussion of the complexities posed by the translation. Readings address a broad array of translation theories, with most focused on translation as a globally theorized phenomenon in the 20th and 21st centuries. Readings and discussions focus on how one translates, and on translation as a culture-making enterprise inextricably tied to the questions of who translates, in what context, for whom, and to what ends. Students understand translation theories from different eras and cultures; understand how translation is implicated in different forms of intercultural contact (colonialism, commerce, proselytization); gain experience translating texts from a source language into English; and can explain why they translated the way they did.	N	RSC	N	GNA	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SLC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

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SLC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
SLC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	602	Literary and Cultural Theory	Trains SILC Ph.D. students in understanding the central role of languages and literatures in the composition of culture. Employs a range of interdisciplinary approaches to various forms of cultural production, specifically as they relate to language, literature, film, visual art, and performance. Through exploration of primary works and foundational theoretical texts, shows students how to question the motivations, aesthetics, transmission, reception, and social control of a variety of works and media. At the center of this analysis stand the critical debates about the nature and definition of the term culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SLC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SLC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	304	Computational Linguistics of Slavic Languages	Information technology and Slavic languages, including Web design, digitalized resources, information retrieval, math/statistical analysis, and PERL.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	CS	
SLV	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	440	History of Slavic Languages	Comparative evolution of East Slavic, West Slavic, and South Slavic languages from the earliest record to the standardizing of national languages in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB	
SLV	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SLV	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
SLV	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SLV	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLV	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SMC	520	Methods and Tools in Applied Cognitive Science	Provides a hands-on approach to understanding and using advanced methodologies commonly implemented in the field of cognitive science.	N	SEM	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SMC	521	Methods and Tools in Simulation and Modeling	Introduces specific methods and tools used in the field of modeling and simulation, with computer-based experience through both writing and using simulation software.	N	SEM	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SMC	540	Foundations of Applied Cognitive Science	Provides a critical background in the theory and organization of the field of cognitive science.	N	SEM	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SMC	541	Foundations of Simulation and Modeling	Introduces a wide variety of methodologies utilized by and applications of the broad field of simulation and modeling.	N	SEM	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SMC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-15		
SMC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Human Systems Engineering	1		
SMC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-4		
SMC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
SMC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-15		
SMC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Human Systems Engineering	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	101	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Credit is allowed for only SOC 101 or 301
SOC	101	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Credit is allowed for only SOC 101 or 301
SOC	101	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only SOC 101 or 301
SOC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		Pre-requisites: Freshmen; maximum 25 earned hours
SOC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
SOC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
SOC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SOC	210	Sociology of Murder	Sociological perspectives on various forms of murder and types of murderers. Also considers forms of punishment for murder.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only FOR 210 or SOC 210
SOC	220	Sport and Society	Examines sports in American society as a source of socialization and an institution where gender, race/ethnicity, and class interact.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	220	Sport and Society	Examines sports in American society as a source of socialization and an institution where gender, race/ethnicity, and class interact.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SOC	241	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
SOC	241	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	241	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	

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SOC	264	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only FAS 264 or SOC 264
SOC	264	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only FAS 264 or SOC 264
SOC	270	Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	
SOC	270	Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	
SOC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
SOC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SOC	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
SOC	301	Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Credit is allowed for only SOC 101 or 301
SOC	301	Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only SOC 101 or 301
SOC	312	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: Minimum 24 hours; SOC 101, PSY 101(PGS 101), FAS 101 or FAS 330 with C or better; Credit is allowed for only CDE 312 or SOC 312
SOC	315	Courtship and Marriage	In-depth study of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	315	Courtship and Marriage	In-depth study of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	315	Courtship and Marriage	In-depth study of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	321	Sociology of Work	Social and cultural analysis of industry. Occupational roles, status, and social participation of workers.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	324	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & H	Credit is allowed for only FAS 324 or SOC 324
SOC	324	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & H	Credit is allowed for only FAS 324 or SOC 324
SOC	328	Migration and Culture	Examines migration and culture embedded in a transnational field of social, economic and political processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours. Credit is allowed for only ASB 340 or SOC 328
SOC	331	Environmental Sociology	Analyzes human organizational responses to population growth, technological change, and environmental stressors on both a national and global scale.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G	Prerequisite(s): minimum 45 hours
SOC	331	Environmental Sociology	Analyzes human organizational responses to population growth, technological change, and environmental stressors on both a national and global scale.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours
SOC	332	The Modern City	In-depth analysis of the growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	G	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	332	The Modern City	In-depth analysis of the growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	333	Population	Global trends in population growth, composition, and distribution; theories, policies, and impact of population trends on environmental quality and development.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G	
SOC	334	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Pre-requisite: Minimum 45 hours; Credit is allowed for only ASB 344 or SOC 334

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SOC	334	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L or SB	Pre-requisite: Minimum 45 hours; Credit is allowed for only ASB 344 or SOC 334
SOC	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
SOC	340	The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisite: SOC 101 or 301
SOC	340	The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: SOC 101 or 301
SOC	342	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB, SBS or SOC 342
SOC	350	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
SOC	352	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	
SOC	352	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G & H	
SOC	352	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G & H	
SOC	353	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the perspective of anthropology and allied disciplines. Uses a global, comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3-4	(HU or SB) & G	Pre-requisite: 45 earned credit hours; Students who have credit for ASB 353, may not enroll in SOC 353
SOC	356	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well. May be repeated once for credit.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356
SOC	360	Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: Minimum 24 hours; SOC 101, PSY 101(PGS 101), FAS 101, or FAS 330 with C or better
SOC	360	Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: Minimum 24 hours; SOC 101, PSY 101(PGS 101), FAS 101, or FAS 330 with C or better
SOC	363	Men and Masculinity	Sociological analysis of how masculine identity is defined, negotiated, and variously constructed depending upon class, ethnicity, age, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Prerequisite(s): SOC 101
SOC	364	Popular Culture and Society	Studies the social approaches to popular culture, focusing on the function of various forms (literature, film, theatre, and music).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours
SOC	365	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
SOC	365	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	365	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SOC	366	Film and Society	Studies the social approaches to film as an art form, mass medium, and ideological construct.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SOC	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with C or better; ASB 100 or 102, SOC 101, SOS 110, or SSH 100 with C or better. Credit is allowed for only ASB, SOC, SOS, or SSH 370

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SOC	371	Inequality and Sustainability	Efforts to shift societies onto a sustainable trajectory are facing profound challenges from the degree and dynamics of global inequalities of income, wealth, and life chances. Data and ideas from a spectrum of disciplines are employed to examine, analyze, and criticize the prospects for redressing global inequalities in a sustainable manner.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ASB or SOC 371
SOC	371	Inequality and Sustainability	Efforts to shift societies onto a sustainable trajectory are facing profound challenges from the degree and dynamics of global inequalities of income, wealth, and life chances. Data and ideas from a spectrum of disciplines are employed to examine, analyze, and criticize the prospects for redressing global inequalities in a sustainable manner.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ASB or SOC 371
SOC	374	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only ASB 374, POS 374, SBS 374 or SOC 374
SOC	375	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	(HU or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST 318, REL 318 or SOC 375
SOC	378	Migration and Society	Application of social scientific theories and principles in order to understand the social and ethnic consequences of international migration with a focus on the United States. Students will communicate views formulated from empirical evidence and reasoned analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Prerequisite(s): ASB 102 or SOC 101 with C or better; 45 minimum hours
SOC	389	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 389 or SBS 389 or SOC 389
SOC	390	Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	
SOC	390	Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	CS	Pre-requisite: MAT 142 or higher
SOC	391	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Prerequisite(s): SOC 101 or SOC 301 or CDE 232; SOC 390; Credit is allowed for only FAS 361 or SOC 391
SOC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
SOC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
SOC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SOC	400	Perspectives on Aging	Broad overview of gerontological issues; e.g., physical aging, retirement, living options, caregiving, theoretical background, death.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SOC	415	The Family	Family considered from the institutional viewpoint; in-depth look at its historical development and its adaptation to a changing culture; analysis of the family system in many cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: minimum 30 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	418	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & H	Pre-requisites: FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better; minimum 30 hours. Credit is allowed for only CDE 418 or SOC 418
SOC	418	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & H	Pre-requisites: FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better; minimum 30 hours. Credit is allowed for only CDE 418 or SOC 418
SOC	419	Organizations and Technological Change	Explores the increasing impact of information technology on corporate, governmental, and private organizations. May involve fieldwork.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	
SOC	420	Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or SB	
SOC	420	Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	
SOC	421	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
SOC	421	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	

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SOC	424	Women and Health	Women as healthcare workers and an in-depth analysis of issues of health, illness, and healthcare for women	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: minimum 30 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	426	Social Inequality	Examines stability and change in social inequality based on class, race and gender, and in the context of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	426	Social Inequality	Examines stability and change in social inequality based on class, race and gender, and in the context of globalization.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SOC	427	Sociology of Health and Illness	Social aspects of illness and sociological analysis of the healthcare system and its practitioners.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Prerequisite(s): minimum 45 hours
SOC	427	Sociology of Health and Illness	Social aspects of illness and sociological analysis of the healthcare system and its practitioners.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours
SOC	433	Applied Demography	Science of population analysis. Covers techniques for measuring fertility, mortality, migration, and population composition.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	435	Advanced Marriage and Family Relationships	In-depth examination of research, issues, and trends relating to marriage and family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Pre-requisites: Minimum 30 hours; FAS 101, 331, PSY 101(PGS 101) or SOC 101 with C or better; Credit is allowed for only FAS 435 or SOC 435
SOC	443	Sociology of Corporations	Examines corporations as social institutions and the implications of their status as a legal person on politics, culture, and economy.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
SOC	445	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
SOC	448	Epidemics and Society	How epidemics occur; how they are perceived in society; how epidemics affect society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G	
SOC	451	Comparative Sociology	Cross-cultural study of basic social institutions; the methodology of cross-cultural research.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G	
SOC	456	Political Sociology	Social factors associated with voting; nature and structure of the electorate and political parties and the nature of national and international power structure.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SOC	457	Global Social Movements	Examines how groups mobilize across borders to pursue social goals, including equality, justice, peace, and salvation in a global context.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
SOC	460	Leadership, Research, and Collaboration in Community Change	Advanced understanding of leadership and the development of proposals for innovative plans that enhance the well-being of children, youth and families.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: Minimum 60 hours; Credit is allowed for only FAS 460, SOC 460 or FAS 498 (Leadership Research & Collaboration in Change)
SOC	461	Community Action Research Experience Research Internship	Second course in Community Action Research Experience (CARE) sequence. Students apply leadership, professional collaboration, project management and research skills in conducting an approved community action research project.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: FAS 460 (or SOC 460); Minimum 60 hours. Credit is allowed for only FAS 461 or SOC 461
SOC	483	History of Social Thought	Social thought in human culture. Background of modern sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Prerequisite(s): minimum 45 hours
SOC	483	History of Social Thought	Social thought in human culture. Background of modern sociology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours
SOC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
SOC	486	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: SOC 101 or 301
SOC	486	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: SOC 101 or 301
SOC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
SOC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
SOC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6	L	Prerequisite(s): Barrett Honors student
SOC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
SOC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
SOC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SOC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
SOC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-7		
SOC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-7		
SOC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
SOC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		
SOC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
SOC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	501	Social Statistics	Understands and uses statistics for applications in the social sciences.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only CDE 501, SOC 501 or SOC 598 (Statistics for Social Sciences)
SOC	505	Applied Regression Analysis	Multiple linear regression topics relevant to social science data analysis. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 505; Graduate students only (degree and non-degree)
SOC	507	Categorical Data Analysis	Logistic regression and related topics relevant to categorical data analysis in social sciences. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 507; Graduate students only (degree and non-degree)
SOC	508	Structural Equation Analysis for the Social Sciences	Theory and application of structural equation modeling. Path analysis and latent variable models such as CFA, multiple group analysis and models for longitudinal data. Projects involve conducting analyses and writing results.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 508; Graduate students only (degree and non-degree)
SOC	509	Event History Analysis	Proportional hazards models and other methods for analyzing longitudinal data and establishing hazard rates of events for exploratory variables.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 509; Graduate students only (degree or non-degree)
SOC	512	Secondary Data Analysis	Works with existing data to produce a publishable article.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 512; Graduate students only (degree or non-degree)
SOC	515	Studies of the Family	Current developments in the study of marriage and the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	516	Family Demography	Current developments in the study of family demography.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
SOC	523	Social Stratification	Overviews significant themes, issues, and bodies of work in the field of social stratification, a fundamental topic of sociological inquiry.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
SOC	533	Demographic Methods	Emphasizes methods and techniques in demographic analyses such as life tables.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		

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SOC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	585	Sociological Theory	Analyzes major sociological theories, from classical to contemporary.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	586	Capstone I	Professional exploration and goal specification for non-thesis capstone project.	N	PRA	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): 3 hours in any CDE, FAS or SOC 500-level course with C or better; Credit is allowed for only FAS 586 or SOC 586
SOC	587	Capstone II	Develops professional expertise and area of focused interest.	N	RSC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): FAS 586 or SOC 586. Credit is allowed for only FAS 587 or SOC 587
SOC	588	Capstone III	Applies developed expertise and knowledge to professional goal.	N	PRA	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): CDE 501 or SOC 501; CDE 531 or SOC 585; FAS 500 or SOC 500; FAS 587 or SOC 587; 12 additional graduate-level hours in CDE, FAS, and/or SOC; Credit is allowed for only FAS 588 or SOC 588
SOC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
SOC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
SOC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	603	Perspectives in Sociological Inquiry	Provides an overview of core theoretical frameworks and associated analytic approaches in sociology. Taught by faculty members from across the university with sociological training or research interests, providing students with foundational and advanced research tools as well as introducing them to ongoing research at ASU, the distinctive contributions of sociological perspectives to inter- and transdisciplinary projects, and potential opportunities for research residency.	N	SEM	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SOC	685	Applied Social Theory	Overviews main classical and contemporary theoretical paradigms and concepts in sociology and provides advanced training on using them to build empirical analytic models. Students identify theoretical perspectives appropriate for research questions, build corresponding conceptual frameworks, and formulates testable hypotheses. Seminar format and therefore students' active participation is expected.	N	SEM	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	100	Introduction to Sustainability	Introduces basic concepts, global trends, and local responses, philosophical, ethical, and cultural dimensions.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	G	Pre-requisites: Not open to Sustainability majors or majors with a Sustainability concentration
SOS	100	Introduction to Sustainability	Introduces basic concepts, global trends, and local responses, philosophical, ethical, and cultural dimensions.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	G	Pre-requisites: Not open to Sustainability majors or majors with a Sustainability concentration
SOS	101	Introduction to Applied Mathematics for the Life and Social Sciences	Introduces quantitative techniques as applied to problems in the life and social sciences. Includes challenges like understanding the complexities of the human genome or the implications of globalization for infectious disease, human health, and economic stability.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	MA	Prerequisite(s): MAT 117 with C or better or Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only AML 100 or SOS 101
SOS	110	Sustainable World	Lays the groundwork for understanding the fundamental geological, biological, and social processes that gave rise to the world we live in and continue to maintain its viability for human life.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SB	
SOS	110	Sustainable World	Lays the groundwork for understanding the fundamental geological, biological, and social processes that gave rise to the world we live in and continue to maintain its viability for human life.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	SB	
SOS	111	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & G	Credit is allowed for only PUP 190 or SOS 111
SOS	111	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(HU or SB) & G	Credit is allowed for only PUP 190 or SOS 111
SOS	111	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	(HU or SB) & G	Credit is allowed for only PUP 190 or SOS 111

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SOS	117	Food System Sustainability	Food systems are particularly important for human societies to sustain and are also particularly vulnerable to multiple threats related to the interconnected sustainability challenges we face. Introduces the concepts and issues involved in food systems sustainability. Divided into four modules, the first three of which address the other systems with which food systems interact--socio-ecological, socio-cultural and socio-technical systems. The final module addresses the future of food systems. Teaches students about the main issues in food system sustainability and allows students to enhance their critical thinking skills by applying them to the many sustainability challenges associated food system activities via solutions-based learning including the social, ecological, economic and institutional dimensions.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		
SOS	171	The Thread of Energy	Follows the thread of energy through every aspect of our lives. Discusses the technical, social, legal, and policy contexts of all energy resources, including present and unconventional fossil fuels, nuclear power, and renewable resources. Addresses energy use throughout history, the influence of energy on quality of life, the role it plays in political strategies and environmental quality, how it shapes our neighborhoods and cities, its contribution to our personal comfort and national security, and how its importance is reflected in the worlds of business and the humanities. Its dual role is as a stand-alone introduction to energy, and as a first step to more advanced studies of energy in the natural, technical, and social sciences.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3	SB & G	Credit is allowed for only GCU or SOS 171
SOS	181	Technological, Social, and Sustainable Systems	Introduces the importance and role of technological, social, and sustainable systems in the modern world. Provides a framework for the theory and practice of sustainable engineering.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	HU	Credit is allowed for only SOS, FSE or CEE 181
SOS	182	Water Planet	Overview of the processes that control water supply to natural ecosystems and human civilizations. Part I introduces the basic science that helps us understand the water planet, including the hydrologic cycle, glaciers and ice; rivers, oceans, and natural hazards associated with water such as flooding, landsliding and tsunamis. Part II covers some of the management and resource allocation topics that face humanity today, including droughts, groundwater contamination, impacts on fisheries, conflicts over water, patterns of water use, and effects of global climate change on future water supplies. Uses water issues facing Arizona and California as examples.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	4	SQ	Credit is allowed for only GLG 108 or SOS 182
SOS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	GRD	School of Sustainability	School of Sustainability	1-3		
SOS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		
SOS	201	Introduction to ASU and Sustainability	Introduces all ASU transfer students to the unique elements, culture, challenges and opportunities of the university.	N	LEC	N	YGB	School of Sustainability	School of Sustainability	1		Pre-requisites: Sustainability major; Minimum 24 hours
SOS	211	Calculus and Probability for the Life and Social Sciences	Introduces two of the most important and useful mathematical frameworks used to study natural and social phenomena: probability and calculus. Probability is used to describe an attitude of mind toward some proposition whose truth is not certain. Calculus is the branch of mathematics used to study the behavior and dynamics of functions: calculus is the mathematical study of change. Students gain the basic competence needed for applying probability and calculus when thinking about and research problems in sustainability. Focuses on and discusses applications, the meaning of important concepts, the origins of the rules of derivation and integration, and logic behind why the methods work.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3	MA	Pre-requisite: AML 100 or SOS 101 with B or better
SOS	212	Calculus-Based Modeling for the Life and Social Sciences	Introduces the evaluation and construction of mathematical models used in the life and social sciences. Includes the basic steps in developing a model, analyzing it, and testing it with actual data. Covers the first steps concerning how to use formal mathematical techniques including developing equation-based relationships, plotting graphs, linear regression, and solving equations using computer software.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): SOS 211; Credit is allowed for only SOS 212 or SOS 294 (Intro to Math Tools & Modeling)
SOS	220	Systems Thinking	Introduces systems thinking and complexity science, with an emphasis on analytical relevance for thinking about a myriad of issues involved in sustainability. Hones students' abilities to read critically, articulate their views clearly, and think about the many systems that shape their lives.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	230	Professional skills in Sustainability	Builds interpersonal competence, which is a key competence in sustainability. Students work on a small hands-on sustainability project in order to practice professional skills in four domains: teamwork, project management, self-directed and continuous learning, and stakeholder engagement. Students learn how to effectively collaborate in teams, use project management tools to achieve quality products in time, innovate their ways of learning, and create productive dialogue with stakeholders.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	1		Pre-requisites: PUP 190 (or SOS 111) and SOS 110 with C or better

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SOS	231	Careers in Sustainability	Aids in career exploration and development for School of Sustainability majors. Explores values, motivations and career options. Students learn how to approach the job search and how to communicate sustainability to employers; also how to prepare a quality résumé, cover letter, and gain a better understanding of the benefits of networking.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	1		Pre-requisites: BA or BS Sustainability major; Minimum 45 hours; PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	272	Environmental Justice	Surveys key environmental justice issues and movements. Uses interdisciplinary social science perspectives to review and analyze U.S. and international case studies.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3	SB	Credit is allowed for only ASB 272 or SOS 272
SOS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: SOS 101 or AML 100 with C or better
SOS	300	Advanced Concepts and Integrated Approaches in Sustainability	Integrates disciplinary contributions to sustainability, teaches advanced concepts in sustainability, and explores methods for identifying sustainability challenges and generating solutions. Focuses on diversity of sustainability research, and integrates specialized approaches in sustainability. Advanced concepts in sustainability, including systems-thinking, complexity, nonlinearity, cascading effects, coupled natural-human systems, governance, future thinking, unintended consequences, normative concerns, transformation, power, participation, and equity.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisite: Sust minor with SOS 100 (or 110 or SOS 111/PUP 190) with C or better; 6 hrs from two Sust themes OR Civil and Environ Engineering major with a Sust conc OR Tourism major with a Sust Tourism conc OR Interdisc Studies major with a Sust conc
SOS	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301
SOS	309	History and Philosophy of Sustainability	Examines sustainability issues in a broadly interdisciplinary way, but with a special emphasis on humanities perspectives, focusing on human ideas, values and institutions as they have evolved over time.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours; Credit is allowed for only HST 308 or PHI 322 or SOS 309 or BIO/HST/PHI/SOS 394 (History & Philosophy of Sustainability)
SOS	310	Equity, Justice and Sustainability	Introduces the "social justice" aspects of sustainability science and practice. Sustainability problems are a special class of problems arising from a complex set of issues spread across time, space and institutional scales. These problems can threaten underlying social, economic and ecological systems which are highly intertwined and interdependent. Explore these issues through study of both theory and practice.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	311	Future Thinking and Strategies	Offers a critical introduction to future-oriented theories and methods. Explores anticipation in contemporary society through a series of cases studies that probe real-world sustainability issues and how the future is created and contested. By characterizing and critiquing future-oriented practices across governmental, academic and private sectors, offers a critical perspective on different methodological approaches and the implications of their use.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	314	Basic Energy Science	Explains the concepts of the science of energy for those without a background in engineering. Allows non-engineering students to better grapple with the issues that surround sustainable energy issues. Covers the most common methods of electricity generation as well as renewable technologies and fuels.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only SOS 314 or SOS 394 (Basic Energy Science)
SOS	315	Energy Policy	Examines the regulation of energy production and consumption in the U.S. at the federal, state and local levels. Identifies energy stakeholders in the U.S. and examines how they have shaped U.S. policies around energy. Explains past and current U.S. energy policies and how energy needs have shaped U.S. relations with other countries. Compares U.S. energy policies to that of other countries in the world, as well as how Arizona's energy policies compare to other states within the U.S.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only PAF 394 (Energy Policy) or POS 394 (Energy Policy) or SGS 315 or SGS 394 (Energy Policy) or SOS 315 or SOS 394 (Energy Policy)

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SOS	320	Society and Sustainability	Establishes an understanding of the human, social, and cultural dimensions of sustainability from multi- and interdisciplinary perspectives and at a variety of spatial and temporal scales.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	L or SB	Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	321	Policy and Governance in Sustainable Systems	Explores the wide array of political questions that are raised when we view the Earth's environment as an integrated, global system.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	322	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Sustainability or Business (Sustainability) major; SOS 110 and 111 (or PUP 190) with C or better OR Non-Sustainability major with 2 courses with C or better: SOS 100, 110, 111 (PUP 190), SOS 300
SOS	323	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	324	Sustainable Energy, Materials, and Technology	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	325	The Economics of Sustainability	Applies economic principles to the allocation of environmental goods and services, external environmental effects, and environmental public goods; decision-making under uncertainty, adaptation to and mitigation of environmental change.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	326	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning, and the provisioning of ecosystem services; use of economic and other social science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SOS	327	Sustainable Food and Farms	Food systems and sustainability. Theories of food security, rural livelihood sustainability, and food sovereignty. Critically examines the social, ecological, economic, and institutional dimensions of the many sustainability challenges associated food system activities (production, processing, distribution, consumption, waste). Students develop a food system framework and apply knowledge to an assessment of the sustainability of one aspect of the local food system.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	328	Sustainability and Enterprise	Examines the evolving interface between sustainability and human enterprise. Explores and reviews key fundamental concepts in the sustainability arena, including economic and scientific drivers and select historical and structural aspects that create the current context for the enterprise and sustainability interface found today. Delves into more specific case studies of attempts by current businesses to become "greener?" and "more sustainable," exploring challenges and opportunities that are commonly found as well as how decisions are often made in today's business settings and by whom. Explores alternative enterprise models and examples of businesses that are using the current context to redefine the sustainability and enterprise. Given the emergent nature of this effort, uses timely and "real-world?" examples from current events where possible. Explores and applies an integrated approach to sustainability and enterprise. Readings include popular texts, original research articles and current events.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisite: Sustainability or Business (Sustain) major; SOS 110 and 111 (or PUP 190) with C or better; OR Non-Sustain major with 2 courses: SOS 100, 110, 111 (PUP 190), SOS 300 with C or better; Credit for only SOS 328 or 394 (Sustain and Enterprise)
SOS	353	Perspectives on the Western Diet: Food, Health and Sustainability	Hybrid course covering political, ethical, social and cultural issues inherent in the U.S. food system. Topics include examination of U.S. food guidance; the food system and food environment; the history of food and farm policy; food security and aspects of sustainability in relation to food system impacts on the health of humans, society and the environment.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only NTR 353 or NTR 394 (The Western Diet: Food, Health, & Sustainability) or SOS 353
SOS	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	L or SB	Pre-requisites: ENG 102 (or ENG 105/108) with C or better; ASB 100 (or 102), SOC 101, SOS 110 or SSH 100 with C or better; Credit is allowed for only ASB, SOC, SOS or SSH 370
SOS	371	Inequality and Sustainability	Efforts to shift societies onto a sustainable trajectory are facing profound challenges from the degree and dynamics of global inequalities of income, wealth, and life chances. Data and ideas from a spectrum of disciplines are employed to examine, analyze, and criticize the prospects for redressing global inequalities in a sustainable manner.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: ENG 101, 105 or 107 with C or better; Minimum 45 hours completed; Credit is allowed for only ASB or SOS 371; Students who have received credit for ASB or SOS 394 (Inequality and Sustainability) may not enroll in SOC 371
SOS	372	Earth Science in Arizona and the Southwest	Place-based application of geology and allied Earth system sciences to explore and interpret the landscapes, rocks, geologic history, climate, resources, and natural hazards of Arizona and the Southwest. Integrates case studies of the interactions of Southwest cultures and societies (past and present) with Earth systems, and inquiry into the future sustainability of Southwestern communities and lifeways.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; GLG 101 (or GLG 102 or 110 or GPH 111 or SES 121); MAT 117 or higher. Credit is allowed for only GLG 301 or GLG 394 (Earth Sci in AZ & SW) or SOS 372
SOS	373	Minerals, Energy, and Society	Studies the science and technology of the minerals and energy industries, how these industries interact with society, and how these interactions may change in the future.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: ENG 101 (or 105 or 107) with C or better; GLG 101 (or 102 or 110) or GPH 111 or SES 121 or Junior standing; Credit is allowed for only GLG 304, 394 (Minerals, Energy & Society) or SOS 373

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SOS	374	Earth's Critical Zone	The Earth's near surface environment (the "critical zone") supports most life and is the dynamic interface between the solid Earth and its fluid envelopes where much of the geologic record is produced. We now know that we face rapid climate change and the consequences of changes in land use, water resources, and ecosystems. Critical to planning a response to, or mitigation of, environmental change is understanding how the Earth surface works. Focuses on how changes to the environment manifest themselves in the critical zone—in the form and function of the Earth's surface (landforms, water resources, soils, ecosystems). Offers a quantitative introduction to the form and function of the processes impacting the Earth's critical zone to build an understanding of the interactions of physical, chemical and biotic processes in shaping the surface and determining fluid, solute and sediment fluxes.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisites with C or better: GLG 101 & 103 or SES 121 & 123; MAT 170 or 171 or 210 or 251 or 265 or 270; PHY 101 or 111 or 121 or 150 or CHM 101 or 107 or 113 or 114 or BIO 100 or 181 or 182 or 281 or 282. Credit is allowed for only GLG 327 or SOS 374
SOS	375	Humans and the Environment: What's the Connection?	How do diverse human groups across global ecosystems (desert, tropics, arctic, alpine, urban) interact with and adapt to their environments and how are these relationships changing in response to globalization, climate change and other social, historical and political-economic drivers? Cultures situated in landscapes are the basis for an incredible global diversity of worldviews and behaviors that in turn affect how humans experience and "use" their environments. This course will provide an introduction to current and benchmark literature and methods in environmental and ecological anthropology that address people-environment interactions.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	(L or SB) & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 375 or SOS 375 or ASB 394 (People: Environment Connections in Anthropology) or ASB 494 (Ecological and Environmental Anthropology)
SOS	385	Business & Sustainability I	Focuses on sustainability practices at the organizational level. Describes how business and consumer products impact our physical environment and the communities that they interact with, and identifies ways to measure and improve the sustainability of products and the supply chains that deliver them. Students will examine organizational practices with regard to sustainability, evaluate the impact of products and services on the environment, and explore a business case for sustainability.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: Minimum 60 hours; SCM 300 or SOS 110 with C or better. Credit is allowed for only SCM 385 or SOS 385
SOS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	414	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3	SB	Prerequisite(s): ASB 100, 102, 222, 223, AML 100, ASM 104 or SSH 100 with C or better; minimum 45 hours; Credit is allowed for only ASM 414 or SOS 414 or SSH 414
SOS	421	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): BIO 320 with C or better. Credit is allowed for only BIO 421 or BIO 521 or SOS 421 or SOS 521
SOS	424	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	4		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit allowed for only ASM, BIO or SOS 424
SOS	429	Human Impacts on Ecosystem Functioning	Explores our current understanding of how humans are impacting the functioning of ecosystems and how changes in ecosystems would affect provisioning of ecosystem services and ultimately human well-being. The two primary drivers of ecosystem change are growth of the human population and increased consumption per capita. These drivers affect the Earth's cycles of carbon, nitrogen and water, as well as regional and global-scale changes in biodiversity and climate. Includes an in-depth discussion of scenarios for the next 50 and 100 years, which articulate costs and benefits of alternative development pathways in terms of climate change, food production, clean water and biodiversity. Scenarios of change in biodiversity lead to the topic of the consequences of biodiversity change for the functioning of ecosystems from the point of view of their productivity and stability. Human activities have disrupted several biogeochemical cycles including nitrogen and carbon cycles.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): BIO 320 (or SOS 326); Credit is allowed for only BIO 429, BIO 528, SOS 429, SOS 528, or SOS 494/598 (Human Impacts on Ecosystem Functioning), or BIO 494/598 (Human Impacts on Ecosystem Functioning)

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SOS	433	Sustainable Water Use	A clustered learning network on the problem of water scarce regions, includes insights from hydrology, engineering, biology, economics and public policy. May be repeated once for credit.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3		
SOS	434	People and Nature: Ecosystem Services	Explores the drivers of biodiversity change and the consequences they have for human wellbeing, taking both an ecological and an economic perspective.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: MAT 117 or SOS 101; junior standing. Credit is allowed for only BIO 434, SOS 434, or BIO 494 (Ecosys Servcs:People&Nature)
SOS	435	U.S. Energy: Pathways to Sustainability	Organized around four mores of energy and environmental policy: energy supply, technology for efficiency, environmental sustainability and infrastructure. Also incorporates the wider context of energy and the environment in the society in which we live, taking into account our historic past and future potential life experience with energy availability and use. Through critical examination and analysis of these mores, students apply knowledge to the creation of a comprehensive energy and environmental policy plan that addresses past conditions, present states and future possibilities.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Credit is allowed for only SOS 435 or SOS 494 (Energy and Environmental Policy) or SOS 494 (US Energy: Pathways to Sustainability) or SOS 555 or SOS 594 (Energy & Environmental Policy)
SOS	441	Mathematical Concepts and Tools in Sustainability	Explores various mathematical analysis and models pertinent to sustainability science drawn from both social and natural sciences and introduced in a problem-based context. Demonstrates basic concepts from game theory such as pure-strategy and mixed-strategy Nash equilibriums in such classic games as prisoner's dilemma, hawk-dove, coordination. Explores the evolutionary dynamics of these games through the replicator equations. Studies important concepts of stability and regime shift for selected problems. Also discusses some basic solution concepts in cooperative game theory (depending on interest and time).	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s) with C or better: AML 253, or SOS 210(or SOS 294 Intro to Math Tools & Modeling). Credit is allowed for only AML 441 or 494 (Math Concepts & Tools in Sustainability) or SOS 441 or 494 (Mathematical Concepts and Tools in Sustainability)
SOS	442	Sustainability Indicators	Measures of sustainability (or sustainable development), focusing on sustainability indicators and indices (SIs). Discusses key conceptual and methodological issues on gauging sustainability and examines a wide range of sustainability indicators and indices that have been commonly used at global, regional and local scales.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only SOS 442, 494 (Sustainability Indicators and Indices), 542 or 598 (Sustainability Indicators and Indices)
SOS	447	Gender, Culture, and Development	In-depth analysis of gender roles related to health, family, work, education and politics in developing countries.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	(L or SB) & G	Prerequisite(s): WST 100 or 300 or minimum 45 hours; Credit is allowed for only SGS 454 or SOS 447 or TCL 447 or WST 447 or TCL 598 (Gender, Culture & Development)
SOS	456	Human Rights and Sustainability	Addresses the connections between human rights and environmental sustainability. Legal and scholarly approaches linking these areas present new perspectives for addressing some of the greatest challenges of our time, given the important resource dimensions of economic and social rights and the human dimensions of sustainability. Yet human rights demands and environmental concerns are not always in harmony. Explores these tensions and opportunities by examining three substantive areas: urban ecology and human rights, the human right to food, and the human rights implications of extractive industries such as oil and mining. Following an introduction to the key concepts of human rights and sustainability, explores the substantive areas through theoretical and empirical readings on each; grassroots accounts of struggles over environment-related human rights; and selections from literature and film that illustrate the environmental justice issues at stake.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3	(L or SB) & G	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 36 hours. Credit is allowed for only JUS 456, SOS 456, JUS 394 (Human Rights & Sustainability), or JUS 497 (Seminar in Human Rights)
SOS	463	Political Ecology of the Border	Examines the political ecology of the human-environment relationship in Mexico and on the U.S.-Mexican border. Through case studies, students learn about the most pressing environmental issues facing human populations and their communities on both sides of the U.S.-Mexican border and the various ways in which these issues are dealt with.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	SB & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 463 or SOS 463 or TCL 443
SOS	465	Sustainable Urbanism	History, theory, principles and practice of New Urbanism, including current critiques and counter-critiques of both movements.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s) with C or better: Sustainability major in a sustainability concentration: SOS 110, 111 (or PUP 190); minimum 45 hours. All other majors: PUP 301. Credit is allowed for only PUP 465 or PUP 565 or SOS 465

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SOS	474	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 464 or MGT 464 or SOS 474
SOS	475	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 465 or MGT 465 or SOS 475
SOS	480	Achieving Career Success in Sustainability	The need for sustainability-minded workers and leaders has never been more important than right now. Yet sustainability as a career track is still very new and means different things to different people. Challenges students to explore their own ambitions and "personal brands," to shape their work personas, to model the behaviors and competencies that build long-term career success, and to uncover the sustainability potential of any job, whether or not "sustainability" is in the job title.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Pre/Co-requisite: SOS 110, 111, PUP 190 with C or better if completed; Credit is allowed for only SOS 480 or 494 (Achieving Career Success in Sustainability)
SOS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	485	Business and Sustainability II	Exposes students to a variety of ideas, concepts, theories, and models concerning sustainable technologies. Students learn to apply a systematic research process in order to assess a technology with potentially positive sustainability attributes; perform hotspot analysis on a technology in order to understand key environmental and social issues; forecast the future of a sustainable technology through application of technology forecasting models; predict how sustainable technologies are likely to get successfully adopted and diffused.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: SCM 385 or SOS 385 with C or better. Credit is allowed for only SCM 485, SCM 494 (Business and Sustainability II) or SOS 485
SOS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	School of Sustainability	School of Sustainability	1-6		Prerequisite(s): Barrett Honors student
SOS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	School of Sustainability	School of Sustainability	1-6	L	Prerequisite(s): Barrett Honors student
SOS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: SOS 110, and SOS 111 (or PUP 190), with C or better
SOS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-7	L	Pre-requisites: Sustainability major; Minimum 9 hours of SOS 320, 321, 322, 323, 324, 325, 326, 327, 328 (or SOS 394 ST: Sustainability and Enterprise), 465 (or PUP 465)
SOS	499	Individualized Instruction		Y	SEM	Y	Z1	School of Sustainability	School of Sustainability	1-3		
SOS	501	Foundations of Sustainability	Provides a knowledge base to help students to succeed in the online MSL program. Supports MSL students in the four learning threads of the program, which include communications and sustainability, global context, strategic sustainability and sustainability leadership.	N	LEC	N	YGB	School of Sustainability	School of Sustainability	1		Prerequisite(s): Sustainability Leadership MSL student; Corequisite(s): EMS 502; EMS 503
SOS	502	Tools and Techniques for Sustainability	Forthcoming federal legislation and Executive Orders will set new standards for operational efficiencies, energy and water conservation, use of renewable energy sources, and waste minimization in the Army and Army National Guard. Tools and Techniques for Sustainability presents a systems approach to meet those standards by integrating principles of sustainability into existing Army policies, procedures, and reporting systems. The course features the Framework for Sustainable Strategic Development as an organizing framework to analyze systems and develop strategic plans to move toward sustainability.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Global Sustainability Leadership certificate student; Pre-or co-requisite: SOS 501
SOS	503	Operationalizing Sustainability	Sustainability is a means to addressing the significant physical, statutory, and regulatory requirements that affect and can encumber the Army's ability to train Soldiers at ranges and maneuver areas across the United States. With hundreds of imperiled species proposed for federal protection in the next few years, threatened and endangered species and sensitive habitat will continue to be a concern. Participants in Operationalizing Sustainability will explore how innovative training practices, improved land and natural resource management practices, and enhanced community relationships can ensure continued access to the land and water assets needed to maintain readiness and can help to 'win hearts and minds.' Proactive approaches to promoting well-being for soldiers, families, civilians, neighbors, and communities, both at installations and downrange, are stressed.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Sustainability Leadership certificate student; SOS 501; SOS 502

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SOS	504	Energy and the Built Environment	Provides practical approaches to applying sustainability principles and practices to public works activities, housing, facilities operations and management, military construction, master planning, and energy management. Presents approaches to implement high-performance sustainable building design, construction, operation and management, maintenance, and deconstruction. Also covers cost-effective, innovative strategies, such as highly reflective and vegetated roofs, to minimize consumption of energy, water, and materials.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Sustainability Leadership certificate student; SOS 501; SOS 502
SOS	505	Sustainable Military Acquisition and Logistics	Sustainable Military Acquisition and Logistics provides practical approaches to applying sustainability principles and practices to all areas of procurement, acquisition, and logistics. Through weapon systems acquisition or procurement of installation goods and services, the Army hopes to drive innovation and promote sustainability while reducing costs. The inclusions of energy and resource efficiency and other sustainability criteria in acquisition and procurement decisions can reduce long-term operation and maintenance costs, conserve resources, and continue to expand innovation throughout the supply chain. This course introduces the application of sustainability principles to procurement and acquisition, transportation, and materiel. The use of life cycle analysis and multicriteria assessment for all 10 classes of supply is also featured significantly in the course.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Sustainability Leadership certificate student; SOS 501; SOS 502
SOS	510	Perspectives on Sustainability	University-wide course covering basic perspectives on sustainability. Uses case studies; faculty and students from engineering, architecture, social sciences, and natural sciences exchange ideas on the major challenges faced in forming a sustainable future at the local, national, and global levels.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): School of Sustainability graduate students
SOS	511	Transformational Sustainability Research	Enables students to describe, position, compare, and evaluate the key features, strengths, and weaknesses of sustainability research and problem-solving methods. Introduces an integrated methodological framework for sustainability research and problem solving that maps and structures families of methods from description/analysis to strategy building. Addresses all major families of sustainability methods, critically evaluating their specific function, structure, underlying assumptions, validity, reliability, strengths and weaknesses against this overall framework. The method families include not only scientific methods but also practical problem-solving techniques. Integrates two training programs, one on teamwork skills, the other on participatory collaboration with stakeholders.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): School of Sustainability graduate students
SOS	512	Sustainable Resource Allocation	Microeconomic principles of resource allocation applied to environmental goods and services, external environmental effects and environmental public goods; decision making under uncertainty, adaptation to and mitigation of environmental change.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	513	Science for Sustainability	Key ideas, concepts and principles of sustainability science that focuses on the dynamic relationship between society and nature. Examines the structure, functioning and dynamics of coupled human-environment systems (CHESs) on local, regional and global scales with a systems perspective. Covers major sustainability science issues including: fundamentals of ecology, energy, agro-food systems, renewable and non-renewable resource systems, economic development and human well-being.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	514	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GCU or SOS 514
SOS	515	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		
SOS	516	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 515 or GLG 547 or HSD 515 or PAF 547 or SOS 516
SOS	517	Sustainability and Enterprise	Examines the evolving interface between sustainability and human enterprise. Explores and reviews key fundamental concepts in the sustainability arena, including economic and scientific drivers and select historical and structural aspects that create the current context for the enterprise and sustainability interface found today.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SOS 517 or SOS 591 (Sustainability and Enterprise)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SOS	518	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
SOS	520	Research Design and Methods for Sustainability	Provides skills and knowledge that help students design their own research and place it in the context of other disciplines or bodies of work. Not a "methods" class because no specific method is taught indepth. Instead, it is an initial introduction to the research design process and is intended as a platform through which students develop the skills to appreciate and contextualize the approaches taken (and methods used) by others, and during which they can identify the types of specific training they require as they define their own research.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre- or corequisite(s): SOS 510; Credit is allowed for only SOS 520 or SOS 598 (Intro Design/Mthds)
SOS	521	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 421 or BIO 521 or SOS 421 or SOS 521
SOS	525	Social-Ecological-Technical Systems (SETS): Domains and interfaces	Guide students in developing an integrated approach and framework for thinking about complex systems in a sustainability context. Presents overviews of content, theories and methods from each of the SETS domains (Social, Ecological and Technical Systems); primarily focuses on how to bring these domains together. Explores the SETS interfaces (intersections) from an integrated perspective and equips students to make those linkages in their research and in subsequent elective courses. Each semester students use a sustainability problem or theme to explore the concepts presented in the course.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	527	Environmental Ethics and Policy Goals	Advanced seminar in applied environmental ethics, focusing on the most influential and policy-relevant approaches in the field of environmental ethics. Core topics include the historical and philosophical foundations of alternative understandings of environmental responsibility; the debate over utility and preservation in environmental policy argument; and the interplay of ethical principles, scientific knowledge and societal priorities in environmental decision making. Consideration of the ethical and value dimensions of biodiversity conservation, wilderness protection, environmental valuation, environmental activism, climate change and sustainability, among other challenges.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BIO 527 or SOS 527 or BIO 591 (Environ Ethics & Policy Goals)
SOS	528	Human Impacts on Ecosystem Functioning	Explores our current understanding of how humans are impacting the functioning of ecosystems and how changes in ecosystems would affect provisioning of ecosystem services and ultimately human well-being. The two primary drivers of ecosystem change are growth of the human population and increased consumption per capita. These drivers affect the Earth's cycles of carbon, nitrogen and water, as well as regional and global-scale changes in biodiversity and climate. Includes an in-depth discussion of scenarios for the next 50 and 100 years, which articulate costs and benefits of alternative development pathways in terms of climate change, food production, clean water and biodiversity. Scenarios of change in biodiversity lead to the topic of the consequences of biodiversity change for the functioning of ecosystems from the point of view of their productivity and stability. Human activities have disrupted several biogeochemical cycles including nitrogen and carbon cycles.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only BIO 429, BIO 528, SOS 429, SOS 528, or SOS 494/598 (Human Impacts on Ecosystem Functioning), or BIO 494/598 (Human Impacts on Ecosystem Functioning)
SOS	530	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	531	Achieving Career Success in Sustainability	The need for sustainability-minded workers and leaders has never been more important than right now. Yet sustainability as a career track is still very new and means different things to different people. Students explore their own ambitions and "personal brands," to shape their work personas, to model the behaviors and competencies that build long-term career success, and to uncover the sustainability potential of any job, whether or not "sustainability" is in the job title.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	1		Prerequisite(s): SOS 510; Credit is allowed for only SOS 531 or SOS 598 (Achieving Career Success in Sustainability)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOS	532	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): (degree- or nondegree-seeking graduate student; Credit is allowed for only ASB 533 or SOS 532
SOS	533	Sustainable Water	Hydrological, legal, political, and ecological implications of alternative water management strategies; effect of institutional and regulatory frameworks; changes in water demand and supply due to human (population growth, economic changes) and natural (drought, climate change) factors	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	534	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	535	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning and the provisioning of ecosystem services; use of economic and other social-science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ELS 535 or SOS 535
SOS	536	Food System Sustainability	Broad view of food systems and the sustainability of such systems. Concepts, theory, methods and empirical analyses from diverse disciplines, including agro-ecology, agronomy, political science, agricultural economics, geography, anthropology, and food and nutrition studies. Students choose a theme that is a core concern to food system sustainability and pursue that theme in diverse course activities and through engaging in the broader food system we are embedded in as residents in the Phoenix area. Culminates with a term paper/project that synthesizes experience and knowledge, providing a unique perspective on their role in food systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	540	Statistical Modeling for Sustainability	Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to begin conducting empirical analyses in their domains of interest; bring students to a high level of competency in using a cutting-edge statistical software package (Stata) for data management and data analysis tasks; expose students to applications of statistical methods in the economics/policy/social science sustainability literatures in order to develop an understanding for how statistical tools are operationalized in the research world; and develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations and command of statistical tools that constitute quality empirical research.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	4		Prerequisite(s): degree- or non-degree-seeking graduate student; Credit allowed for only AML, ESS or SOS 540
SOS	541	Mathematical Concepts and Tools in Sustainability	Explores various mathematical analysis and models pertinent to sustainability science drawn from both social and natural sciences and introduced in a problem-based context. Demonstrates basic concepts from game theory such as pure-strategy and mixed-strategy Nash equilibriums in such classic games as prisoner's dilemma, hawk-dove, coordination. Explores the evolutionary dynamics of these games through the replicator equations. Studies important concepts of stability and regime shift for selected problems. Also discusses some basic solution concepts in cooperative game theory (depending on interest and time).	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit allowed for only AML 494 (Math Concepts & Tools in Sustainability), AML 541, SOS 494 (Math Concepts & Tools in Sustainability), SOS 541 or SOS 598 (Math Concepts & Tools in Sustainability)
SOS	542	Sustainability Indicators	Measures of sustainability (or sustainable development), focusing on sustainability indicators and indices (SIs). Discusses key conceptual and methodological issues on gauging sustainability and examines a wide range of sustainability indicators and indices that have been commonly used at global, regional and local scales.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only SOS 442, 494 (Sustainability Indicators and Indices), 542 or 598 (Sustainability Indicators and Indices)
SOS	545	Organizations, Sustainability & Public Policy	Sustainability concerns are fast becoming a strategic issue for organizations in all sectors. In the last ten years, numerous organizations have completely redefined their business strategies in line with principles of sustainability by balancing the requirements for economic development, environmental quality and social justice, and governments worldwide are developing programs and policies that encourage these activities. Explores the connections between organization strategy--especially within the private sector, sustainability and public policy. Through a combination of practical cases, readings and lectures, class sessions engage students in discussions aimed at developing sustainability assessment models. Additionally, students apply new strategy tools that incorporate principles of proactive environmental management and social responsibility designed to enhance the public good.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only PAF or SOS 545

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SOS	546	Life Cycle Assessment for Civil Systems	Covers fundamental and advanced concepts of the life cycle assessment framework exploring products, services, activities and infrastructure systems. Examines key concepts for system boundary selection, functional unit selection, inventoring, impact assessment and interpretation stages with a focus on energy and environmental assessment. Advanced concepts include allocation of effects, problem formulation for assessing footprints versus decisions or policies, and assessment of infrastructure interdependencies and supply chains. Exposes tools and data sources and presents approaches for evaluation of sensitivity and uncertainty of results. Encourages students with broad sustainability interests to enroll and explore how life cycle assessment can aid their work by shifting their views from direct to cradle-to-grave effects.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CEE 506 or CEE 598 (Lifecycle Assessment) or SOS 546 or SOS 598 (Lifecycle Assessment)
SOS	547	Urban Infrastructure Anatomy and Sustainable Development	Understanding how built environment infrastructure systems interact with ecosystem services is critical for policies and decisions directing urban sustainability. Brings together students from several disciplines to develop a semester-long research project focused on a particular urban sustainability problem in Phoenix. During the semester, students are given background on how infrastructure systems work and are interdependent, and explore tools and methods for urban sustainability assessment with peers from several disciplines. As a class, students evaluate a particular urban sustainability problem for Phoenix, interact with local policy and decision makers in developing solutions, and present their findings at the end of the semester to the ASU community.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit for only CEE 507 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or PUP553 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or SOS547 or SOS598 (Urban Infrastr Anatomy & Sustain Dev)
SOS	552	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Credit is allowed for only CEE 581 or SOS 552
SOS	553	Ecological Anthropology	Focuses on the theories and methods that environmental anthropology (EA) can bring to bear on human-environmental questions across a variety of social-ecological systems. Explores how environmental anthropologists approach these complex challenges, and considers the role of EA within larger interdisciplinary approaches for understanding development, adaptation, vulnerability, and change.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 530 or SOS 553
SOS	555	US Energy: Pathways to Sustainability	Organized around four mores of energy and environmental policy: energy supply, technology for efficiency, environmental sustainability and infrastructure. Also incorporates the wider context of energy and the environment in the society in which we live, taking into account our historic past and future potential life experience with energy availability and use. Through critical examination and analysis of these mores, students apply knowledge to the creation of a comprehensive energy and environmental policy plan that addresses past conditions, present states and future possibilities.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit for only SOS 435,SOS 494 (Energy & Environ Policy) or SOS 494- US Energy: Pathways-to Sustain or SOS 555 or 594 (US Energy: Pathways to Sustainability) or SOS 594 (Energy & Environmntl Policy)
SOS	570	Fundamentals of CAS Science	Many phenomena of critical relevance to human society are dynamic systems that change over individual and evolutionary time scales, and are highly interactive, both within and between systems. That is, they are complex adaptive systems (CAS), and thus share isomorphic properties like near-decomposability, hierarchical organization, scale-free networks, self-organized criticality, and emergence. Fundamentals of CAS science explores the diverse, interdisciplinary applications of a complex adaptive systems across the social, behavioral, and life sciences.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student, Credit is allowed for only ASM, BIO, or SOS 570
SOS	577	Interdisciplinary Writing Seminar	If you want your work to make a difference in the world, you need to be able to communicate your ideas to diverse audiences in a way that is interesting and accessible. Teaches students to write clearly, persuasively, and ethically to people in your discipline, in other disciplines, and outside academia. Approaches writing as a way to think critically and refine ideas, as well as to communicate them to others.	N	SEM	Y	GNA	School of Sustainability	School of Sustainability	2		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is only allowed for ESS 577 or SOS 577 or SOS 598 (Interdisciplinary Writing) or SOS 598 (Writing Seminar)
SOS	578	Writing Papers for Publication	Students produce a draft of a research paper for submission to a peer-reviewed journal. Analysis of exemplary published papers and narrative strategies, along with peer review, support the writing process.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	2		Prerequisite(s): SOS 577 or SOS 598 (Interdisciplinary Writing Seminar). Credit is allowed for only SOS 578 or SOS 598 (Writing Papers for Publication)
SOS	579	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		
SOS	581	Synthesis for Sustainability Research	Engages students in inter- and transdisciplinary problem solving after they have gained depth of training in content areas, integrative approaches and methods. Students link their own research to the broader field of sustainability. Research.	N	RSC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): SOS 510; 520; 525; 579; Co-require(s): SOS 596 or SOS 599

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SOS	582	Project Management for Sustainability	Provides exposure to the tasks and challenges facing project managers, i.e., those people responsible for the vital function of managing complex projects in sustainability in today's environment. Successful project managers have the abilities and skills to simultaneously manage people, schedules, risks, and resources while delivering successful outcomes. This course is a prerequisite for the MSUS culminating experience.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): Graduate Sustainability major; SOS 510. Pre- or corequisite: SOS 511
SOS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	589	Community of Graduate Student Scholars	Provides the opportunity to develop new skills, to foster cohort building, to interact with other students and faculty, and to network and build support with the alumni network. Overseen by a faculty member but is primarily directed by the students. All MA or MS students take this course each semester. Although there is an overall structure as demonstrated in the course schedule, the specific content of the course varies each semester depending on the needs and interests of the students.	N	LEC	Y	YGB	School of Sustainability	School of Sustainability	1		Prerequisite(s): School of Sustainability graduate students
SOS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	School of Sustainability	School of Sustainability	1		
SOS	596	Scientific Paper	MA/MS students are required to devote six hours to conducting research and writing a scientific paper of publishable quality based on the research. The paper topic, the research methodology, and the written format must be approved by the supervisory committee. Students must decide if they will complete the paper on their own or as a group.	N	RSC	Y	GNA	School of Sustainability	School of Sustainability	1-6		Prerequisite(s): Sustainability MA or MS student; SOS 510; SOS 579
SOS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	656	Human Rights and Sustainability	Addresses the connections between human rights and environmental sustainability. Legal and scholarly approaches linking these areas present new perspectives for addressing some of the greatest challenges of our time, given the important resource dimensions of economic and social rights and the human dimensions of sustainability. Yet human rights demands and environmental concerns are not always in harmony. Explores these tensions and opportunities by examining three substantive areas: urban ecology and human rights, the human right to food, and the human rights implications of extractive industries such as oil and mining. Following an introduction to the key concepts of human rights and sustainability, explores the substantive areas through theoretical and empirical readings on each; grassroots accounts of struggles over environment-related human rights; and selections from literature and film that illustrate the environmental justice issues at stake.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only JUS 656 or SOS 656 or JUS 691 (Human Rights & Sustainability)
SOS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-12		

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SOS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		
SOS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	School of Sustainability	School of Sustainability	1		
SOS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		
SPA	101	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Students with credit for SPA 102, 111, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325 or 412 may not enroll in SPA 101
SPA	101	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Students with credit for SPA 102, 111, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325 or 412 may not enroll in SPA 101
SPA	101	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Students with credit for SPA 102, 111, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325 or 412 may not enroll in SPA 101
SPA	102	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Students with credit for SPA 111 or higher may not enroll in SPA 102
SPA	102	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Students with credit for SPA 111 or higher may not enroll in SPA 102
SPA	102	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Students with credit for SPA 111 or higher may not enroll in SPA 102
SPA	110	Intensive Spanish I	First-semester intensive course for students who (1) have never taken Spanish language courses before, or (2) have studied Spanish for one year at the high school level, or (3) have authorization from the Spanish section. This six-hour course meets on Mondays, Tuesdays, Wednesdays and Thursdays for 75 minutes in the classroom. To achieve the maximum level of proficiency, the course focuses on the development of speaking and written skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Credit is allowed for only SPA 101 or SPA 102 or SPA 110 or SPA 111
SPA	111	Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Students may not enroll in SPA 111 if credit earned in SPA101, 102, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	111	Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Students may not enroll in SPA 111 if credit earned in SPA101, 102, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	118	Basic Spanish for Health Care Professionals	Introductory Spanish course that focuses on helping students develop basic oral Spanish skills that allows them to interact with patients in the health care settings. Health care-related vocabulary, simple medical scenarios and basic grammar form the majority of the course curriculum. Students are responsible for completing virtual oral dialogues with a partner each week.	N	LEL	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Students may not enroll in SPA 118 if credit earned in SPA 194 (Basic Spanish for Health Care Professionals), SPA 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisite: Maximum 25 hours

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SPA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
SPA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	201	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	G	Students may not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312, 313, 314 ,315, 316 ,325, or 412
SPA	201	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312, 313, 314 ,315, 316 ,325, or 412
SPA	201	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4	G	Students may not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312, 313, 314 ,315, 316 ,325, or 412
SPA	202	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	G	May not enroll in SPA 202 if received credit in SPA 204, 311-316, 325 or 412
SPA	202	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	May not enroll in SPA 202 if received credit in SPA 204, 311-316, 325 or 412
SPA	202	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4	G	May not enroll in SPA 202 if received credit in SPA 204, 311-316, 325 or 412
SPA	203	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 201. Composition, literature, conversation, grammar fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in SPA 203 if they have received credit in SPA201, 202, 204, 311, 312,313,314,315,316,325,412
SPA	204	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 202. Composition, literature, conversation, grammar fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	May not enroll in SPA 204 if credit received in SPA 202, 311,312,313,314,315,316,325, or 412
SPA	210	Intensive Spanish II	Second-semester intensive course for students who have authorization from the Spanish section. This six-hour course that meets on Mondays, Tuesdays, Wednesdays and Thursdays for 75 minutes in the classroom. To achieve the maximum level of proficiency, the course is focused on the development of speaking and written skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Prerequisite(s): SPA 110 with C or better
SPA	218	Intermediate Spanish for Health Care Providers	Intermediate Spanish course that focuses on helping students develop oral Spanish skills that allow them to interact with patients in the health care settings. Health care-related vocabulary, the impact of culture on health care, medical scenarios and intermediate grammar form the majority of the course curriculum. Students are responsible for completing virtual oral dialogues with a partner each week.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Students may not enroll in SPA 218 if credit earned in SPA 294 (Intermediate Spanish for Health Care Providers), SPA 311, 312, 313, 314, 315, 316, 325, or 412
SPA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
SPA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
SPA	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SPA	313	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	G	Pre-requisites: SPA 202 with C or better; May not enroll in SPA 313 if credit received in SPA 314, 315, 316, 325 or 412
SPA	313	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: SPA 202 with C or better; May not enroll in SPA 313 if credit received in SPA 314, 315, 316, 325 or 412
SPA	313	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G	Pre-requisites: SPA 202 with C or better; May not enroll in SPA 313 if credit received in SPA 314, 315, 316, 325 or 412

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SPA	314	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	G	Prerequisite(s): SPA 313 or 315 with C or better; Students may not enroll in SPA 314 if they have received a C or better in SPA 412
SPA	314	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): SPA 313 or 315 with C or better; Students may not enroll in SPA 314 if they have received a C or better in SPA 412
SPA	314	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G	Prerequisite(s): SPA 313 or 315 with C or better; Students may not enroll in SPA 314 if they have received a C or better in SPA 412
SPA	315	Spanish Conversation and Composition for Bilinguals	Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	C	May not enroll in SPA 315 if credit received in SPA 313, 314, 316, or 412
SPA	315	Spanish Conversation and Composition for Bilinguals	Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	C	May not enroll in SPA 315 if credit received in SPA 313, 314, 316, or 412
SPA	316	Spanish Conversation and Composition for Bilinguals	See SPA 315.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L & C	Pre-requisite: SPA 315; Students who have credit for SPA 314 or SPA 412 may not enroll in SPA 316
SPA	316	Spanish Conversation and Composition for Bilinguals	See SPA 315.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L & C	Pre-requisite: SPA 315; Students who have credit for SPA 314 or SPA 412 may not enroll in SPA 316
SPA	317	Spanish for the Professions	Advanced-level course that serves as an introduction to the Spanish for the Professions minor or certificate. Develops oral and written skills that prepares students to use their Spanish in their careers and/or professional fields of interest. Also covers several cultural points that facilitate effective interaction with Spanish speakers in the professional world and global community.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: SPA 314 or 316
SPA	318	Advanced Spanish for Health Care Professionals	Advanced Spanish course that focuses on helping students develop oral Spanish skills that allow them to interact with patients in the health care settings. Health care-related vocabulary, the impact of culture on health care, medical scenarios and advanced grammatical structures form the majority of the course curriculum. Students are responsible for completing virtual oral dialogues with a partner each week.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Students may not enroll in SPA 318 if credit earned in SPA 394 (Advanced Spanish for Health Care Professionals)
SPA	319	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisite: SPA 314 or 316
SPA	325	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: SPA 313, 314, 315, 316, 412 or 413 with C or better
SPA	325	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: SPA 313, 314, 315, 316, 412 or 413 with C or better
SPA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
SPA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
SPA	400	Introduction to Spanish Linguistics	Introduces the discipline and methods of linguistics through the study of Spanish data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre/co-requisite: SPA 412 or 413; Students who have credit for SPA 400 may not enroll in SPA 539
SPA	401	Spanish Oral Communication for the Professions	Students practice their Spanish oral communication skills in the context of serving U.S. Latino clients in the community (e.g., schools, government agencies, social work settings, medical settings) or reporting on issues of interest to the Hispanic community. Students gain practice in speaking varieties of Spanish that would assist their communication with monolingual Spanish-speaking Latino clients in formal (professional) and informal contexts in the public sector. Students gain experience in giving public talks, reporting on cultural events and issues in the Hispanic community, participating in simulated workplace exercises requiring the ability to carry out various language functions appropriately in different contexts.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Spanish Oral Comm. for Profes) may not enroll in SPA 401

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SPA	402	Written Communication for the Professions	Students hone their Spanish literacy (reading and writing) skills in the context of serving U.S. Latino clients in the community (e.g., schools, government agencies, social work settings, medical settings) or reporting on issues of interest to the Hispanic community. Students read and understand documents in Spanish that they would come across in the process of assisting monolingual Spanish-speakers in the public sector or doing research on the Hispanic community (e.g., birth certificates, academic transcripts, medical reports, criminology documents, newspaper or magazine articles). Students gain practice in creating written documents in Spanish that would assist their communication with Latino clients in formal (professional) and informal contexts or that would allow them to report intelligently on issues of interest to the Hispanic community.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Spanish Written Communication) may not enroll in SPA 402
SPA	403	Spanish Grammar and Stylistics for the Professions	Students raise their level of awareness of appropriate grammatical, lexical and stylistic forms to use in their oral and written communication with U.S. Latino clients in formal (professional) and informal contexts in the community (e.g., schools, government agencies, social work settings, medical settings) or for reporting on issues of interest to the Hispanic community. Students enhance their analytical skills by analyzing and comparing Spanish oral and written discourse for genre-appropriate features (stylistics), grammaticality, mechanics, coherence and for a logical flow of ideas in public documents and oral discourses meant for a U.S. Latino audience.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Span Gram & Stylistics for Pro) may not enroll in SPA 403
SPA	404	Spanish in U. S. Professional Communities	Students investigate linguistic issues that impact the U.S. Latino community's interaction with professionals (e.g., interaction with service providers in schools, government agencies, social work settings, medical settings; language planning at state and local levels; Spanish spoken in different regions in the U.S.; Spanish language assessment of public sector employees; creation of Spanish for Professional Purposes courses). Students also learn to report on issues of interest to the Hispanic community.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	C	Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Spanish in the Community) may not enroll in SPA 404
SPA	405	Latino Cultural Perspectives for the Professions	Requires students to investigate the Latino cultural perspectives that underlie and affect communication in the professional world. Students come to understand the historical context that has affected the lives of Latino community in the U.S. and take a critical look at values traditionally associated with Latino culture (e.g., the importance of family ties, fatalism, honor, respecting elders, machismo or marianismo), which provide background information for professionals in the public sector who need to serve the needs of the Hispanic community.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	C	Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Latin/a Cultural Perspect Pro) may not enroll in SPA 405
SPA	406	Introduction to Spanish/English Medical Interpretation	Provides an introduction to interpretation theory and practice with a specific focus on interpretation for medical fields. Constitutes an academic introduction to the field and does not certify students to be medical interpreters. Students who enroll in this course should have an advanced level of conversational Spanish.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): SPA 314, SPA 316, or SPA 394 (Introduction to Spanish for the Professions); Credit is allowed for only SPA 406 or SPA 494 (Interpretation for Medical/Law Enforcement Personnel) or SPA 494 (Intro to Spanish/English Medical & Legal Interp)
SPA	412	Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: SPA 314, 316 or 413 with C or better
SPA	412	Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G	Pre-requisites: SPA 314, 316 or 413 with C or better
SPA	413	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: SPA 314, 316 or 412 with C or better
SPA	413	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G	Pre-requisites: SPA 314, 316 or 412 with C or better
SPA	414	Spanish for Sustainability and Environmental Studies	Provides language skills to engage in meaningful communication and official transactions in sustainability and environmental studies with an intermediate to high level of Spanish speaking, reading and writing competence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 314 or SPA 316 with C or better; Credit is allowed for only SPA 394 (Spanish for Sustainability) or SPA 414
SPA	417	Spanish Phonetics and Phonology	Introduces the theory and practice of Spanish phonetics and phonology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: SPA 412 or 413 with C or better
SPA	418	Spanish Syntax	Introduces the syntax of the Spanish language by analyzing different word categories, their groupings in phrases, and the structure of both simple and complex sentences. Advanced course that requires some previous knowledge of basic structures of the language and their internal structure.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 412 or SPA 413 with C or better

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SPA	419	Language Variations of Spanish	Spanish dialectology and variationist/quantitative sociolinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre- or corequisite(s): SPA 417 and 418 with C or better if completed; Credit is allowed for only SPA 419 or SPA 494 (Language Variations of Spanish)
SPA	420	Applied Spanish Linguistics	Applies linguistic principles to the teaching of Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L	Pre-requisites: SLC 201 or SPA 400 with C or better; SPA 413
SPA	421	Spanish in the Southwest	Discussion and linguistic analysis of Southwest Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	C	Pre-requisites: SPA 412 with C or better
SPA	422	Spanish Lexicology and Lexicography	Explores the linguistic theory and methodology related to the defining of meanings of words in Spanish dictionaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: SPA 412
SPA	425	Foundational Texts of Spain	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): SPA 325
SPA	425	Foundational Texts of Spain	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): SPA 325
SPA	426	Literature and Society in Modern Spain	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): SPA 325
SPA	426	Literature and Society in Modern Spain	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): SPA 325
SPA	427	Colonial and Postcolonial Latin American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): SPA 325
SPA	427	Colonial and Postcolonial Latin American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): SPA 325
SPA	428	Foundational Texts of Latin American Literature Since Modernismo	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Prerequisite(s): SPA 325
SPA	428	Foundational Texts of Latin American Literature Since Modernismo	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): SPA 325
SPA	429	Writing Mexico: Major Texts	Selected readings from pre-Columbian writers/poets (e.g., Macuilxochitl) through the novel of the Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Prerequisite(s): SPA 325
SPA	429	Writing Mexico: Major Texts	Selected readings from pre-Columbian writers/poets (e.g., Macuilxochitl) through the novel of the Revolution to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): SPA 325
SPA	431	Prose of Golden Age	Focuses on a number of books of canonical prose of 16th- and 17th-century Spain. Spanish Golden Age prose is considered one of the most important bodies of literature both in the Spanish-speaking world and in early modern studies. An astonishing number of works of fiction and nonfiction were written in the period, inspiring artists and intellectuals all over Europe. All readings are representative of genres that, in addition to enjoying popularity in Spain, were extensively translated into other languages throughout Europe. Through a wide readership, <i>Carcel de Amor</i> , <i>el Lazarillo</i> , <i>La Celestina</i> , <i>El Abencerraje</i> , the <i>Novelas ejemplares</i> , and <i>Desenganos amorosos</i> , influenced the system of literary genres. They established a model for successful genres such as the sentimental novel, the picaresque and the Moorish novel, and promoted the reacceptance of the Italian novella in Spain.	N	LEC	N	OP6	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): SPA 325
SPA	434	Drama of the Golden Age	Dramatic works of Lope de Vega, Calderon de la Barca, and their contemporaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325
SPA	434	Drama of the Golden Age	Dramatic works of Lope de Vega, Calderon de la Barca, and their contemporaries.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): SPA 325
SPA	435	Cervantes-Don Quijote	Don Quijote and the development of the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & H	Prerequisite(s): SPA 325
SPA	454	19th-Century Spanish American Narrative	Principal works in the novel, short story, narrative fiction, and narrative (Gauchesque) poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325
SPA	456	20th-Century Spanish American Fiction	Major works and movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325
SPA	456	20th-Century Spanish American Fiction	Major works and movements.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): SPA 325
SPA	464	Jaitón Works in Chicano/a Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(HU or SB) & C	Prerequisite(s): SPA 325
SPA	464	Jaitón Works in Chicano/a Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C	Prerequisite(s): SPA 325
SPA	471	Civilization of the Indohispanomexicano Southwest	Political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & C	Prerequisite(s): SPA 314 or 316
SPA	472	Latin American Society: Five Case Studies	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Prerequisite(s): SPA 314 or 316
SPA	472	Latin American Society: Five Case Studies	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H & G	Prerequisite(s): SPA 314 or 316

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SPA	473	Old and New Spaniards: Culture and Civilization of Spain	Political, intellectual, social, economic, and artistic development of the Spanish nation from its origin to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(HU or SB) & G	Prerequisite(s): SPA 314 or 316
SPA	473	Old and New Spaniards: Culture and Civilization of Spain	Political, intellectual, social, economic, and artistic development of the Spanish nation from its origin to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & G	Prerequisite(s): SPA 314 or 316
SPA	474	Revolutionary Mexico and Postmodern Revisions	Examines diverse aspects of Mexican culture since the 1910 Revolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Prerequisite(s): SPA 314 or 316
SPA	474	Revolutionary Mexico and Postmodern Revisions	Examines diverse aspects of Mexican culture since the 1910 Revolution.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): SPA 314 or 316
SPA	481	Dictatorships and Dirty Wars: Latin American Cinema from Resistance to Reconciliation	Examines aspects of Latin American politics and culture of and through the optic of social unrest. Examines films focusing on the period(s) of recent Latin American history in which there have been social upheavals, dictatorships and state repression, "dirty wars": understood as clandestine wars waged on the citizenry by the government, social movements from below.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s) with C or better: LAS 205, 206, 330. Credit is allowed for only LAS 481 or SPA 481 or ENG 494 (Dictatorships/Dirty Wars:Lat Am Cinema) or SPA 494 (Dictatorships/Dirty Wars:Lat Am Cinema)
SPA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
SPA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
SPA	485	Chicano/a Short Story: Espanglish, Barrio y Xicanisma	Critical study of contemporary short stories by Mexican American authors, with emphasis on their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L & C	Prerequisite(s): SPA 325
SPA	486	Mexican American Novel	Social and literary contexts of representative novelists, emphasizing their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325
SPA	487	Chicano/a Drama: Pachucos, Vendidos y Cerezitas	Representative dramatic works, with emphasis on the history and development of this genre from its regional origins to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325
SPA	487	Chicano/a Drama: Pachucos, Vendidos y Cerezitas	Representative dramatic works, with emphasis on the history and development of this genre from its regional origins to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): SPA 325
SPA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
SPA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SPA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
SPA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
SPA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
SPA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
SPA	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SPA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SPA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		
SPA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SPA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
SPA	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	520	Preparing for Professional Careers	Professional training of graduate students who pursue an academic job. Guides these students through their career and provides the tools they need to navigate their new and demanding academic life, not only as current students but also as future faculty. Among others topics, covers the following: research, publishing, surfing the Internet and the library for articles and books, bibliographical matters, conferences and presentations, professional ethics, choosing a dissertation director, writing and publishing the dissertation, first job search, differences among institutions, cover letters, CVs, tenure issues, and balance of personal and professional life. Explores all the practicalities of the academic profession to direct students to the right track from the first day of graduate school.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPA	534	Spanish Drama of the Golden Age	Analyzes principal works and figures of Golden Age Drama (Cervantes, Lope de Vega, Calderón, Tirso de Molina, Moreto, Ruiz de Alarcón) with current theater theory and comedia performance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	536	Generation of 1898	Works of Unamuno, Baroja, Azorín, and their contemporaries, studied against the ideological background of the turn of century in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	537	Women in Spanish Literature	Major female writers and their texts from Spanish literature (María de Zayas, Ángela Grassi, Concepción Arenal, Emilia Pardo Bazán, Carmen Laforet, Paloma Pedrero) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	538	Mexican American Women Writers	Major female figures and works in Spanish or translation by contemporary writers (Zamora, Castillo, Corpi, Anzaldúa, L.D. Cervantes, D. Chávez, Duarte, Cisneros) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	539	General Spanish Linguistics	Introductory course to the study of the linguistic structure of the Spanish language and its various sub fields, such as phonetics, phonology, syntax, morphology and the history of the language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: graduate student; students who have credit for SPA 400, may not enroll in SPA 539
SPA	540	History of the Spanish Language	Analyzes and discusses the development of Spanish from Vulgar Latin to the present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	541	Spanish Language in America	Discusses and analyzes various regional and social varieties of Spanish in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	542	Studies in the Spanish of the Southwest	Examines bilingualism and the social and regional dialects of Spanish in the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	543	Structure of Spanish	Analyzes and discusses data on selected topics in Spanish morphology, semantics, and syntax.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	544	Spanish Phonology	Surveys problems of Spanish phonology within the context of recent phonological theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	545	Concepts of Literary Criticism	Aims and methods of modern literary scholarship. Discusses major theories of literary analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	547	Spanish Pragmatics	Studies the theoretical aspects of pragmatics and their incorporation to the analysis of talk in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: SPA 400 or SPA 539
SPA	552	Studies in Mexican American Film	Major figures and films by contemporary filmmakers (Sylvia Morales, Cheech Marín, Gregory Nava, Lourdes Portillo, Roberto Rodríguez, Evelina Fernández) interpreted via critical film theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	553	Latin American Feminist Film	Examines Latin American feminist films in the context of contemporary Latin American culture; films viewed analyzed as casework examples.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only SPA 553 or 583 (Feminist Filmmaking)
SPA	555	Spanish American Modernism	Principal works and figures of literary modernism, 1880-1920, with emphasis on international literary context of the movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	557	Contemporary Spanish American Poetry	Major works and problems in contemporary poetry and poetics, with emphasis on Paz, Parra, Cardenal, and new poetry since 1960.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	560	Medieval Spanish Literature	Major figures and works of the Middle Ages in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		

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SPA	564	19th-Century Spanish Prose Fiction	Principal figures and works of realism in the 19th-century novel, with emphasis on Gald&ocute;s.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	565	20th-Century Spanish Drama	Principal figures and works of Spanish dramatic literature from the Generation of 1898 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	566	Generation of 1927	Major poets of the Generation of 1927, with emphasis on works of Lorca, Guillen, Salinas, and Aleixandre.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	567	Contemporary Spanish Novel	Major works of post-Civil War Spanish fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	568	Cervantes	Extensive analysis of the prose and theater of Cervantes as a key figure of the Spanish Golden Age.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	569	Studies in Spanish Film	Examines major figures and films in Spanish cinema. Critically interprets films through current film theory, history, and critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	572	Spanish American Drama	Major contributions of Spanish American drama, with emphasis on contemporary dramatists.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	573	Spanish American Essay	Major works of the essay, within the framework of intellectual history and literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	574	Spanish American Vanguard Poetry	Examines poetic developments, 1920-1940, with emphasis on Huidobro, Vallejo, Neruda, and the international context of their works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	575	Contemporary Spanish American Novel	Principal novels of the <i>Nueva Narrativa Hispanoamericana,</i> within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	576	Contemporary Spanish American Short Story	Principal short stories of the <i>Nueva Narrativa Hispanoamericana,</i> within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	577	Regional Spanish American Literature	Figures and works of major national (Peru, Argentina, Chile, and Mexico) and regional (Caribbean) literatures. Topics offered on a rotating basis. May be repeated when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	582	Studies in Latin American Film	Examines the role of film in contemporary Latin American culture; films viewed and analyzed as casebook examples.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	585	Mexican American Short Story	Major collections and figures in Spanish or translation by contemporary Chicano short story writers (Úlca, Suárez, Ulbarrí, Soto, Aguilar, P. Martín, Alarcón, R. Sánchez, N. Cantú, J. Sage, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	586	Mexican American Novel	Major novels and figures in Spanish or translation by contemporary Chicano novelists (Hinojosa-S., Méndez, Morales, Cota-Cárdenas, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	587	Mexican American Drama	Major works of Mexican American drama, with emphasis on contemporary playwrights (Valdez, Portillo-T., Morton, Moraga, Gómez-Peña) interpreted via current critical drama theory or other methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	588	Mexican American Essay	Major figures and essays in Spanish or translation by contemporary essayists (Rendón, Anzaldúa, Villanueva, Rodríguez, Mora, Stavans) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	589	Mexican American Poetry	Major figures and works in Spanish or translation by contemporary poets (Gonzales, Alurista, L.D. Cervantes, B. Zamora, R. Sánchez, Baca, G. Valdés, J. Montoya, G. Velázquez, T. Villanueva, J.F. Herrera, A. Villanueva) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
SPA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		

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SPA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
SPA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
SPA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	601	Latin American Feminist Cultural Production	Latin American feminist theory and studies as viewed through cultural production such as literature, film, photography, art.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
SPA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	791	Seminar		Y	LEC	Y	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
SPA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
SPA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
SPE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPE	222	Orientation to Education of Exceptional Children	Legal aspects of special education; legislation, education and community services to meet the needs of students with special education needs. Examines the nature and characteristics of students with developmental disabilities, autism, communication disorders, emotional or behavioral disorders, learning disabilities, sensory impairments, orthopedic impairments, other health impairments, and children with gifts and talents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB & C	Credit is allowed for only SPE 222 or SPE 311
SPE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student

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SPE	310	Professional Practices and Foundations in Special Education	Foundational themes and issues in special education. Discusses each disability within the mild cross-categorical area in relation to foundational themes and issues relating to professional practices in special education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	316	Introduction to Physical Disabilities and Other Health Impairments	Introduces various physical disabilities and other health impairments with an emphasis on service delivery in schools and communities.	N	LEC	N	OPT	Institute & Grad Sch Education	Division of Curriculum and Instruction	3		
SPE	317	Special Education for Culturally and Linguistically Diverse Children and Youth	General issues and practical applications regarding the education of culturally and linguistically diverse students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	320	Assessment and Evaluation of Children with Special Needs	Norm-referenced, criterion-referenced, and formative evaluation to determine eligibility, plan individualized programs, and monitor progress of students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Prerequisite(s): admission to the Professional Program
SPE	321	Classroom and SPE Assessment	Norm-referenced and criterion-referenced assessment and evaluation of student learning to determine eligibility, plan individualized programs and monitor progress of students with disabilities. Includes academic, language disorders and transition assessments. Emphasizes integration and adaptation of curriculum, instruction and evaluation for all students.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
SPE	322	Behavior Management and Consultation	Analysis, intervention, and consultatoin strategies for effective management of classroom and social behavior for students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	323	Behavioral Strategies for All Students	Focuses on behavior analysis and classroom management intervention and consultation strategies in general education and special education settings.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
SPE	325	Language Literacy 1 in Elementary Schools	Theoretical knowledge and pedagogical skills for implementing a high-quality reading program. Course objectives and topics are aligned to standards for reading and research from the International Reading Association (IRA), Arizona College and Career Ready Standards (ACCRS), Interstate Teacher Assessment and Support Consortium (InTASC) standards, and the National Reading Panel Report (2000). Focuses on emergent literacy, phonemic awareness, phonics, fluency, vocabulary and comprehension. Presents strategies and assessments to support students of a variety of ability levels and cultural backgrounds with a specific focus on the struggling readers and English language learners. For education majors only.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only RDG 322 or SPE 325
SPE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): minimum 45 hours
SPE	396	Clinical Experience I	Applies course content in special education classrooms grades K-12: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Prerequisite(s): admission to the Professional Program
SPE	404	Instructional Design for Culturally and Linguistically Diverse Students	Provides a foundation in instructional design to meet the academic and linguistic needs of culturally and linguistically diverse students, with a focus on English language learners.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only BLE 404 or ELL 504 or SPE 404
SPE	410	Mathematics in Elementary Schools	Methods of teaching mathematics to all students at the K-8 level, instructional planning and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 412 or MTE 412 or SPE 410
SPE	411	Parent Involvement and Regulatory Issues	Emphasizes parent and school relations through effective communication and state and federal regulations impacting services for the handicapped.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing OR enrolled in Early Childhood minor
SPE	416	Quality Practices in the Collaborative Classroom	Develops skills, strategies, and a knowledge base for preservice teachers in building collaborative partnerships with special educators.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): admission to the Professional Program
SPE	417	Inclusion Practices at the Secondary Level	Applies curricular practice and how preservice teachers work with students with special needs in middle and secondary levels.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	422	Methods and Technology for High-Incidence Disabilities	Assessment and instructional methods for students with high-incidence disabilities including mild intellectual disabilities, learning disabilities, emotional disabilities, and physical/health impairments.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): senior standing
SPE	423	Methods of Cross-Categorical Special Education I	Focuses on implementing research-based strategies in reading, language arts, math and language for students with mild/moderate special needs. Includes using data from all stakeholders in the development of the IEP, making instructional decisions using assessment data, monitoring student progress and developing lesson plans.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program

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SPE	424	Methods of Cross-Categorical Special Education II	Emphasizing pedagogy, content knowledge and evidence-based strategies, focuses on assessment, curriculum development and instruction across content areas (e.g., reading, language, writing, mathematics, science, social studies) for students with low-incidence disabilities or intensive support needs (e.g., significant intellectual disabilities, multiple disabilities, orthopedic impairments [OI], and other health impairments [OHI]). Particular focus includes access to the general curriculum, inclusion, instructional and assistive technologies, communication and language development and disorders, and transition for this population.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	430	Professional Practices, Foundations, and Collaborative Teaching in Special Education	Foundations of special education; effective collaboration and communication skills and co-teaching models that promote inclusive practices.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	431	Collaborative Teaching Methods for General Education Classroom Environments	Methods and issues in cooperative teaching for special education students in general education classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	478	Student Teaching: Special Education (Grades K-8)	Student teaching in special education classrooms grades K-8: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	8		Prerequisite(s): admission to the Professional Program
SPE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): admission to the Professional Program
SPE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
SPE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPE	495	Student Teaching in Early Childhood Special Education	Supervised teaching in the early childhood special education classroom setting. Synthesizes experience in curriculum, instruction, classroom organization, and guidance of young children.	N	PRA	N	YGB	MaryLouFulton Teachers College	Division of Teacher Preparation	6		Prerequisite(s): senior standing
SPE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): admission to the Professional Program
SPE	501	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
SPE	502	Language Development and Communication Disorders	Theory and practice in phonology, syntax, semantics and pragmatics of language development for children with and without disabilities from infancy through adolescence. Emphasizes multiple models of assessment and intervention across multiple ecologies.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	503	Collaboration, Consultation and Family-Centered Practices	Provides definitions, models, activities and exploration in the various roles in collaboration, consultation and teamwork in the field of special education. Explores connections in depth with families, professionals and support personnel across disciplines and agencies.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SPE 503 or SPE 540 or SPE 541
SPE	505	Collaborating w/Families for Effective Transition Planning for Students w/Intensive Support Needs	Provides an introduction to transition planning for students with disabilities, focusing on person-centered planning and collaborative practices with families and service providers. Emphasizes understanding employment, self-determination, community participation, collaborative practices, family systems and person-centered planning. Introduces and applies a family systems perspective to understanding of families of all children, including infants and toddlers, adolescents and adults with disabilities. Emphasizes understanding diversity in values, belief and traditions.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	508	Educational Foundations of Serving Students with Severe Disabilities	Provides an overview of the etiological nature of individuals with moderate to severe disabilities (intellectual disabilities, multiple disabilities, sensory impairment and physical disabilities); characteristics of this population; and the associated support needs across the lifespan. Topics focus on the historical and legal contexts that influence services for this population; supports-based assessment and instruction; and key issues related to self-determination, person-centered planning in school contexts for children, youth and adults with moderate to severe disabilities.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	509	Individualized Positive Behavior Supports for Students with Intensive Support Needs	Knowledge and skills to assess, implement and evaluate positive behavior supports for students with intensive support needs (moderate to severe/profound intellectual disability, autism spectrum disorder, multiple disabilities), terminology reflective of a support-based model of disability rather than a deficits-based model. Students learn and apply the foundations of positive behavior supports, understanding the function of behavior and developing replacement behaviors, and implementing plans from a person-centered perspective that reflects the cultural needs of individuals and their families while drawing on interdisciplinary team members' expertise.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	512	Individuals with Intellectual Disability	Etiology, diagnosis and management of individuals with intellectual disability. Current trends in prevention, programming and teacher preparation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking). Credit is allowed for only SPE 312 or SPE 512
SPE	520	Reading and Communication Strategies for Individuals with Autism	Understands and applies reading and communication strategies with individuals with autism and related disorders. Includes historical, diagnostic, and identification issues.	N	REC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	521	Foundations of Autism Spectrum Disorders	Increases the understanding of characteristics of individuals with autism.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	524	Effective Classroom Behavior Management	Addresses behavioral management techniques for children with special needs, including the organization and delivery of instruction and functional behavioral analysis.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	531	Methods of Applied Behavior Analysis for Exceptional Populations	Methods based on the principles and concepts of applied behavior analysis. Students learn to operationally define problem behavior, conduct functional behavior assessment and generate recommendations for the development of behavior analytic interventions. Students gain knowledge and understanding of specific scientifically valid behavior change procedures. Discusses and applies their corresponding literature base.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	534	Assessment and Evaluation for Children with Special Needs	Norm-referenced and criterion-referenced assessment and evaluation of student learning to determine eligibility, plan individualized programs, and monitor progress of students with disabilities. Includes assessments in academic areas, language disorders and transition. Emphasizes integration and adaptation of curriculum, instruction and evaluation for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	535	Curricula, Methods, Technology, and Adaptations in Special Education	Develops strategies for effective adaptation of special education and general education curriculum through use of technology. Includes methods for addressing special needs in reading, math and language disorders.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	536	Characteristics of Children with Behavioral Disorders	Variables contributing to behavior patterns of behaviorally disordered children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	538	Language and Literacy I	Focuses on the theoretical knowledge and pedagogical skills necessary to equip future teachers to plan and implement high-quality reading and writing instruction in a classroom setting. Course objectives and topics are aligned to standards for reading and research from the International Reading Association (IRA), Arizona College and Career Ready Standards (ACCRS), Interstate Teacher Assessment and Support Consortium (InTASC) standards, and the National Reading Panel Report (2000). Focuses on reading readiness, language development, phonemic awareness, phonics, fluency, vocabulary and comprehension. Presents strategies and assessments to support struggling readers as well as a variety of ability levels and cultural and linguistic backgrounds to include English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Teachers College graduate student; Credit is allowed for only RDG 531 or SPE 538
SPE	540	Family-Centered Practices	Provides definitions, models, activities and exploration in the various roles in collaboration, consultation and teamwork in the field of special education. In-depth exploration of connections with families, professionals and support personnel across disciplines and agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	541	Consultation Frameworks and Issues	Models, activities, and roles of educational consultants working with families, professionals, and support personnel across disciplines and agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	548	Cross-Categorical Foundations: LD, ED, MR, & P/OHI	Foundations course compares cognitive, motor, and affective developmental and educational issues across LD, ED, MR, and P/OHI.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	555	Inclusive Practices for Diverse Learners	Adapting instruction and assessment to meet the needs of all learners in inclusive settings. Includes the creation of plans to address challenging classroom behaviors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	559	Methods for Teaching Diverse Learners	Apprentice teachers select a specific population, based on placement (mild to moderate or moderate to severe), for individualized investigation. Utilizes practical strategies for curriculum development and IEP implementation. Gains a deeper understanding of their practice by analyzing and reflecting for the purposes of monitoring and adjusting instruction.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: MEd Special Education (Teacher Certification) major
SPE	561	Characteristics/Diagnosis of Learning Disabilities	Theories related to learning disabilities, including identification and characteristics.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	565	Behavior Change Systems	Focuses on applied behavior analysis-based behavior change systems and procedures. Students learn to identify, implement, manage and supervise interventions based on fundamental elements of behavior change. Addresses behavior change considerations, including ethical use of behavior change systems and ongoing data collection for fidelity and progress monitoring.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): SPE 531; SPE 566; degree- or nondegree-seeking graduate
SPE	566	Applied Behavior Analysis in Inclusive Settings	Examines definitions, characteristics, assumptions and basic principles of applied behavior analysis. Describes and applies fundamental elements of behavior change, including reinforcement schedules, modeling, shaping, chaining and other behavior change procedures. Activities center on the design and delivery of social skill interventions with individuals with special needs in inclusive settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	567	Ethics of Applied Behavior Analysis	Addresses knowledge and application of the Behavior Analyst Certification Board Guidelines for Responsible Conduct for Behavior Analysts. Examines and resolves ethical dilemmas which may be encountered by behavior analysts. Addresses roles and responsibilities of members of a multidisciplinary treatment team comprised of educators, behavior analysts, parents, learners and other professionals. Students conduct risk-benefit analysis of evidence-based treatment approaches and develop declarations of professional practices and procedures for behavior analysts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	568	Behavior Assessment	Focuses on critical aspects of applied behavior analysis, experimental design and the identification and implementation of effective assessment methodologies. Addresses client-centered responsibilities of the behavior analyst including problem identification, measurement, assessment, data collection and analysis. Students gain experience conducting functional behavior assessment and stimulus preference assessment to inform intervention design. Emphasizes measuring and ensuring treatment integrity.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): SPE 531; SPE 566; degree- or nondegree-seeking graduate. Credit is allowed for only SPE 568 or SPE 598 (Behavioral Assessment)
SPE	569	Research Methods in Applied Behavior Analysis	Students gain expertise and practical experience in the interpretation and application of experimental design to inform decision making. Focuses on evaluation of the effectiveness of interventions through use of behavior analytic technologies in clinical and applied settings. Students learn to interpret and describe behavior in behavior analytic terms and explain concepts and approaches in everyday language. Students research and evaluate skill assessment approaches through strategic review of the behavior analytic literature. Course addresses single-subject methodologies to inform design and delivery of effective instruction and clinical interventions.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); SPE 531; SPE 566; Credit is allowed for only SPE 569 or SPE 598 (Research Methods Applied Behavioral Analysis)
SPE	572	Testing and Measurement in Gifted Education: Methods	Covers current and historical aspects of testing and measurement in the field of gifted education. Topics include: the history and purposes of IQ testing, definitions of various types of tests, purposes of testing for gifted education services, ability tests and achievement measures, how tests are used in Arizona in programs for gifted learners.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only SPE 572 or 591 (Testing&Measurement Gifted Ed)
SPE	573	Differentiating Instruction for Gifted Learners: Teaching Methods	Explores the design of differentiated curriculum and instruction for gifted learners in elementary and secondary education	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only SPE 573 or 591 (Diff Curriculum Gifted Child)
SPE	575	Survey, Issues, and Foundations for the Exceptional Student	Explores the foundations of special education through characteristics and eligibility of exceptional students. Analyzes historical, political, social, and legal factors impacting special education services for exceptional students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	576	Clinical Experience	Applies course content in special education classrooms grades K-12: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	578	Student Teaching: Special Education (Grades K-12)	Student teaching in special education classrooms grades K-12: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	579	Apprentice Teaching: Special Education (Grades K-12)	Apprentice teaching in special education setting. Synthesized experience in classroom management, curriculum, instruction and assessment. Must be taken four times for a total of 12 semester hours.	N	PRA	Y	YGB	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	585	Creativity: Foundations of Research and Development in Gifted Education	Explores nature of creativity in terms of philosophical underpinnings, empirical evidence, human development, self-actualization, and the ecology surrounding the creative event.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	586	Advising the Gifted Learner: Social and Emotional Needs	Focuses on educational planning and guidance, social and emotional development, and family problem solving regarding needs of gifted children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	587	Special Populations in Gifted Education	In-depth analysis of major controversies in educating the gifted, including nature/nurture, the role of mental tests, and sex differences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	588	The Gifted Learner: Foundations of Identification, Education and Development	Gifted children's characteristics, identification, needs, school and home environments, definitions, and misunderstandings. Research by Pressey, Stanley, Terman, and others.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	589	Teaching the Gifted Learner: Models, Methods, and Programs	Methods in teaching elementary and secondary school gifted children, including individualized and computer-assisted instruction, team teaching.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Special Education Graduate student
SPE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: postbaccalaureate undergraduate or graduate student (degree seeking or nondegree seeking)
SPE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Special Education Graduate student
SPE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Special Education Graduate student
SPE	597	Capstone	Applies theoretical and practical information presented through coursework in a real-world setting.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Special Education Graduate student
SPE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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SPE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Special Education Graduate student
SPE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Special Education Graduate student
SPE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Special Education Doctoral student
SPE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Special Education Doctoral student
SPF	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
SPF	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPF	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPF	301	Culture and Schooling	For the professional teacher preparation program. Overview of the cultural, social, and political milieus in which formal schooling takes place in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Pre-requisites: ENG 102, 105 or 108 with C or better
SPF	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPF	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
SPF	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPF	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
SPF	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPF	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student

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SPF	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
SPF	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPF	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPF	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SSH	100	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; comparative health systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Credit is allowed for only ASB or SSH 100
SSH	194	Covers topics of immediate or special interest to a faculty member and students.	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	201	Epidemics and Outbreaks	Covers epidemiologic methods for the control of conditions such as infectious and chronic diseases, mental disorders, community and environmental health hazards, and unintentional injuries. Other topics include quantitative aspects of epidemiology, including data sources, measures of morbidity and mortality, evaluation of association and causality, and study design. A background in basic biology and a basic understanding of the principles of human diseases helpful in succeeding in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Credit is allowed for only ASM 201, SSH 201 or 294 (Introduction to Epidemiology)
SSH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SSH	300	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & C	Pre-requisite: ENG 101, 105, 107, or ENG 111; Credit is allowed for only ASB or SSH 300
SSH	301	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 301 or HST 301 or SSH 301
SSH	305	Poverty and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 305 or SSH 305 or WST 305
SSH	314	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only MIC 314 or SSH 314
SSH	355	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	HU or SB	Credit is allowed for only ASB or SSH 355
SSH	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with C or better; ASB 100 (or 102), SOC 101, SOS 110, or SSH 100 with C or better; Credit is allowed for only ASB, SOC, SOS or SSH 370
SSH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	401	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4		Pre-requisites: ASB 100 (or ASM 104); SSH 100; Credit is allowed for only ASM or SSH 401
SSH	402	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites: Minimum 45 credit hours; SSH 100 or ASB 100; Credit is allowed for only ASB 452 or SSH 402
SSH	403	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	(L or SB) & G	Pre-requisites: SSH 100 or ASB 100; Credit is allowed for only ASB 443 or SSH 403
SSH	404	Medical Anthropology: Culture and Health	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & C	Credit is allowed for only ASB 462 or SSH 404
SSH	405	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Global Health major; Minimum 87 hours; SSH 100 or ASB 100 and SSH 403 or ASB 443 with C or better; Credit is allowed for only ASB 455 or SSH 405
SSH	414	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): ASB 100, 102, 222, 223, AML 100, ASM 104 or SSH 100 with C or better; minimum 45 hours; Credit is allowed for only ASM 414 or SOS 414 or SSH 414
SSH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
SSH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
SSH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Prerequisite(s): Barrett Honors student
SSH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SSH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
SSH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
SSH	502	Professional Seminar in Global Health	Focuses on skills, ideas, and practice related to the Global Health MA and PhD at Arizona State University. Seminar. Prerequisite: Must be a graduate student in the Global Health degree program.	N	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Pre-requisite: Must be a graduate student in the Global Health degree program
SSH	503	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	510	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	512	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Pre-requisites: ASB 511 or SSH 511; Graduate (degree or nondegree) student
SSH	514	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		
SSH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
SSH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		
SST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SST	220	Introduction to Social Transformation	Introduces key concepts in the study of social change, social innovation, and social transformation. Studies examples of social movements, social activism, community organizing, and coalition building and how such efforts have transformed society and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only APA 220 or JUS 220 or SST 220
SST	235	Disability, Justice and Advocacy	Overarching history of the disability rights movement and how it is similar to and differing from other civil and rights movements. Examines how policies and activism are interconnected within this movement, in addition to looking at other human categories related to disabilities such as gender, sexuality, race and socioeconomic status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only COM 235, JUS 235, SST 235, WST 235 or SST 294 (Disability Justice and Advocacy)
SST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
SST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	428	Critical Race Theory	In-depth analysis of the ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only AFR, APA, JUS or SST 428
SST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
SST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7		
SST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
SST	501	Foundations of Social Transformation	Introduces the foundations of social transformation and social change. Looks at social transformation through an interdisciplinary lens and explores the connections between the objective and subjective factors that enable or inhibit social transformation in different contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SST	510	Social and Cultural Pedagogy: Theoretical and Practical Issues	Engages students with the academic literature and scholarly debates on social and cultural pedagogy, reviews practical lessons from the field, and provides an overview of different areas of intervention and professional practice. Considers the historical, local, and international dimensions of social and cultural pedagogy, illustrating them with selected case studies. Encourages the study of social and cultural pedagogy using a critical and interdisciplinary perspective.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
SST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		

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SST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
STC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	505	Theories of Social Technology	Examines key theories of social technologies from social and behavioral perspectives. Examines the political dimensions of technologies; technology's role in constructing social structures; and how mobile technologies encourage, structure and delimit social interaction.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	510	Applied Social Technology	Provides participants with a foundation for understanding how technological systems, large and small, relate to organizational and social change. Case-based approach focuses on how to assess and recommend changes to a variety of types of organizations and communities.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	520	Advocacy and Social Technology	Examines the potential for social technology in advocating for social change.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	525	Politics and Social Technology	Concerns the political implications of social technology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	530	Technology and Collaboration	Examines the analysis, design, implementation and implications of systems intended to support collaboration.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	535	Networked Social Technology	Surveys human and social behaviors from the perspective of networks, with an emphasis on social technology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	537	Community Informatics	Examines the ways in which communities form, manage themselves, and improve through the use of networked technologies.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	540	Critical/Cultural Approaches to Social Technology	Examines critical and cultural studies approaches to social technologies. Explains a critical/cultural studies approach to social issues and the cultural and social dimensions of technologies. Explores how social technologies both shape and are shaped by power and how cultural understandings of technology contribute to the shaping of everyday life.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	545	Games as Social Technology	Explores how games as networked and collaborative technologies facilitate community formation, interaction and development.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
STC	547	Political Economy of Social Technologies	Examines the economic, political and material structures of contemporary social and participatory media. Considers patterns of ownership, regulatory policy, corporate ideology and practice, intellectual property, the nature of labor in the information economy, and more, all with an eye toward understanding how social technologies are developed, distributed and deployed.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
STM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
STM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
STM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
STM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
STM	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
STP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Prerequisite: Freshman status; Maximum 25 earned hours
STP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
STP	220	Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		
STP	220	Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		
STP	226	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Prerequisite(s): MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better or completed the Mathematics Placement Test with a score of 50% or higher

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STP	226	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Prerequisite(s): MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better or completed the Mathematics Placement Test with a score of 50% or higher
STP	226	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s): MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better or completed the Mathematics Placement Test with a score of 50% or higher
STP	231	Statistics for Life Science	Concepts and methods of statistics; display and summary of data, interval estimation, hypothesis testing, correlation, regression. Applications to biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Prerequisite(s): MAT 117 or 142 with C or better or completed the Mathematics Placement Test with a score of 50% or higher
STP	280	Probability and Statistics for Researchers	Methods for data summary, numerical summary measures, probability concepts, discrete and continuous probability distributions, expected values, statistics, sampling distributions, point estimation, and introduction to statistical inference for a single parameter.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisites: MAT 251, 265, or 270
STP	281	Statistical Analysis for Researchers	Confidence intervals, hypothesis testing, one- and two-factor analysis of variance, simple linear regression, multiple regression, chi-square tests, and introduction to statistical quality control.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 266 (or 271); STP 280
STP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
STP	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
STP	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
STP	310	Design and Analysis of Experiments	Factorial and nested designs, randomized designs, randomized complete block designs, Latin squares, fixed and random effects, expected mean squares, multiple comparisons, and analysis of covariance.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: MAT 266 (or MAT 271); STP 281
STP	311	Regression and Time Series Analyses	Simple linear regression, multiple linear regression, indicator variables, influence diagnostics, stepwise selection, logistic regression, introduction to time series models, autocorrelation, and some ARIMA models.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 266 (or 271); STP 281
STP	315	Statistical Computing	Statistical techniques using a professional statistical programming language (e.g., SAS, R). Emphasizes correct methods, writing and presentation of results	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: STP 281; STP 310 (or STP 311)
STP	326	Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only ACT 415 or STP 326
STP	326	Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only ACT 415 or STP 326
STP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
STP	420	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Prerequisite(s): MAT 210 (or MAT 251, 265 or 270) with C or better
STP	420	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Prerequisite(s): MAT 210 (or MAT 251, 265 or 270) with C or better
STP	420	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s): MAT 210 (or MAT 251, 265 or 270) with C or better
STP	421	Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisites: MAT 272 or 267 with C or better

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STP	421	Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisites: MAT 272 or 267 with C or better
STP	425	Stochastic Processes	Markov chains, stationary distributions, pure jump processes, 2-D order processes, and other topics in stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisites: MAT 342 (or 343); STP 421 with C or better.
STP	427	Mathematical Statistics	Limiting distributions, interval estimation, point estimation, sufficient statistics, and tests of hypotheses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: ACT 415 or STP 421; STP 281 or 420
STP	427	Mathematical Statistics	Limiting distributions, interval estimation, point estimation, sufficient statistics, and tests of hypotheses.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: ACT 415 or STP 421; STP 281 or 420
STP	429	Experimental Statistics	Statistical inference for controlled experimentation. Multiple regression, correlation, analysis of variance, multiple comparisons, and nonparametric procedures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: STP 420 with C or better
STP	450	Nonparametric Statistics	Rank- and order-based tests and estimation procedures for 1 sample and 2 or more related or independent samples, measures of correlation, and introduction to resampling methods, including bootstrap and randomization tests.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: STP 310
STP	451	Quality Improvement	In-depth concentration on statistical process control for attribute and variables data, process capability analysis and measurement systems analysis.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): STP 281
STP	452	Multivariate Statistics	Statistical analysis of multivariate data including methods for preparation and presentation of multivariate data, MANOVA, discriminant analysis, principal component analysis, factor analysis, cluster analysis, random forests and classification trees.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: STP 311; MAT 343
STP	460	Categorical Data Analysis	Statistical methods for the analysis of categorical (discrete, count) data. Topics include exact and approximate tests and confidence intervals for one- and two-binomial proportions, contingency tables, generalized linear models, logistic regression and loglinear models.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): STP 310, 311; MAT 272
STP	460	Categorical Data Analysis	Statistical methods for the analysis of categorical (discrete, count) data. Topics include exact and approximate tests and confidence intervals for one- and two-binomial proportions, contingency tables, generalized linear models, logistic regression and loglinear models.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): STP 310, 311; MAT 272
STP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
STP	485	Statistics Capstone	Students work in a team and partner with a client to solve a real-world problem requiring statistical analyses. Emphasizes problem development, integration of technical skills, teamwork and communication among the students and with the client. Requires regular meetings and presentations with team, client and faculty advisor.	N	LEL	N	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: Senior standing; STP 310, 311, 6 additional hours of upper-division STP excluding STP 492, 493, 498, 499
STP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
STP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
STP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Prerequisite(s): Barrett Honors student
STP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
STP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
STP	495	Undergraduate Research	Supervised research in statistical or probability studies.	N	RSC	Y	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): minimum 45 hours. Credit is allowed for only MAT 494 (UG Research in Math) or STP 495
STP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
STP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7		
STP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		

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STP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
STP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
STP	501	Theory of Statistics I: Distribution Theory 3	Introduces rigorous probability theory, including distributions and expectations of random variables, transformations of random variables and order statistics, generating functions and basic limit concepts. Supplements the understanding of applied statistics with a firm grasp of the probabilistic underpinnings of theoretical statistics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking); Credit is allowed for only STP 501 or STP 598, Theory of Statistics I
STP	502	Theory of Statistics II: Inference	Pesents techniques and basic results of mathematical statistics at a rigorous level. Develops the structure of statistical inference procedures, including the principles of data reduction, theory of estimation, confidence sets, hypothesis testing, and prediction for common parametric models.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): STP 501 with B- or better; Credit is allowed for only STP 502 or STP 598, Theory of Statistics II
STP	526	Theory of Statistical Linear Models	Multinomial distribution, distribution of quadratic forms, full and nonfull rank models, generalized inverses, unbalanced data, variance components, and the large sample theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	527	Statistical Large Sample Theory	Types of convergence, central limit theorems, theory of maximum likelihood estimation, efficiency, robustness, influence functions, theory of bootstrap methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	530	Applied Regression Analysis	Method of least squares, simple and multiple linear regression, polynomial regression, analysis of residuals, dummy variables, and model building.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	531	Applied Analysis of Variance	Factorial designs, balanced and unbalanced data, fixed and random effects, randomized blocks, Latin squares, analysis of covariance, and multiple comparisons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	532	Applied Nonparametric Statistics	One-sample test, tests of 2 or more related or independent samples, measures of correlation, and tests of trend and dependence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	533	Applied Multivariate Analysis	Discriminant analysis, principal components, factor analysis, cluster analysis, and canonical correlation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	535	Applied Sampling Methodology	Simple random, stratified, cluster sampling; variance estimation in complex surveys; nonparametric superpopulation approaches; nonresponse models; computational methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	581	Statistical Consulting Clinic	Provides practical experience in the application of statistical theory and methods to problems from a wide variety of disciplines, exposing students to a diverse range of data types and clients. Develops nontechnical consulting skills, for example explaining statistical concepts to non-statisticians, writing reports, and making oral presentations.	N	PRA	Y	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with B or better: STP 530, 531; Credit is allowed for only STP 581 or 598 (Statistical Consulting)
STP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
STP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STP	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		
STP	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STS	101	Introduction to Science, Technology, and Society	Overview of the basic issues, definitions, and literature involved in the study of science, technology, and human systems. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	110	Global Technology and Development	Introduces awareness and understanding of how technology, processes of globalization, and society influence one another. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Credit is allowed for only STS 110 or 317
STS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
STS	202	Science, Technology, and Diversity	Examines the concept and meaning of the "technology gap" and its implications of the global impact of scientific and technological advances.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
STS	235	Technology and Urban Systems	Focuses on the relationship between technology and urbanization, especially on how technological innovation and change impact all aspects of urban systems, including urban social and economic development, sustainability, governance, environmental, and community change.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
STS	250	Science, Society, and Global Warming	Addresses global warming and its implications for society, including evidence and components of warming, measurement of warming and global change, and the social and political aspects of change.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Students who have credit for STS 294 (Society and Global Warming) may not enroll in STS 250
STS	260	Politics of Science and Technology	Explores the relationship among government, politics, science, and technology, especially the interdependence of public policy and science and technological pursuits.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
STS	301	Research in Science and Technology Studies	Examines methods of inquiry in the social sciences with emphasis on STS, including both qualitative and quantitative approaches, philosophy of science, and scientific revolutions.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	302	Philosophy of Science and Technology	Focuses on the nature and implications of science as a body of knowledge, set of practices, specific methods, and how these differ from other human enterprises and activities.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
STS	303	History of Science and Technology	Examines the history of technology within social, cultural, political, and economic contexts and the critical relationship between society and technology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	H	Prerequisite(s): minimum 45 hours
STS	304	Science, Technology, and Society	Overview of the major issues associated with the study of science, technology, and human systems, including theoretical approaches. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	

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STS	305	Science and Social Theory	Explores the different theoretical traditions that inform social interpretations of science, including awareness of the historical traditions that define these interpretations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	306	Social Effects of Science and Technology	Examines the effects of science and technology on social life and the contexts in which those effects manifest.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	317	Science, Technology, and Global Engagement	Overview of international issues associated with both the development and deployment of technologies, including matters concerning international relations. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Credit is allowed for only STS 110 or 317
STS	318	Science, Technology, and Government	Examines the foundations of the interrelationship of science, technology, and democratic governance, with emphasis on the American political system.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	325	Science, Technology, and Public Policy	Examines the interaction of science and technology with American domestic policy.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	328	Science, Technology, and Culture	Overview of technology and international cultures, including cultural definitions of science and technology. May intersect issues of culture and religion.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	329	Cultivating Technology in Newly Industrializing Countries	Covers specific issues relating to building technological capability in newly industrializing countries.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
STS	330	Information Technology and Globalization	Examines the intersection of advances in information technology and globalization and the impact of these processes on human systems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
STS	331	Ethical Issues in Science and Technology	Examines the interconnections between values and science and technology by examining such topics as computers and privacy, medical malpractice, reproductive technologies, patents, and hazardous facilities.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	332	Global Issues in Science and Technology	Examines contemporary international debates in science and technology and how those issues impact globalization.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	364	Science, Technology, and National Security	Examines how changing technologies impact all aspects of national security policy in the United States.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
STS	385	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
STS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
STS	401	Statistics in Science and Technology Studies	Introduces statistical techniques for the social sciences, including the role and rationale of statistics, descriptive measures, associational measures, and inferential statistics.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Pre-requisites: MA general studies requirement satisfied
STS	425	Law, Values, Science, and Technology	Examines the interconnections of law, values, and science and technology with a view to establishing their reciprocal relationships.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	480	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
STS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
STS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
STS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7		
STS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
SWG	501	Micro Human Behavior in the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre/Co-requisite: masters or doctoral in Social Work major
SWG	502	Macro Human Behavior in the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspective in a macro context.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite: MSW or DSW student
SWG	510	Foundation Practice I	Basic social work methods with emphasis on the problem-solving process as it pertains to individuals, families, and small groups.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Must be Master or Doctor Social Work student.
SWG	511	Foundation Practice II	Theory and methods of direct practice with groups and selected practice models.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Master or Doctor Social Work student; SWG 510 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
SWG	514	Bridge Seminar I	Professional social work practice at the master's level.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major. Corequisite(s): SWG 516
SWG	515	Bridge Seminar II	Generalist practice problem-solving skills with diverse individuals, groups, families and systems at the master's level.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Adm and Community Practice) major. Corequisite(s): SWG 516. Pre- or corequisite(s): SWG 514. Credit is allowed for only SWG 515 or SWG 598 (Bridge Seminar II)
SWG	516	Social Work Skills Seminar	Focuses on the acquisition of practice skills for advanced interaction with individuals, families, groups and communities.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major. Corequisite(s): SWG 514, 515
SWG	519	Research Methods in Social Work	Conceptual foundations and methods of nomothetic research in social work. Includes problem identification, hypothesis formulation, measurement, sampling, and experimental design.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Master or Doctor Social Work student.
SWG	526	Mental Health for Sentencing	Helps justice system professionals understand existing mental health diagnoses, the DSM-5, and how specific DSM-5 categories are associated with specific types of crime.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	527	Mitigation of Death and Life Cases	Issues and skills for practicing as a mitigation specialist in cases of death and life without parole.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	528	Presentence Investigations	Examines the functions and objectives of presentence investigation reports and prepares students to perform different types of investigations for limited and general jurisdiction courts for local, state and federal courts.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	529	Alternatives Penal Sanctions	Prepares individuals to practice as sentencing advocates on defense teams, as consultants to problem-solving courts, or as private presentence investigators hired by the defense to advocate for alternatives to incarceration.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	531	Social Policy and Services	Conceptual, analytical, and historical perspectives on the social welfare institution. Emphasizes poverty and inequality. Principles of policy analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Masters or Doctoral of Social Work student
SWG	533	Diversity and Oppression in a Social Work Context	Explores issues of social inequality related to disability, ethnicity, gender, race, and sexual orientation. Emphasizes populations of the Southwest.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Masters or Doctoral Social Work student.
SWG	540	Professional Experience I: Introduction to the Profession	Explains the historical origins of the social work profession, discusses the values and ethics unique to the profession, and familiarizes students with resources available at the school and the university for students enrolled in the MSW online program.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Social Work - Standard Program MSW student; Credit is allowed for only SWG 540 or SWG 598 (Professional Seminar I)
SWG	541	Field Practicum I	With SWG 542, two consecutive semesters (480 hours) of supervised social work practice in an approved placement.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Master or Doctor Social Work student; Pre/Co-requisite: SWG 510 with C or better if completed
SWG	542	Field Practicum II	See SWG 541	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Master or Doctor of Social Work major; SWG 510 and 541 with C or better Pre- or corequisite(s): SWG 511 with C or better if completed

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SWG	554	Overview of Addictions	Addictions and their impact upon society including alcohol, legal and illegal drugs, gambling, the Internet, sex and pornography. Focuses on the etiology of addictions that impact our society on a micro, mezzo and macro level. Provides an ecological perspective to view human behavior across the life span as it relates to addictive behaviors.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 554 or SWG 591 (Overview of Addictions) or SWU 454 or SWU 498 (Overview of Addictions)
SWG	556	Immigrants and Refugees	Provides basic conceptual approach to understanding immigrant and refugee issues and how these factors influence social work practice with immigrant and refugee populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWU 456 or SWG 556 or SWG 591 (Immigrants and Refugees)
SWG	557	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Credit is allowed for only SWG 557 or SWU 457
SWG	558	Introduction to Behavioral Health Services	Explores mental health. Develops a basic understanding of mental health and co-occurring conditions. Gains an understanding of public- and employer-financed contemporary behavioral health services with a focus on Arizona models.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWU 458 or SWG 558 or SWG 591 (Introduction to Behavioral Health Services)
SWG	559	Spirituality and the Helping Professions	Provides a framework for spiritually and culturally competent practice with diverse populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWU 459 or SWG 559 or SWG 591 (Spirituality & Helping Profession) or SWG 598 (Spirituality and the Helping Professions)
SWG	560	Legal Issues in Social Work	How the law relates to social work practice, administration and policy.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWU 460 or SWG 560 or SWG 591 (Legal Issues in Social Work)
SWG	561	Lesbian, Gay, Bisexual, Transgender and Queer Issues	Historical, socio-cultural introduction to lesbian, gay, bisexual and transgender communities and their resilience to challenges and barriers.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWU 461 or SWG 561 or SWG 591 (Lesbian and Gay Issues)
SWG	562	Global Social Welfare	Analyzes social work's response to international social issues and human need from the perspectives of globalization, development and human rights.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 562 or SWG 591 (International Social Work) or SWU 462 or SWU 498 (International Social Work)
SWG	570	Aging: A Biopsychosocialspiritual Perspective	Biopsychosocialspiritual perspectives on aging, including intergenerational matters, international trends, policies, programs, services and issues unique to populations of the Southwest.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 570 or SWG 591 (Aging Soc Wk Perspective)
SWG	571	Mental Health Aspects of Aging	Older adult mental health assessment, treatment, planning, policy and service delivery from a cross-cultural, interprofessional, intergenerational, international and continuum-of-care perspective.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 571 or SWG 591 (Mental Health & Aging)
SWG	572	Interprofessional Approaches to Healthy Aging	In-depth examination of healthy aging, interprofessional practice and interprofessional practice approaches designed to foster healthy aging for older adults.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SWG	577	Traumatic Death: Theory, Counseling and Practice	Explores the various experiences of grief, trauma and bereavement through a phenomenological perspective and using creativity, art, literature, poetry, indigenous wisdom and evidence-based research. Practice techniques and psychosocial care to the traumatically bereaved. Examines the micro, mezzo and macro aspects of death and grief in contemporary society. Theory, philosophy and direct practice with individuals, families and groups experiencing traumatic death and grief.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only SWG 577, 591 (Trauma & Death Counseling) or 598 (Trauma&Death: Counseling, Theory, &Practice Issues)
SWG	579	Critical Incident Stress Management	Theory and research behind coping strategies and mechanisms commonly experienced by Emergency Management Teams (EMT) and DHS. Explores topics of stress, trauma, vicarious trauma and mass trauma as experienced by the individual and large populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Masters or Doctoral Social Work student
SWG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	585	Macro Social Work Practice	Examines communities and human service organizations as social systems. Introduces strategies for initiating planned change.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Masters or Doctoral Social Work student
SWG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Social Work	1		Pre-requisite: Master or Doctor Social Work student.
SWG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4		Pre-requisites: Master Social Work student
SWG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		
SWG	600	Foundation for Advanced Practice	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisites: Master Social Work student.
SWG	603	Social Work Practice in Health/Behavioral Health Settings	Advanced social work practice in health and behavioral health settings, focusing on enhancement of client functioning and quality of life.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	604	Advanced Social Work Practice in Health	Addresses the crucial social work practice issues of health and healthcare in the new millennium.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 603 with C or better
SWG	606	Assessment of Mental Disorders	Theories and concepts of mental health and illness. Attention to classification systems and nomenclature used in assessing mental disorders.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 502 with C or better or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	608	Ecological Approach to Practice with Children, Youth, and Families	Provides a theoretical and practical orientation to working with children, youth, and families from an ecological strengths perspective.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 542 with Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major

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SWG	609	Advanced Social Work Practice with Child Welfare Families	Focuses on substance abuse, family violence, and serious mental illness in practice with families and children in the child welfare system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 608 with C or better
SWG	610	Advanced Social Work Practice III	Assists students in advanced theoretical understanding and practice with families, groups, and communities.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: MSW or MSW Adv Standing student; Co-Requisite: SWG 693 and 645
SWG	611	Social Work with Families	Theory, concepts, and skills for working with diverse family populations. Emphasizes a systems and integrative approach.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	612	Social Work with Groups	Practices applications of knowledge and skill to social work with groups.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	613	Advanced Social Work Practice in Behavioral Health	Treatment of prevalent disorders encountered by social workers, selected from the following: anxiety disorders, personality disorders, depression, and schizophrenia.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 603 with C or better
SWG	614	Advanced Generalist Social Work Practice IV	Integrates a multilevel approach to practice with critical choice theories and interventions. Focus on groups, organizations, and communities and their impact on social work practice. Completion of the foundation courses or advance standing in the MSW program, or instructor approval, is required for all 600-level SWG courses.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Master or Doctor Social Work student; SWG611 with a grade of C or better
SWG	617	Advanced Social Work Practice with Children and Adolescents	Theory, research, and intervention that focus on children and adolescents.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 608 with C or better
SWG	618	Advanced Practice in Domestic Violence	Theory, research, intervention, and prevention strategies relevant to child maltreatment, partner abuse, and elder abuse.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	619	Practice-Oriented Research	Accelerated course in application of scholarly and scientific principles to field practice, problem formulation, interventional procedures, and impact assessment.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 519 with C or better or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	621	Integrative Seminar	Explores the fit between theoretical frameworks and practice with clients. Requires presentation of empirical studies with clients.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s) with C or better: SWG 603 or SWG 608, 619. Pre- or corequisite(s): SWG 604, 606, 609, 613, 617 with C or better if completed; SWG 641 with Y if completed
SWG	623	Program Evaluation	Research design techniques and data collection in human service agencies and communities. Analysis for program evaluation and needs assessment.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 519 with C or better, SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major. Corequisite(s): SWG 685
SWG	626	Crisis Intervention and Short-Term Treatment	Comprehensive analysis of crisis and solution-focused brief intervention strategies and approaches used in advanced social work practice.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SWG	630	Brief Social Work Intervention	Concepts and techniques of solution-focused, systematic, and strategic approaches to therapy in the context of brief therapy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major
SWG	632	Policy Practice	Develops advanced knowledge and skills in social welfare policy analysis, policy formulation, and advocacy and intervention for policy change.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 531 with C or better or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	633	Child Welfare Services	Examines, using ecological and system theories, services that supplement, support, and substitute for parental care of children.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	641	Advanced Practicum: Direct Practice I	With SWG 642, two consecutive semesters (480 hours) of supervised social work practice in an approved placement related to the student's career goal.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) major. Pre- or corequisite(s): SWG 603 (or SWG 608) with C or better if completed)
SWG	642	Advanced Practicum: Direct Practice II	With SWG 641, two consecutive semesters (480 hours) of supervised social work practice in an approved placement related to the student's career goal.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 603 or 608 with C or better; SWG 641 with Y; Pre or Co-requisite: SWG 604, 609, 613 or 617 (with C or better if completed)
SWG	643	Advanced Practicum: Planning, Social Work Administration, and Community Practice I	With SWG 644, two consecutive semesters (480 hours) in social work practice in an approved placement related to the student's career goal.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Planning, Administration and Community Practice) major. Pre- or corequisite(s): SWG 623, 685 with C or better if completed
SWG	644	Advanced Practicum: Planning, Social Work Administration, and Community Practice II	See SWG 643.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Masters or Doctoral Social Work student; SWG 623 with C or better; Prerequisite(s): SWG 623, 685 with C or better, SWG 643 with grade of Y. Pre- or corequisite(s): SWG 681, 682 with C or better if completed
SWG	645	The Professional Experience III	240 hours of supervised social work practice. Provides opportunities to apply classroom learning in the field setting. Y/E grade only.	N	PRA	N	YGB	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: MSW student; SWG 542 with Y grade OR MSW Advanced Standing student; Co-requisite: SWG 610 and SWG 693
SWG	646	The Professional Experience IV	240 hours of supervised social work practice. Provides opportunities to apply classroom learning in the field setting. Y/E grade only.	N	PRA	N	YGB	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Standard MSW or MSW Adv Standing student; SWG 645 with Y grade; Co-requisite: SWG 614; SWG 693
SWG	654	Introduction to Sexual Abuse	Develops general knowledge and skills for working with persons who have been impacted by sexual abuse.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SWG	655	Quality of Life	Addresses key elements of a healthy life style contributing to wellness and disease through experiential learning and evidenced-based research.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major or Assessment of Integrative Health Modalities certificate
SWG	656	Treating the Whole Person	Addresses treating the "whole person's" physical and behavioral health through interviewing, intervention, and treatment within the context of an interdisciplinary model.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major or Assessment of Integrative Health Modalities (certificate)
SWG	657	Ancient Healing Traditions	Historical development and research of the ancient healing teachings of traditional Chinese medicine, Ayurvedic medicine, homeopathic, naturopathic, and indigenous medicine and how they are used in today's health systems.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	660	Clinical Supervision in Social Work.	Examines and practices the knowledge, skills, and values of becoming a social work supervisor in human service agencies.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		
SWG	661	Cognitive Behavior Therapy Across the Lifespan	Knowledge and skills to understand and apply cognitive-behavioral approaches to treatment (CBT), including diagnostic information and empirically supported interventions targeted to individuals, families and groups across the lifespan.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y OR MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major; Credit is allowed for only SWG 591 (Cognitive Behavior Therapy Across Lifespan) or 661
SWG	662	Social Work Practice With Adolescents	Advanced elective focuses on working with adolescents in a variety of intervention settings (e.g., mental health agencies and schools).	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y OR MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major; Credit is allowed for only SWG 591 (Social Work Practice With Adolescents) or 662
SWG	663	Clinical Trauma Treatment	Explores the assessment and treatment of PTSD in people throughout the lifespan.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y OR MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major; Credit is allowed for only SWG 591 (Clinical Trauma Treatment) or 663
SWG	664	Evidence-Based Approaches to Treatment of Substance Use Disorders	Knowledge and skills to understand substance abuse disorders, including diagnostic information and evidence-based interventions targeted to individuals, families and groups.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y OR MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major; Credit is allowed for only SWG 591 (Treatment Substance Use Disorders) or 664

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SWG	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	IND	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisites: Masters or Doctoral Social Work student; SWG 681 or SWG 682 with C or better; Pre/Co-requisite: SWG 623 with C or better if completed
SWG	681	Social Work Administration	Administrative skill building and theory application within human service nonprofit social work settings.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 623 with C or better; SWG 685 with C or better; Co-requisite: SWG 682
SWG	682	Community Participation Strategies	Reviews strategies to involve citizens and the consumers of social and human services in community decision-making systems. Participation is viewed as a means to facilitate the empowerment of oppressed peoples.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 623 with C or better; SWG 685 with C or better; Co-requisite: SWG 681
SWG	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	685	Program Planning in Social Services	Social services planning process; includes needs assessment, goals and objectives, program design, budgeting, management information systems, and program evaluation.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y; SWG 585 with C or better OR MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major; Corequisite(s): SWG 623
SWG	686	Developing Grants and Fund Raising	Identifies potential funding sources, technical and interpersonal/political aspects of proposal development and fund raising.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	687	Public Policy and Advocacy	Covers public policy at the federal level, including administrative, legislative and judicial policy. Students understand how to develop congressional policy and methods to engage in advocacy at the federal level to impact macro social work practice.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 687 or SWG 591 (Advocacy and Public Policy)
SWG	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisites: MSW or MSW Advanced Standing student
SWG	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		
SWG	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		
SWG	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Col of Pub Serv & Comm Solutns	School of Social Work	1		Pre-requisites: MSW, MSW Adv Standing, or PhD student
SWG	700	Research Methods	Course on research methods in a specific discipline.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	718	Qualitative Research Methods	Provides comprehensive qualitative research methods training for doctoral students to complement their quantitative survey research methods knowledge.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Doctoral student; Credit is allowed for only SWG 718 or 791 (Qualitative Research Methods)
SWG	719	Quantitative Research Methods	Provides the tools for independently designing and conducting methodologically sound, ethical, quantitative research that advances social work and social welfare knowledge.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Doctoral student

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SWG	720	Philosophy of Science Issues in Social Work	Critical examination of social science, social work practice, and policy in terms of philosophical assumptions and varying frames of reference.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Master or Doctor Social Work student.
SWG	721	Statistics	Logic and application of statistical methods for analyzing social welfare-based data pertaining to social work. Includes ethical issues concerning the appropriate application, interpretation and use of social research, as well as the potential limitations and biases of applications that fail to adequately consider issues of population diversity. Students learn to independently design a research project from start to finish employing statistical analysis of primary data.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: doctoral major
SWG	722	Pedagogy in Social Work	Prepares doctoral students to teach for the profession of social work. Provides an opportunity for students to develop or enhance their philosophy of teaching, their attitudes toward learning, teaching and students, and the knowledge and skills necessary to teach effectively. Explores teaching to the diverse students present in social work programs, the challenges that teaching presents and the responsibilities that come with social work education.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Doctoral student; Credit is allowed for only SWG 722 or SWG 791 (Pedagogy in Social Work)
SWG	723	Proposal Development	Provides an opportunity for doctoral students to formulate a dissertation proposal or a research plan for a three-paper option. Provides a forum for presenting ideas, receiving feedback and defending one's proposal.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Doctoral student; Credit is allowed for only SWG 723 or 791 (Proposal Development)
SWG	731	Welfare State	Examines the evolution of the welfare state as a problem of political economy.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Doctoral student; Credit is allowed for only SWG 731 or 791 (Welfare State)
SWG	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWG	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Col of Pub Serv & Comm Solutns	School of Social Work	1		
SWG	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Col of Pub Serv & Comm Solutns	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWU	171	Introduction to Social Work	Descriptive and historical perspectives of social problems, social justice issues and society's response to them.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB & H	
SWU	180	Introduction to Lesbian, Gay, Bisexual and Transgender (LGBT) Studies	A historical, socio-cultural introduction to lesbian, gay, bisexual, transgender, transsexual, and intersexed communities and their resilience to challenges and barriers.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB & C	Credit is allowed for only SWU 180 or 194 (Introduction to LGBT Studies)
SWU	181	Economics: A Social Issues Perspective	Introduces economic principles through the lens of contemporary social issues for social work and related fields.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Credit is allowed for only SWU 181 or 194 (Economic and Social Issues in Perspective)
SWU	182	Social Services Perspective of Government	Explores levels of government and policy practice in advancing social and economic justice and effective social services within the Southwest.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB	Credit is allowed for only SWU 182 or 194 (AZ/National Government: Social Work Perspective)
SWU	183	Introductory Ethics: A Social Issues Perspectives	Introductory exploration of ethics from a historical and multicultural perspective viewed through the lens of contemporary social issues.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	HU	Credit is allowed for only SWU 183 or 194 (Intro Ethics: Social Issues Perspective)
SWU	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4		
SWU	250	Stress Management Tools I	Helps students develop an understanding and behaviors to create a healthy balance in their lives by studying the bio/psycho/social aspects of wellness.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB	

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SWU	291	Social Service Delivery Systems	Federal, state, private not-for-profit and for-profit social service delivery system's purpose, structure, and professional roles. Includes 40 volunteer hours.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: PSY 100, PSY 101, SOC 101 or SOC 301; Pre/Co-requisites: SWU 171 with a C or better if completed
SWU	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4	SB	
SWU	295	Foundations of Social Work Practice	Theoretical foundation and skill base for effective culturally competent communication and interviewing with individuals, families, small groups, and larger systems.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB & C	Pre-requisites: PSY 101, SOC 101 or SOC 301; Pre/Co-requisites: SWU171 or 271 and SWU 291 with a C or better if completed
SWU	302	Human Biology for Social Workers	Overview of human anatomy and physiology, and the reciprocal relationship between physical and social environments. May be repeated for credit.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		
SWU	303	Micro Human Behavior and the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	L or SB	Prerequisite(s): PSY 101; SOC 101 or 301; Pre- or corequisite(s): SWU 171, 291, 295 with C or better if completed, OR Community Advocacy and Social Policy major
SWU	306	Ethics in Social Services	Focuses on following the NASW Code of Ethics in making ethical decisions in social service settings.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; PHI 101 or 105 or 306 or SWU 183; SWU 291; lower-division (L) course
SWU	310	Social Work Practice I	Introduces social work methods, emphasizing the following skills: relationship development, cross-cultural interviewing, communication patterns, and case-recording.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWU 171 or SWU 271 with C or better; SWU 291 with C or better; SWU 295 with C or better; Pre or Co-requisite: SWU 303 (with C or better if completed)
SWU	311	Integrative Social Work Practice	Social work practice skills emphasizing cross-cultural interviewing, assessment and professional recording.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWU 171; SWU 291; SWU 295; Corequisite(s): SWU 312; Pre- or corequisite(s): SWU 306
SWU	312	Integrative Social Work Practice Skills	Applies social work content from SWU 311 focusing on practice skills and professional behavior.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWU 171; SWU 291; SWU 295; Corequisite(s): SWU 311; Pre- or corequisite(s): SWU 306
SWU	320	Research Methods in Social Work	Applies scientific principles to field practice, problem formulation, intervention procedures, and impact assessment in social work.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre- or corequisite(s): SWU 310 with C or better if completed, or Community Advocacy and Social Policy major
SWU	321	Statistics for Social Workers	Teaches social work students how to use and interpret descriptive and inferential statistics in social work practice. May be repeated for credit.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	CS	Pre-requisites: MAT 142 or an MA general studies course
SWU	332	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Community Advocacy and Social Policy major; POS 110 or POS 310 or SWU 182
SWU	340	Macro Human Behavior and the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspectives in a macro context	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB	Prerequisite(s): SWU 303 with C or better; Pre- or corequisite(s): SWU 310 with C or better if completed OR Community Advocacy and Social Policy major
SWU	349	Stress Management Tools II	Developing mindful strategies toward managing stress, developing instinct awareness; healthy decisions in nutrition, relationship with self, others and creating a personal carbon footprint.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Credit is allowed for only SWU 349 or SWU 294 (Stress Management Tools II)
SWU	350	Whole Person Health Across the Lifespan	Development of mindful strategies toward managing stress and identification, implementation and integration of skills and knowledge for well-being across the lifespan.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): ENG 102, 105, or 108 with C or better

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SWU	351	Sustainable Living, Mindful Eating	Addresses issues related to foods we eat, how we eat, and impacts of choices on health, the environment, locally and globally.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
SWU	374	Diversity and Oppression in a Social Work Context	Issues of social inequality related to race, ethnicity, gender, sexual orientation, and disability. Emphasizes populations of the Southwest.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Pre- or corequisite(s): SWU 310 with C or better if completed, or Community Advocacy and Social Policy major
SWU	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4		Pre-requisite: Master of Social Work student
SWU	410	Social Work Practice II	Knowledge and skills in social work practice with individuals and families.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Social Work BSW major; SWU 310 with C or better; PHI 101 or PHI 105 or PHI 306 or SWU 183; Corequisite(s): SWU 412; SWU 413
SWU	411	Social Work Practice III	Knowledge and skills in social work practice with groups, communities, and organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWU 410, 412, or 413 with C or better or Co-requisites: Social Work student with SWU 414; SWU 415
SWU	412	Field Instruction I	16 hours a week of supervised practice in an approved placement. "Y/E" grade only.	N	PRA	N	YGB	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Social Work student; SWU 310 with C or better; Co-requisite: SWU 410; SWU 413
SWU	413	Field Instruction Seminar	Field-focused seminar, including practice evaluation.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Social Work student; SWU 310 with C or better; Co-requisite: SWU 410; SWU 412
SWU	414	Field Instruction II	16 hours a week of supervised practice in an approved placement. Y/E grade only.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Social Work student; SWU 410, SWU 412 or SWU 413 with C or better Co-requisites: SWU 411 and SWU 415
SWU	415	Integrative Field Seminar	Field-focused seminar to help students integrate practice and theory.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Social Work student; SWU 410, SWU 412 or SWU 413 with C or better; Corequisite(s): SWU 411 and SWU 414
SWU	432	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): ECN 211 (or SWU 181); POS 110 (or POS 310 or SWU 182); SWU 310 with C or better; Social Work major. Corequisite(s): SWU 410, 412, 413
SWU	442	Introduction to Practice with Children and Families in Child Welfare	Focuses on the characteristics, strengths, and service needs of families and children in the Child Welfare System.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Social Work student; SWU 410 with C or better; SWU 412 with C or better; SWU 413 with C or better
SWU	450	Mastering Mindfulness	Facilitates mastering mindfulness practice. Students teach a lesson and develop a training proposal that will be implemented and evaluated.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre- or corequisite(s): SWU 350; SWU 351
SWU	454	Overview of Addictions	Addictions and their impact upon society including alcohol, legal and illegal drugs, gambling, the Internet, sex and pornography. Focuses on the etiology of addictions that impact our society on a micro, mezzo and macro level. Provides an ecological perspective to view human behavior across the life span as it relates to addictive behaviors.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): minimum junior standing; Credit is allowed for only SWU 454 or SWU 498 (Overview of Addictions) or SWG 554
SWU	456	Immigrants and Refugees	Provides basic conceptual approach to understanding immigrant and refugee issues and how these factors influence social work practice with immigrant and refugee populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Prerequisite(s): minimum junior standing; Credit is allowed for only SWU 456 or SWU 498 (Immigrants & Refugees) or SWG 556
SWU	457	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Pre-requisite: Credit is allowed for only SWG 557 or SWU 457

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SWU	458	Behavioral Health Services	Behavioral health conditions; their impact on the individual, family and community; and historical and contemporary service models.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): minimum junior standing; Credit is allowed for only SWU 458 or SWU 498 (Behavioral Health Services) or SWG 558
SWU	459	Spirituality and the Helping Professions	Provides a framework for spiritually and culturally competent practice with diverse populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): minimum junior standing; Credit is allowed for only SWU 459 or SWU 494 (Spirituality and the Helping Professions) or SWU 498 (Spirituality & Helping Profession) or SWG 559
SWU	460	Legal Issues in Social Work	How the law relates to social work practice, administration and policy.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): minimum junior standing; Credit is allowed for only SWU 460 or SWU 498 (Legal Issues in Social Work) or SWG 560
SWU	461	Lesbian, Gay, Bisexual, Transgender, and Queer Issues	Historical, socio-cultural introduction to lesbian, gay, bisexual and transgender communities and their resilience to challenges and barriers.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Prerequisite(s): minimum junior standing; Credit is allowed for only SWU 461 or SWU 498 (Lesbian/Gay Issues) or SWG 561
SWU	462	Global Social Welfare	Analyzes social work's response to international social issues and human need from the perspectives of globalization, development and human rights.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): junior standing; Credit is allowed for only SWG 562 or SWU 462 or SWU 498 (International Social Work)
SWU	474	Ethnic/Cultural Variables in Social Work	Basic conceptual approach to understanding ethnic and cultural variables of southwestern ethnic minorities and how these factors influence social work practice.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Pre-requisite: SWU 310 with C or better
SWU	488	Advocacy Strategies	Comprehensive advocacy approach that spans administrative, legislative and community strategies.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWU 320; SWU 332; SWU 340; SWU 374; senior standing
SWU	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-6		Prerequisite(s): Barrett Honors student
SWU	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-6	L	Prerequisite(s): Barrett Honors student
SWU	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4		
SWU	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-7	L	
SWU	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-3		Pre-requisite: Bachelor of Social Work student
TCL	101	Introduction to Transborder Chicana/o and Latina/o Studies	Historical and contemporary issues in Chicana/o and Latina/o communities; focuses on the diverse economic, sociological, cultural, and political status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	111	Introduction to Transborder Chicana/o and Latina/o Culture	Interdisciplinary analysis of customs, values, belief systems, and cultural symbols; special attention is given to cultural continuity and change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-3		
TCL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	201	Transborder Society and Culture I: Interdisciplinary Approaches	Intensive overview of Mexican origin and Latina/o populations through various sociological, historical, anthropological, economic, political, cultural, literary, and analytical lenses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	202	Transborder Society and Culture II: Contemporary Issues	Examines contemporary transborder belief systems, ideologies of health, gender, familial structures, and community development within a transnational context.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	

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TCL	210	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	C	Credit is allowed for only AFR 212 (or AFS 210) or APA 210 or JUS 210 or TCL 210
TCL	211	Transborder Chicano/a and Latino/a Poetry	Writing seminar on Chicana and Chicano poetics and intensive creative writing workshop.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	220	Transborder Latina/o Expressive Culture	Examines media, literature, performance, and visual art grounded in the historical experiences of transborder Latina/o communities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU or SB) & C	Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
TCL	230	The Expressive Culture of Latin America and the Caribbean: A Transborder Perspective	Interdisciplinary social science introduction to various forms of cultural expressions found throughout Latin America and the Caribbean region and in Latina/o communities within the United States. Uses a transborder perspective to examine how migration, race, ethnicity, gender, power, history and identity shape and influence different aspects of Latina/o culture and identity. Focuses on the study of a wide array of expressive practices including music, dance, verbal arts, myths and folktales, festivals, sports and food in Mexico, the Spanish Caribbean and their counterpart Latina/o communities in the United States. Class lectures and readings introduce basic concepts such as ethnography, ethnomusicology, culture, representation and globalization.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU or SB) & C	Credit is allowed for only ASB 220 or TCL 230
TCL	270	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	Credit is allowed for only FMS 270 or TCL 270
TCL	275	Culture, Language and Learning	Examines the dynamic and complex interplay of language, culture and learning within and across individuals, groups, institutions and cultures in diverse multicultural, multilingual and transborder contexts.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Credit is allowed for only ASB 275 or TCL 275
TCL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	303	Transborder Theory	Studies historical, cultural, and economic theories contributing to understanding the emergence of Mexican and Latina/o origin populations in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB	
TCL	304	Transborder Research Methods	Emphasizes critical skills: quantitative/qualitative, spatial, archival, and reflexive methodologies, including ethnographic, biographical, historical, and mapping.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	
TCL	305	Transborder Practicum and Field Research.	Field work with faculty incorporating practical experience while honing research skills and ability.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Pre or Co-requisites: TCL 303 and TCL 304 with C or better if completed
TCL	310	Transborder Chicano/a and Latino/a Folklore of Southwest North America	Analyzes Chicana and Chicano folk beliefs, traditions, and practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	314	Transborder Regional Immigration and Economy	Historical/contemporary overview of Mexican immigration into and within the U.S.; factors affecting population movement, settlement patterns, and migrants' incorporation into society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or SB) & H & C	
TCL	315	Chicana/o and Latina/o Family Structures	Traditional and changing family relationships; emphasis on gender and intergenerational relations and impact of modern society on traditional family values.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB	
TCL	321	Transborder Community Development and Health	Emphasizes core concepts and practices relevant to regional community development and health, including demographic health indicators, individual, and community models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	323	Latino Health Issues	Health issues among Chicanos and other U.S. Latinos; interplay among political economy, health, family, culture, and community.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	4	SB & C	
TCL	326	Health of Chicanas and Latinas	Examines gender, ethnicity, and health; critical issues affecting health status of Chicanas and Latinas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	327	Health and Migration	Focuses on health status among various immigrants; health trajectories following migrations, adaptive behaviors, health practices, and the role of policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB	Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	328	U.S. Latino Religion and Culture	U.S. Latino and Latin American religious history with special attention to what have become Hispanic mestizo hybrid cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	Pre-requisites: Minimum 24 earned hours; ENG 102, 105, or 108 with a C or better; Credit allowed for only REL 326 or TCL 328
TCL	331	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & H & C	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST or TCL 331
TCL	332	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & H & C	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST or TCL 332

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TCL	335	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): ENG 101 with C or better; ENG 102 with C or better; Credit is allowed for only AFR 335 or HST 323 or TCL 335
TCL	340	Chicana/o and Latina/o Politics and Policy	Historical/contemporary analysis of Chicana and Chicano political ideologies, attitudes, strategies, and movements; relations with governmental agencies; and public policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L & C	
TCL	341	Policy Issues in Chicana/o and Latina/o Urban Settings	Historical, demographic, and sociological overview of the status of Chicanas and Chicanos in urban settings as well as the public policy relevance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	C	
TCL	342	Social Demographics of Latino Populations	Provides an introduction to social demography of Latinos in the U.S. from the 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	
TCL	350	Transborder Mexican and Chicano/a Artistic Production	Overview of Mexican and Mexican American artistic production from colonial times to present; emphasis on religious and folk art.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C & G	
TCL	351	Transborder Chicano/a and Latino/a Art	Intensive analysis of contemporary Chicana and Chicano art movement as appraised within the context of contemporary American art and the art of Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	352	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	C	
TCL	353	Race, Space and the Production of Inequality	Explores how the relationship between race and space has been important to the development of broad patterns of social inequality in the United States. Through a variety of readings, films and other material, examines how ideas of race and space have been important to the making and maintenance of national boundaries, citizenship, regional histories and spatial typologies such as border, ghetto, suburb and prison.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	Prerequisite(s): APA 200 or 210; minimum 45 hours; Credit is allowed for only AFR 352 (or AFS 352) or APA 352 or JUS 353 or TCL 353 or APA 394 (Race, Space and the Production of Inequality)
TCL	360	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
TCL	363	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only ENG 363 or TCL 363
TCL	364	Transborder Mexican Literature Before 1917	Offers a historical panoramic view of the political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest. May be taught in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L	Prerequisite(s): minimum 45 hours
TCL	370	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU	Credit is allowed for only FMS 370 or TCL 370
TCL	373	Latina/Chicana Issues	Critical examination of the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States and along the border.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 30 hours. Credit is allowed for only TCL 373 or WST 373
TCL	378	McGlobalization: Migration, Mass Media and McDonald's	Explores the impact of globalization on local societies and cultures by focusing on the international migration of peoples, the global expansion of capitalism and global mass media and popular culture. Examines both the socioeconomic causes and consequences of globalization, as well as how local peoples around the world have been affected by, participated in and resisted the forces of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or SB) & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 378 or TCL 378
TCL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	410	Race, Medicine, and the Body	Explores how body and embodiment and race and ethnicity are constructed within and by biomedical sciences and technology development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L	Prerequisite(s): ENG 101, 105 or 107 with C or better; minimum 45 hours
TCL	422	U.S.-Mexico Border Health	Focuses on identifying health issues affecting Latino/Mexican families in the U.S.-Mexico borderlands using basic epidemiological techniques to analyze regional data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Pre-requisites: TCL 321 with C or better
TCL	424	Theory and Practice of Community Development and Health	Foundations of methodology of community mapping and establishment of community diagnosis, media literacy and advocacy applications for community-based public health.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB	Pre-requisites: TCL 321 with C or better

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TCL	443	Political Ecology of the Border	Examines the political ecology of the human-environment relationship in Mexico and on the U.S.-Mexican border. Through case studies, students learn about the most pressing environmental issues facing human populations and their communities on both sides of the U.S.-Mexican border and the various ways in which these issues are dealt with.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 463 or SOS 463 or TCL 443
TCL	444	The Ethnography of Mexico and the Borderlands	Students learn basic principles of ethnographic research and obtain a better understanding of the social, ecological, cultural, political and economic processes affecting people in Mexico and in the U.S.-Mexico borderlands. Through case studies, students become aware of the variety of issues shaping the lives of those living in these regions. Focuses on contemporary issues such as migration, economy, gender, labor, health and the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 464 or TCL 444 or TCL 598 (The Ethnography of Mexico and the Borderlands)
TCL	445	Transborder Latin American Short Story	Studies the modern Latin American short story, with primary focus on the development of its literary and cultural tradition. Taught in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L or HU	Prerequisite(s): SPA 202 (or SPA 204); minimum 45 hours
TCL	446	Comparative Bilingual Latina/o Poetics	Comparative study of contemporary bilingual Latina/o poetry. Focuses on two specific U.S. ethnic minority groups--Mexican- (or Chicanos) and Puerto Rican-Americans (or nyoricans)--who have long and strong literary traditions of bilingual poetry. The significant feature of both bodies of poetry is the interactive mixture of their base languages: Spanish and English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU) & C	Credit is allowed for only TCL 446 or 598 (Comparative Bilingual Latina/o Poetics)
TCL	447	Gender, Culture, and Development	In-depth analysis of gender roles related to health, family, work, education and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or SB) & G	Prerequisite(s): WST 100 or 300 or minimum 45 hours; Credit is allowed for only SGS 454 or SOS 447 or TCL 447 or WST 447 or TCL 598 (Gender, Culture & Development)
TCL	448	Teaching Chicana and Chicano Studies in the Schools	Approaches/techniques for infusion of transborder studies content into elementary and secondary curriculum; designed for teachers who work with Mexican and Latino origin students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): minimum 45 hours
TCL	464	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU) & C	Credit is allowed for only ENG 458, FMS 464 or TCL 464
TCL	465	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	Pre-requisites: ENG 102, 105 or ENG 108 with C or better. Credit is allowed for only FMS or TCL 465
TCL	466	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	C	Credit is allowed for only FMS or TCL 466
TCL	470	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 470
TCL	471	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		
TCL	485	Chicana and Latina Writers	Critical reading of Mexican American women authors; emphasis on contemporary (post-1970) poetry, novels, short stories, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU) & C	
TCL	488	Border Global Narratives	Studies four general and different border areas through literature. Through literary-cultural texts, looks into peoples; experiences of migration to and from the homelands of Mexico, Haiti, the Dominican Republic, Cuba, and the Puerto Rican isle to the U.S. These experiences are never unidirectional but are characterized by constant back-and-forth movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L & C	Credit is allowed for only TCL 488 or 598 (Border Global Narratives)
TCL	490	Transborder Queer Performativity	Explores a rich and diverse body of border-crossing performative expression created by queer and/or Latina/o artists. Course readings and discussions include solo and collaborative works with an emphasis on solo autobiographical performance scripts as well as performer interviews and performance scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 45 credit hours; Credit is allowed for only TCL or WST 490
TCL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-6		Prerequisite(s): Barrett Honors student
TCL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-6	L	Prerequisite(s): Barrett Honors student
TCL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
TCL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-7		Prerequisite(s): Transborder Chicana/o and Latina/o Studies (Media and Expressive Culture or Transborder Community Development and Health or U.S. and Mexican Regional Immigration Policy and Economy) major; minimum 56 hours
TCL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-3		
TCL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		Pre-requisite: Maximum 25 hours; Credit is allowed for only CRD, PRM or TDM 191
TDM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
TDM	205	Introduction to Travel and Tourism	Examines the components of the travel and tourism industry at the state, national, and global levels.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	G	
TDM	210	Community Services and Professions	Introduces the system of public, nonprofit, and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: NLM 160 or PRM 120 (with C or better if completed); Credit is allowed for only CRD or NLM or PRM or TDM 210
TDM	225	Introduction to Resort and Hotel Management	Introduces local, national and international lodging and food service industries.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
TDM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
TDM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
TDM	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301
TDM	302	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	C	Pre-requisites: ENG 102; MAT 142; NLM 160 (or PRM 120) with a C or better; 2.50 GPA; 45 earned hours; Credit is allowed for only CRD, NLM, PRM or TDM 302
TDM	345	Meeting and Convention Planning	Basic aspects and skills in planning meetings and conventions. Industry and market overview of certified meeting planners.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	350	Tourism, Recreation and Sports Marketing	Critical examination of marketing principles in leisure and related industries in diverse settings, including local, national, and international.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or CSM 201 or TDM 205; minimum 45 hours. Credit is allowed for only CSM 350 or PRM 350 or TDM 350

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TDM	372	Tourism Planning	Applies economic and regional development concepts and theories to destination product development.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	L	Pre-requisites: Tourism Development & Mgmt or Recreation (Tourism) students; Minimum 2.50 gpa; Minimum 45 hours; TDM 205 or RTM 373 with C or better; ENG 102 with C or better; MAT 142 or higher with C or better
TDM	386	Convention Sales and Management	The role of convention and visitors bureaus or resort managers, including economic impacts of markets, structure, governance, membership, and advertising.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
TDM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
TDM	401	Tourism Management	Basic principles of administration and their application in successful administrative situations. Analyzes administrative function, structure, and policies.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 201 or PRM 210 or TDM 210 with C or better; CRD 301 or PRM 301 or TDM 301 or TDM 301 with C or better; PRM 303 or TDM 372 with C or better
TDM	402	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre- or corequisite(s): CSM 401, NLM 410, PRM 401, or TDM 401 with C or better if completed; Credit is allowed for only CSM 402 or NLM 402 or PRM 402 or TDM 402
TDM	403	Leadership and Professional Development	Examines leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: NLM, PRM or TDM 210 with C or better; NLM, PRM or TDM 301 with C or better; Senior standing; 2.50 GPA. Credit is allowed for only CRD, NLM, PRM or TDM 403
TDM	415	Tourism Transportation Systems	Examines the role of various modes of transportation in domestic and international tourism development.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	448	Heritage and Cultural Tourism	Provides a solid conceptual understanding of the issues, problems, and management implications associated with heritage and cultural tourism.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: TDM 205 with C or better; Credit is allowed for only TDM 448 or CRD 598 Heritage and Cultural Tourism)
TDM	458	International Tourism	Global examination of international tourism and its significance as a vehicle for social and economic development.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	G	
TDM	463	Senior Internship	Supervised guided experience in selected agencies.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	6-12		Prerequisite(s) with C or better: CRD 403 or PRM 413; CSM 402 or NLM 402 or PRM 402 or TDM 402. Credit is allowed for only CSM 463 or NLM 463 or PRM 463 or TDM 463
TDM	475	Entrepreneurial Recreation and Tourism	Explores basic business principles and innovative processes involved in starting a small business in the commercial recreation and tourism industry.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 60 hours; Credit is allowed for only PRM or TDM 475
TDM	480	Sustainable Tourism	Tourism has a multitude of impacts, both positive and negative, on people's lives and on the environment. Critically analyzes the environmental, economic, and socio-cultural aspects of tourism development, and strategies to attain balance among these three dimensions to guarantee its long-term sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: PRM 120 or TDM 205 or 60 minimum hours
TDM	481	Sustainable Food Management in Tourism	Focuses on the fundamentals of sustainability, sustainable food systems, relationships between food and tourism, and the applications of sustainable food practices in different types of global tourism. Defines sustainable development, explains the importance of sustainable food systems, recognizes the relationship between local food systems and global food challenges. Connects the challenges of creating and maintaining sustainable food systems with the needs of tourists and tourism destinations; defines leakage in reference to tourism and food. Creates and applies sustainability assessment criteria to food systems in a variety of different tourism spaces.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Junior standing; Minimum 60 hours

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TDM	482	Sustainable Revenue Management	Introduces the fundamental economic principles that underlie revenue management and the practical application of new analytical technological services in the hotel and resort industry. Uses experienced revenue managers from local resorts and hotels as regular guest speakers and IdeaS system (a revenue management analytics subsidiary of SAS).	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: MAT 142 or higher; Minimum 72 hours
TDM	483	Sports Tourism	Examines the relationship between sports and tourism, and the role of recreation and amateur sports as an economic and community development strategy. Also considers the motives, behaviors and experiences of sport tourists; the impacts of sport tourism; and trends in sports tourism.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): Minimum 45 hours. Credit is allowed for only CSM 483 or TDM 483
TDM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; 72 minimum hours; 2.50 GPA or higher; Non SCRD majors
TDM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
TDM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6	L	Prerequisite(s): Barrett Honors student
TDM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
TDM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
TDM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-7	L	
TDM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
TDM	520	Sustainable Thinking in Tourism	First in a series of two courses introducing students to the basic concepts of sustainability and their application and implications for tourism.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	521	Sustainable Thinking in Tourism II	Second in a series of two courses focusing on how to measure, assess, and plan for sustainability in the tourism industry.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: TDM 520 with C or better
TDM	530	Sustainable Tourism Destination Planning and Management I	Applies sustainable economic and regional development concepts and theories to destination planning and management. Students learn the fundamentals of sustainable planning, including stakeholder involvement and meeting community needs.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	531	Sustainable Tourism Destination Planning and Management II	Applies sustainable economic and regional development concepts and theories to destination planning and management. Students learn the fundamentals of sustainable planning, including stakeholder involvement and meeting community needs.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): TDM 530
TDM	540	Sustainable Food Management in Tourism	Focuses on the fundamentals of sustainability, sustainable food systems, relationships between food and tourism, and the applications of sustainable food practices in different types of global tourism. Students learn to define sustainable development; explain the importance of sustainable food systems, recognize the relationship between local food systems and global food challenges; connect the challenges of creating and maintaining sustainable food systems with the needs of tourists and tourism destinations; define leakage in reference to tourism and food; and create and apply sustainability assessment criteria to food systems in a variety of different tourism spaces.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	550	Managing the Sustainable Tourism Business	Through case study analysis, students learn how sustainability impacts business operations, how successful sustainable businesses identify and assess alternative resource management techniques, and evaluate operational models for embedding sustainability practices into their business models.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s) TDM 570; Credit is allowed for only TDM 550 or CRD 598 (Managing the Sustainable Tourism Business)
TDM	561	Best Practices Workshop Preparation	First in a series of two courses investigating and sharing best practices in sustainable tourism. Provides an overview of best practices and innovative actions in tourism. A destination or business is identified to be used as a case study.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Pre/co-requisite: TDM 521 with C or better

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TDM	562	Best Practices Workshop Presentation	Second in a series of two courses investigating and sharing best practices in sustainable tourism. Provides an overview of best practices and innovative actions in tourism. A presentation of a best practices case study is conducted for the class.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Pre-requisite: TDM 561 with C or better
TDM	570	Sustainable Tourism	Critically examines the environmental, economic, and socio-cultural aspects of tourism development, and strategies to attain balance among these three dimensions to guarantee its long-term sustainability.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	101	The Teachers College Experience	Introduces all new first-time ASU students to the unique elements, culture, challenges, and opportunities of their university. Mary Lou Fulton Teachers College sections relate specifically to future educators. Covers several core college success topics.	N	SEM	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Prerequisite(s): Mary Lou Fulton Teachers College freshman
TEL	111	Exploration of Education	Education as an instrument in the development of the individual and society and its significance as an American Institution.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	
TEL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
TEL	200	Social Embeddedness of Educational Endeavors	Serves as a pathway toward self discovery and professional identity. Course readings, reflections and self assessments help students develop personal and professional goals and goal-setting strategies. Course assignments provide students with a greater level of understanding regarding the reciprocal influences among community and culture and the student's life experiences. Students have an opportunity to clearly define themselves and share topics they are passionate about, as well as locate how they might fit into and contribute to their community.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
TEL	212	Understanding the Culturally Diverse Child	Surveys cultural and linguistic diversity in American education, including education equity, pluralism, learning styles, and roles of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	C	Credit is allowed for only MCE 230 or TEL 212
TEL	215	Introduction to Child and Adolescent Development	Emphasizes the cognitive, social-emotional, and physical domains of child and adolescent development. From a knowledge base of theory, research, and current issues, students apply learning to developmentally appropriate principles and practices that guide relationships and learning experiences for all children. Uses available technologies; emphasizes the complex ecosystem of culture, ethnicity, family, and school.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	
TEL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
TEL	300	Community, Family, and Education	Addresses education in a community and family context. Analyzes education and identifies education-focused community challenges in a broad variety of settings and across multiple times and places.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): TEL 200
TEL	311	Instruction and Management in the Inclusive Classroom	Planning and delivering instruction, organizing and managing classrooms, and making adaptations for English language learners and students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
TEL	313	Educational Technology in the K-12 Curriculum	Focuses on using technology in an education setting and addresses the integration of technology in curricular areas for all students. Students receive a broad-based introduction to using and integrating technology into many different educational settings.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 56 hours
TEL	314	Classroom Assessment	Assessment and evaluation of student learning; emphasizes integration and adaptation of curriculum, instruction, and evaluation of all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
TEL	315	Child and Adolescent Development	Physical, cognitive, social, and emotional development during childhood and adolescence; developmentally appropriate principles and practices to facilitate development for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L or SB	

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TEL	316	Teaching, Imagination, and Creativity	Engages students in critical thinking and the complex terrain of aesthetic theory and intellectual, academic work and teaching practice. Students apply aesthetic consciousness teaching by teachers developing imagination, creativity, and intuition as tools to use every day in their classrooms. Emphasis on how teachers can integrate the arts into the curriculum, use the arts to support academic content, and develop aesthetic consciousness as a way of becoming attuned to the teaching environment as well as to learners' diverse cultures, talents, and needs. The arts will also be studied as multi-cultural and socio-cultural phenomena, aiding teachers to become consciously attuned to the culturally diverse learner within the larger society. consciousness as a way of becoming attuned to the teaching environment as well as to learners' diverse cultures, talents, and needs. Also studies the arts as multicultural and sociocultural phenomena in support of these ends, aiding teachers to become consciously attuned to the culturally diverse learner within the larger society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Education majors; Minimum junior standing
TEL	320	Introduction to Gifted Education	Overview of a variety of issues related to gifted students from preschool through high school. Provides background in order to create an optimal experience for students, parents and teachers when working with gifted students.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
TEL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
TEL	400	Innovation in Educational Endeavors	Pursues innovative solutions to social problems with the courage and ability to impact change in individuals, communities and organizations. Reviews community problems, challenges or areas of improvement; learns underlying principles of social enterprise; and develops innovative methods that empower individuals and support educational initiatives.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): TEL 200, 300
TEL	404	Current Issues in Education and Policy Reform in the United States	Specialized topics related to current issues in education with a focus on education reform efforts from the late 20th century into the 21st century. Explores current reform efforts in education as part of the larger public policy agenda in the United States, analyzing how external influences shape present education systems.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-reqs for TEL 404
TEL	405	History of Education and Policy Reform in the United States	Specialized topics in education history with a focus on education reform efforts from pre-Revolutionary War time to the end of the 20th century. Explores the past reform efforts in education as part of what was happening historically in the United States, analyzing how those efforts have shaped the present education systems.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only TEL 405 or TEL 494 (History of Education & Policy Reform in the US)
TEL	410	Leadership and Advocacy in Educational Endeavors	Educators who take an active stance through advocacy and leadership are well-equipped to create societal change. Students learn about styles of leadership that are fitting for this need, study advocacy techniques, then position themselves as advocates and leaders as they create a plan, with goals, to address an identified community problem, challenge or area of improvement.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): TEL 200; 300; 400
TEL	420	Curriculum Strategies for Gifted Learners	Overview of a variety of ways in which to create and adapt curriculum for gifted students from preschool through high school. Provides a broad range of resources for classroom teachers to use in order to help gifted students work to their full potential in a heterogeneously grouped classroom.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
TEL	430	Learning Outside of School	Studies and methods from a variety of nonschool environments for learning and development. Teaches knowledge and skills such as methods of identifying and evaluating free-choice learning that occurs through museum going, hobbies, family learning, media, community programs, sports, public health campaigns, and more. Covers career opportunities for educators in key creative environments besides classrooms.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only TEL 430 or 494 (Learning Outside of School)
TEL	431	Learning in Workplaces	School isn't the only place where people learn! Once you get a job, most of what you learn will occur as you do your job, and that kind of learning is crucial to the development of competence and expertise. Surprisingly, seventy to eighty percent of this important learning takes place outside of formal training. Studying learning in workplaces illuminates how learning happens universally, and helps teachers and trainers design effective educational programs.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only TEL 431 or 494 (Learning in Workplaces)
TEL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1		
TEL	489	Undergraduate Projects and Research in Education	Topics include history of educational research, literature reviews, research methodology, resources, individual project ideas and the creation of a research prospectus. Students may also work in teams to complete theses or projects if their interests intersect. Open to all students; however, Honors and Scholar's Academy students will be planning and/or implementing theses or creative projects.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only TEL 489 or TEL 494 (Undergrad Projects & Research in ED)

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TEL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
TEL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
TEL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
TEL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
TEL	501	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
TEL	504	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	505	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	N	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	607	Critical Social Theory and Education	Seminar exploring education through the lens of critical social theory originating in the Frankfurt School. Marxian theory is updated to confront current situations through the ideas of alienation, base and superstructure, hegemony, ideology, and culture theory as well as a vision of human consciousness. Includes Pierre Bourdieu's theory of habitus, social or cultural capital, and field. Studies various critical education scholars as applications of critical social theory. Examines critiques of critical theory.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Credit is allowed for only DCI 691 (Critical Social Theory) or TEL 607
TEL	683	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
TEL	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	GRD	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	701	Advanced Quantitative Methods	Data collection, analysis, interpretation in studies using quantitative methods of inquiry situated in action research, evaluation and data-informed decision making.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): doctoral student; Credit is allowed for only EDA 701 or TEL 701
TEL	702	Dynamic Contexts of Education	Explores current ethical issues influencing leadership decisions with a focus on real problems in the educational setting.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
TEL	703	Innovation in Teaching and Learning	Development and psychological processes of human cognition, motivation, and performance applied to cognitively diverse, English language learners, adult professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	704	Leadership for Organizational Change	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EDA 704 or TEL 704
TEL	706	Introduction to Doctoral Studies	Prepares doctoral students for success, focusing on balance and identity, communities of practice, leadership and innovation, action research, and organization systems.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Leadership and Innovation EdD major; Credit is allowed for only TEL 598 (Introduction to Doctoral Studies) or 706
TEL	711	Strategies for Inquiry	Develops knowledge and skills for research and program evaluation that foster innovation in education that leads to improved student learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	712	Mixed Methods of Inquiry	Methods for combining qualitative and quantitative inquiry in action research, evaluation, and data-based decision making.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	713	Advanced Qualitative Methods	Data collection, analysis, interpretation in studies using qualitative methods of inquiry, situated in action research, evaluation and data-informed decision making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): PhD student
TEL	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	795	Continuing Registration		N	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
TEM	100	Seminar in Entrepreneurship	Exposes students to careers in entrepreneurship by inviting diverse entrepreneurs to discuss their businesses and backgrounds and share their stories on starting and growing their ventures.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1		Credit is allowed for only TEM 100, TEM 194 (Entrepreneurship) or OMT 191 (Entrepreneurship)
TEM	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
TEM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TEM	200	My Technology Venture	Introduces the concept of entrepreneurship through venture practice and self-reflection to help students understand their potential roles in a technology-driven marketplace.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 110; Pre- or corequisite(s): TEM 100; Credit is allowed for only TEM 200 or TEM 294 (My Technology Venture) or TMC 294 (My Technology Venture)

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TEM	230	Creativity and Business Innovation	Introduces concepts, models and techniques of creativity and innovation. Exposes processes related to developing creative skills and habits with an emphasis on problem solving and design.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; TEM 100; TMC 110; minimum sophomore standing; Credit is allowed for only TEM 230 or TEM 394 (Technology Entrepreneurship) or TMC 394 (Technology Entrepreneurship)
TEM	250	Design Methodology	Outlines product design method and provides opportunity to apply it to a design project including identifying needs, setting target specifications, generating and selecting concepts, prototyping and testing.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; MAT 211; Credit is allowed for only OMT 294 (Design Methodology) or TEM 250
TEM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TEM	311	Opportunity Analysis	The key to making sound business decisions involves the careful analysis of the situation, intelligent use of research, and successful practice. Entails the research and implementation of strategy to determine consumer expectations utilizing the skills especially important in today's competitive and turbulent market.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 310
TEM	330	Systems Innovation	Systems thinking course that investigates how innovators can incorporate the knowledge of complex systems into the processes of technology development, product/service innovation and venture development.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: ENG 102, 105 or 108 with C or better; TEM 200 or 45 earned hours; Credit is allowed for only TEM 330 or TEM 394 (System Innovation)
TEM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TEM	400	Technology Entrepreneurship	Introduces opportunities and challenges that accompany starting and operating an entrepreneurial venture by exploring the fundamentals and principles of entrepreneurship suitable for undergraduate business and technology students. Provides real-world, hands-on learning on what it's like to successfully transfer knowledge into products and processes that benefit society. Engages students with industry, talking to customers, partners and competitors, as the team encounters the chaos and uncertainty of transferring knowledge into products and processes that benefit society.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre- or corequisite(s): Technological Entrepreneurship & Mgmt BS major; ENG 102, 105, or 108 with C or better if completed; TEM 250 OR Business (Technology) BA major; Credit is allowed for only OMT 494/TEM 394 (Technology Entrepreneurship) or TEM 400
TEM	420	Statistics for Industry	Covers topics such as probability theory, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, and simple linear regression analysis. Provides a fundamental understanding of probability theory and statistics as used in typical industrial applications. Presents and discusses illustrative problems. Where possible, explores problems from the students' disciplines to insure that the principles of statistics and probability are studied in the context of the students' chosen field.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: MAT 117 or any MA General Studies course
TEM	431	Innovation Management	Focuses on execution challenges that innovation initiatives face, including: (a) Resources: Where do the resources for innovation initiatives come from? (b) Organization: How should innovation initiatives be organized? (c) Planning: How should plans for innovation initiatives be written and through what kind of process should they be revised? Explores the processes of innovation management for various sizes of companies utilizing smaller scale, local processes to large scale, globally dispersed innovation processes and teams.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: ENG 102 , 105 or 108 with C or better; TEM 200 or 45 earned hours; Credit is allowed for only TEM 431 or TEM 494 (Innovation Management)
TEM	450	Design for the Developing World	Learn the product design process; improve the lives of poor residents in communities at the base of the economic pyramid who earn less than \$2/day. Help improve health, energy and clean water issues among others by joining with GlobalResolve, an ASU program in the College of Technology and Innovation whose goal is to help reduce poverty through technological innovation and entrepreneurship.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: Junior, Senior or Graduate standing; Credit is allowed for only TEM 450 or TEM 494 (Design for the Developing Wrld)

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TEM	455	Global Impact Entrepreneurship	Increases awareness and understanding of the complex nature of global poverty. Students think comprehensively about sustainable ways to address by focusing on business ventures and product design, which take advantage of local resources, networks and institutions. Students design and refine technologies and services that address the needs of communities in the developing world. Examines piloted technological innovations by ASU students in the west African nation of Ghana, India, and Latin American countries such as Mexico and Peru. Analyzes technological initiatives that have been piloted in Ghana and Peru, and attempts to create sustainable business ventures for them.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; TMC 320; minimum junior standing; Credit is allowed for only OMT 494 (Global Impact Entrepreneurship) or TEM 455
TEM	460	Lean Six Sigma Green Belt Certification	Six Sigma and Lean are fast becoming required knowledge for professionals involved in helping their companies streamline productivity and improve performance. Provides a focused and measurable management discipline, structured to reduce product and service failure rates to near perfection. Explores how Six Sigma and Lean strategies and tactics fit into a larger management systems and how to apply these techniques to solve and prevent critical business process problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: ENG 102, 105 or 108 with C or better; TEM 200 or 45 earned hours; Credit is allowed for only TEM 460 or OMT 494 (Lean Six Sigma Green Belt Certification)
TEM	480	Focus Area Project	Student research project that synthesizes knowledge across the core and the student's selected focus area. Examines a practical challenge that demonstrates technical competence related to technological entrepreneurship and management. Enhances the student's ability to focus on a topic, conduct research and present findings.	N	LEC	Y	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 430; senior standing
TEM	481	Consulting Project	Students learn about technology entrepreneurship through consulting with leaders and owners of businesses, not-for-profit organizations and government agencies. Requires both out-of-class consulting projects and in-class instructional sessions focused on technology entrepreneurship and business strategy, including financing, promoting, leading and growing the venture and consulting skills.	N	PRA	Y	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): senior standing; Pre- or corequisite(s): TMC 430 or BAS major
TEM	482	Startup Workshop	Students launch their own technology-based ventures with collaboration and mentorship from colleagues and faculty. Explores the fundamentals and principles of entrepreneurship suitable for undergraduate technology entrepreneurship. Provides real-world, hands-on learning on what it's to successfully transfer knowledge into products, processes and services that benefit society. Engages with industry, talking to customers, partners and competitors, as the team encounters the chaos and uncertainty of transferring knowledge into products and processes that benefit society.	N	PRA	Y	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 430; senior standing
TEM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		
TEM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-6		Prerequisite(s): Barrett Honors student
TEM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-6	L	Prerequisite(s): Barrett Honors student
TEM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TEM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
TEM	505	Lean Process Improvement	Develops an understanding of individual and group decisions and responsibilities for process design and improvement in work settings. Covers common problems and success stories and qualitative and quantitative techniques to measure progress toward organizational goals for a variety of industrial business situations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEM	530	Statistics Bootcamp for Industry	Provides foundational coverage of topics such as probability theory, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, and simple linear regression analysis, appropriate for first-year graduate students. Additionally, provides a fundamental understanding of probability theory and statistics as used in typical industrial applications. Presents and discusses illustrative problems from technology, entrepreneurship, aviation and psychology. Where possible, explores problems from the student's discipline to insure that the principles of statistics and probability are studied in the context of the student's chosen field.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only TEM 530 or 598 (Statistics Bootcamp for Industry)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
TEM	531	Disruptive Innovation and Technological Evolution	Focuses on the processes of innovation management of various sizes of companies utilizing smaller scale, local processes to large scale, globally dispersed innovation processes and teams, with an emphasis on disruptive innovation and the evolution and forecasting of technology. Provides a survey of innovation management concepts and various technological forecasting and prediction approaches, both mathematical and nonmathematical, in conjunction with a study of the evolution of selected technologies and the management problems associated with emerging technologies.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEM	532	Advanced Analysis of Systems	Introductory course in systems analysis and modeling. Develops basic competence in formulating and solving models of systems to aid decision making. Topics include: introduction to systems and systems modeling; a simple what-if analysis; overview and review of linear algebra and matrices; problem formulation and model development in optimization; linear programming (LP), economic interpretation and sensitivity analysis; introduction to integer programming (IP); special linear programs; project schedule network development and computations; overview of heuristic algorithms. Uses selected software in examples, short problems and in a project.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TGM	101	Principles of Global Management	Provides the basic concepts of management with particular emphasis on the functions of management in a global environment. Examines the antecedents of globalization; the role of global environments in shaping organization structure, strategy and processes, as well as the basic principles of managing in complex cross-cultural settings. Emphasizes global institutional arrangements and macroeconomic issues. Serves as an introductory course that provides a quick snapshot of key issues facing global corporations today with each of the major themes explored more fully in the set of advanced courses that follow. Applies global business concepts in understanding global political economics, legal systems and socio-cultural environments.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3	G	
TGM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): Maximum 25 hours
TGM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	200	Principles of Accounting for Global Organizations	Focuses on financial and managerial accounting and examines how outsiders evaluate businesses, nonprofits and governmental operations and how economic events are reflected in a firm's financial statements, including balance sheets and cash flow statements. Examines key accounting methods that impact a company's financial statements and how they are used by shareholders, creditors, employees and customers to make credit decisions and/or value a firm's equity securities.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	204	Principles of Marketing for Global Organizations	Explores the ways in which global marketing strategies reflect a deep understanding of markets and create valuable offerings for customers globally. Broadly speaking, marketing strategy making is comprised of segmentation, targeting and positioning. Segmentation is the process by which we segregate a relatively heterogeneous mass market into relatively homogeneous market segments. Targeting is the process by which we analyze opportunities and identify those customers where our business has the greatest prospects for success. Positioning is the process of assembling the "total offering" (product, service, distribution and price) and communicating the benefits of this "total offering" to the members of our target market. Challenges students to think critically about global competition. As such, rote learning of terms and concepts is not sufficient to prepare students to manage a business in global markets.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student

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TGM	268	Intercultural Communication for Global Management	In a dynamic and interactive format, this course presents a framework of models and skills for building communication performance in competitive global business settings. Assists in implementing strategies for mastering interpersonal encounters, including conflict resolution, in multicultural environments. Examines theories of communication (the basic concepts, principles and skills vital for understanding and improving communication across racial, ethnic and cultural differences). Places students in experiential situations in order to develop valuable global management skills. Using cases, self-assessment questionnaires, multicultural team exercises and simulations, equips the global manager with the ability to solve problems and take advantage of opportunities in a multicultural world. Explores in depth intercultural theories from the TGM three regional areas--China, Latin America and the Middle East.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	300	Principles of Finance for Global Organizations	Equips students with the tools necessary to make strategic financing and investment decisions for value creation in a competitive global environment. Topics addressed include financial analysis and projections; working capital management; and investment management (derivation of cash flows, cost of capital, discounted cash flow valuation and capital budgeting decisions).	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	353	Regional Management Environment	Provides future global managers with the analytical tools and frameworks for understanding the political, social, cultural and economic contexts within which business activities take place in various countries and regions throughout the world.	N	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student; minimum 60 hours
TGM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	400	Advanced Topics in Global Management	Focuses on advanced topics in global management designed to synthesize knowledge acquired from global business, language and cultural coursework.	N	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student; minimum 60 hours
TGM	468	States and Markets	Global managers operate in an international economy that presents tremendous opportunities as well as risks. Globalization has dramatically expanded opportunities for international trade, investment and economic development. At the same time, global managers have to deal with the prospect of trade wars, international financial crises and intensified competition over markets and resources. In addition, international organizations such as the International Monetary Fund, World Trade Organization and World Bank Group have a direct impact on international business operations. Develops analytical tools for understanding the rapidly changing and dynamic global political. With these tools, managers are better prepared to anticipate the risks and take advantage of opportunities in the global economy.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	489	Multinational Organizational Leadership	Explores multinational organizational management strategies, organizational practices/systems, and related managerial skills which are an essential part of global competitiveness. Develops skills to understand the application of analytical tools and frameworks, executes complex strategy, and builds and leads competitive teams and people.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-6		
TGM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-6	L	
TGM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-7	L	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TGM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		
TGM	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	501	Global Accounting	Focuses on two aspects of accounting: financial and managerial accounting. Financial accounting is about how outsiders view and evaluate an organization such as a business, a not-for-profit entity or a governmental operation. It focuses on how economic events are reflected in a firm's financial statements including a balance sheet, an income statement and a statement of cash flows. It also focuses on how financial statement information is used by various stakeholders such as shareholders, creditors, employees and customers in making decisions with regard to the firm, including credit decisions and/or valuing a firm's equity securities. Analysis and equity management accounting involves providing information, both financial and non-financial, to management and employees to aid in planning, organizing activities, and monitoring and controlling business performance.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	502	Financial Management for Global Value Creation	Equips students with the tools necessary to make strategic financing and investment decisions for value creation in a competitive global environment. Topics addressed include financial analysis and projections; working capital management; and investment management (derivation of cash flows, cost of capital, discounted cash flow valuation, and capital budgeting decisions).	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	503	Global Marketing	Provides a managerial orientation to the topic of global marketing in today's complex, rapidly changing international business environment. A key focus is developing competitive advantage by creating customer value. Course participants gain a fundamental understanding of marketing strategy and marketing analysis (i.e., customer, competitor and company analysis) as well as an appreciation of the basic strategic issues involved in market segmentation, market targeting and market positioning in the international arena. Also examines the major tactics/tools used by global marketers to facilitate the management of their international marketing plans (i.e., product development, pricing strategies, marketing communications, distribution management). Emphasizes developing skills for entering new markets and sustaining or growing current markets.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	504	Managing Organizations from a Global Perspective	Covers two key aspects of successfully managing an organization in a global environment. The first component covers the strategic direction of the organization, and the second component discusses how to harness the power of people in the organization to build teams and lead people to execute the strategy.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	505	States and Markets in a Global Economy	Global managers operate in an international economy that presents tremendous opportunities as well as risks. Globalization has dramatically expanded opportunities for international trade, investment and economic development. At the same time, global managers have to deal with the prospect of trade wars, international financial crises and intensified competition over markets and resources. In addition, international organizations such as the International Monetary Fund, World Trade Organization and World Bank Group have a direct impact on international business operations. Develops analytical tools for understanding the rapidly changing and dynamic global political. With these tools, managers are better prepared to anticipate the risks and take advantage of the opportunities they will encounter in the global economy.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	506	Communicating and Negotiating Across Cultures	This dynamic and interactive course provides managers with an effective framework for achieving their goals in global management settings. Assists students to prepare for and execute time-tested strategies for achieving communication competence with persons from different cultures. Also covers negotiating in the global context. Not only examines theories of culture and communications, but also places students in an experiential situation to gain valuable skills for overcoming obstacles in global management environments. Through use of cases, multicultural team exercises, student negotiation exercises and simulations, equips the global manager with tools to solve problems and take advantage of opportunities in a multicultural world.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
TGM	507	Global Organizational Consulting: Basics	Consulting course provides an overview of the field of consulting and the role of the management consultant. Familiarizes students with the tools and techniques used during a consulting engagement, including project entry, problem definition, intervention planning, data collection, problem solving, alternative generation, feedback, project exit, client relations skills and project management. Requires students to work in project teams to solve business problems in organizations through the application and expansion of technical skills acquired in other classes.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	508	Regional Business Environment I: Emerging Markets	As an extension of states and markets in a global economy, provides an analysis of contextual factors that influence dynamic business environments by employing frameworks that integrate political, economic, geographic, and sociocultural factors in a specific regional area.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 505
TGM	509	Regional Business Environment II: Developed Economies	Provides future global managers with the analytical tools and frameworks for understanding the European business environment. Also provides a broad understanding of the region in order to be successful therein. Deals with the political, social and economic context within which business activities take place in Europe. In order to succeed as managers in the environment, requires knowledge of political, social, cultural, economic, business and regional economic factors, both across the European landscape and within individual countries.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 508
TGM	510	Strategies in Global Development	The nuances and challenges of development in the less-developed countries (LDCs) and in the transition economies of the world. Analyzes the economic, social, political, cultural and other challenges that LDCs and transition economies face, and the strategies they are employing in their quest for development.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 505
TGM	511	Global Financial Accounting	Accrual accounting concepts, teaching students how to prepare and understand the content of traditional financial statements. Topics include the recognition and measurement of accounting events; preparation and analysis of income statements, balance sheets and statements of cash flows; and the measurement of revenue, expenses, assets, liabilities and stockholders' equity, including both U.S. and international principles.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	512	Managerial Accounting and Decision Making in a Global Environment	Covers the development and use of managerial accounting information, including both financial and nonfinancial performance measures, in making long- and short-run decisions. Topics include cost-profit-volume analysis, cost behavior, relevant costs, job-order and processes costing, activity-based cost management and the analysis of customer profitability.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-2		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 501 or 511
TGM	519	Global Financial Engineering	Develops (1) an understanding of the pricing of derivative securities such as options, futures, forwards and swaps; (2) an understanding of derivative strategies, such as straddles, spreads, synthetics; (3) the ability to use these derivative assets and strategies to manage diverse sources of risk, including market risk, interest rate risk, foreign exchange risk and commodity price risk; (4) the ability to manage the interest rate and default risk in fixed-income securities (requires an understanding of duration, convexity, credit default swaps); (5) a broad understanding of the role played by hedge funds, arbitrage and liquidity in financial markets.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 502 or 552
TGM	521	Managing for Global Value Creation	Equips students with the tools necessary to make strategic financing and investment decisions for value creation in a competitive global environment. Topics addressed include financial analysis and projections; working capital management and investment management (derivation of cash flows, cost of capital, discounted cash flow valuation, and capital budgeting decisions).	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	522	Global Financial Decisions	Covers modern practices of financial decision-making and management in a market-oriented multinational framework. Topics addressed include capital structure decisions, risk management involving financial derivatives and currency hedging, cross-border investment decisions, subsidiary management, and cross-border merger and acquisitions.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 521
TGM	528	Business Intelligence	Examines the role that business intelligence--the systematic collection, synthesis and analysis of information on the external operating environment--should play in strengthening corporate strategies and decision making. Through lectures and client-sponsored competitive assessment projects, the course has two goals: to help students understand this management tool and to train them to be able to utilize it for competitive advantage. Also addresses the related issues of corporate/industrial espionage and information security.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 504 or 540; TGM 541

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TGM	529	Multinational Corporate Finance (FORAD)	Applies the theories of managerial and international finance to the problems of multinational treasury management. Topics include issues and techniques in multinational funds transfers; identifying and measuring foreign exchange and interest rate risk; multinational tax planning; managing foreign exchange and interest rate risk; hedging instruments, including forward contracts, options and swaps; and financially engineered synthetics. Students also manage the financial functions of a computer-simulated multinational corporation, construct a biennial report summarizing their management results and present oral reports to a board of directors consisting of professors and invited business professionals.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 502 or 552
TGM	530	Big Data in the Age of the Global Economy	Creating a sustainable IT-dependent competitive advantage is a major goal for forward-thinking multinational organizations. Understands how multinational organizations make strategic use of Big Data to gain a competitive advantage in the global economy. Covers the important technological aspects of big data from a managerial viewpoint. Delves into the understanding of global data and how this data must be standardized to account for differences in collection methods, legal constraints and cultural interpretation to create a reliable platform for evaluation.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	531	Multinational Value Chain	Exposes students to the strategies and challenges associated with moving goods, services, information and associated payments across complex, globally dispersed value chains to end customers. Topics include value-chain structures, supplier partnerships, cross-cultural issues, technology, data networks, global logistics, risk management and value-chain mapping. A field project provides students with an opportunity to work in teams applying the course concepts to increase customer value in a real value chain.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	532	Leading Global Projects	Provides an overview of the global context of project leadership. Global project leaders work at the intersection of project management, leadership in a project context and cross-cultural effectiveness. Exposes students to key project leadership approaches including stakeholder management, methods for increasing inclusion on global project teams and building high-performing global project teams. Uses case studies, a simulation, several exercises and interactive discussions.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	540	Managing People from a Global Perspective	Explores the mix of organizational practices and people that can be the basis of sustainable competitive advantage in the contemporary global business environment. Topics covered include cross-cultural issues in managing people, traditional and emerging models of organizations, organizational culture, leadership, employee skills and motivation, reward systems and change management.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	541	Competitive Strategy from a Global Perspective	Focuses on choices that impact the performance of the entire organization. Examines central questions: Why are some industries and firms more profitable than others? How do firms create competitive advantage? How does the choice of strategy drive organizational performance? How do firms manage scarce resources in the pursuit of strategic objectives? How do firms create unique and sustainable industry positions?	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	546	Regional Industrial Analysis	Builds on concepts introduced in competitive strategy, global strategy and regional business environment. Focuses on the analysis of the strategies adopted by competing players and their impact on the global strategies pursued by the parent organization in the context of regional industry dynamics. Covers a spectrum of topics ranging from industry cluster formation, country-specific advantage, industry versus industry ecosystem analysis, the government's role in industry and regional development including national innovation systems, demand and supply chains in regions, and emerging market challengers. Applies multiple decision-making tools and frameworks to understand the Information and Communications Technology (ICT) industry in Asia Pacific--the fastest growing region in the world. Tools and frameworks learned in this course are applicable to other regions and other industries.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 505
TGM	547	Leading Change and Transformation in a Global Environment	Increases understanding of the nature of organizational change (through conceptual frameworks, readings and discussions). Specifies skills needed for managing change. Enhances sensitivity to the contribution and consequences of the human element as related to change. Helps student's own capacity to "thrive on change."	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 540
TGM	548	Global Strategy	Focuses on how global firms create value. Covers topics ranging from country-specific competitive advantage and the notion of distance to alternative global strategy archetypes and sources of competitive advantage for emerging market multinationals. The approach applies multiple decision-making tools and frameworks to untangle the complexities of managing in a global corporation.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): TGM 504 OR TGM 540 and 541

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TGM	549	Global Leadership	Explores the concept of effective leadership within and across a variety of organizations and global contexts. Definitions of "leadership" and strategies for becoming an accomplished leader abound. Rather than attempt to narrowly focus our attention on definitions, leadership styles, and supposedly "definitive" theories of leadership, focuses on the demands of and competencies associated with excellent leadership. Most importantly, examines how leaders sense the need for and then manage organizational change. Given the increasingly complex world we live in and the ongoing and rapid rate of change, change management has become one of the most critical of leadership skills.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 504 or 540
TGM	551	Global Marketing Strategy	Covers the major concepts involved in creating and sustaining customer value, analyzing the firm's macro environment, choosing whether or not to enter a foreign market, how to evaluate different foreign markets, the best methods for entering different markets, the market research design process, understanding consumer and B2B customer behavior, and ethical issues encountered in global marketing.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	552	Global Marketing Management	Covers the functional aspects of marketing including decisions relating to segmentation, targeting, branding, product development, pricing, distribution and advertising/promotion. Students integrate their knowledge of these topics through the creation of an international marketing plan based on a product or service and in a country approved by the instructor.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	558	Global Data Analysis for Strategic Marketing	Provides an understanding of the key marketing issues through an examination of various marketing decisions. Course complements other marketing courses by adopting a more hands-on and practical approach to strategic market planning. A combination of lectures and discussions, analyses of cases, software demonstrations, and a simulation game facilitate understanding of the material. Requires a solid understanding of marketing planning, statistics and quantitative methods.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 503 OR TGM 551 and TGM 552
TGM	559	Global Brand Management	Provides a managerial orientation to the topic of global brand management. Prepares participants for a career either in the role of the "traditional brand manager" or in the role of a "manager with brand-related responsibilities." A major portion of the course is working on a global brand field project to develop a brand management/marketing plan for a brand and brand challenge of student (and team) choosing. Emphasizes the ethical dimension of global brand management; focuses on an individual brand ethics project.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 503 or 552
TGM	579	Communicating in a Global Context	In a dynamic and interactive format, presents a framework of models and skills for building communication performance in competitive global business settings. Assists in implementing strategies for mastering interpersonal encounters, including conflict resolution, in multicultural environments. Not only examines theories of communication, but places students in experiential situations in which they develop valuable global management skills. Using cases, self-assessment questionnaires, multicultural team exercises and simulations, equips the global manager with the ability to solve problems and take advantage of opportunities in a multicultural world.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	581	Negotiating in a Global Context	Provide students with knowledge, skills, insights and experience necessary to be a competent negotiator. Covers theories of cross-cultural negotiation and how these impact business interactions. Students gain insight into personal and cultural underpinnings that influences cognitive, affective and negotiation behavioral processes. Expands skills in achieving communication and negotiating competence through the understanding and practice of increased appropriateness, flexibility and adaptability.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 579
TGM	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
TGM	585	Corporate Social Responsibility in a Global Context	Provides knowledge, skills, insights and experience necessary to be a competent negotiator. Covers theories of cross-cultural negotiation and how these impact business interactions. Students gain insight into personal and cultural underpinnings that influences cognitive, affective and negotiation behavioral processes. Expands skills in achieving communication and negotiating competence through the understanding and practice of increased appropriateness, flexibility and adaptability. Corporate Social Responsibility (CSR) has become essential for corporations seeking to succeed in an intensely competitive global economy. Provides an in-depth understanding of what CSR is, how to apply it effectively in an international context and how to manage it well. Using a case-based approach, focuses on actual experiences of corporations that have used CSR strategies successfully--and unsuccessfully--to draw practical lessons for international managers. Incorporates several guest lectures from executives who share their firsthand experiences with CSR in various regions of the world.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 505
TGM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic or writing a literature review of a topic.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	591	Seminar	A small class emphasizing discussion, presentations by students and written research papers.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	592	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded and no grade is assigned.	Y	RSC	Y	Z3	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1		
TGM	596	Thunderbird Experiential Practicum	Capstone course offering students an opportunity to apply the full range of professional skills they have acquired during graduate business and management studies. Consists of participation in a consulting project for a client system in an emerging market country, including Central America, Latin America, the Middle East, Africa, central and eastern Europe, and the whole of Asia apart from Hong Kong, Japan, Singapore, Australia and New Zealand. Serves all sectors: public/governmental, private and NGO/nonprofit.	Y	PRA	Y	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-6		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 501 or 512; TGM 502 or 522; TGM 503 or 552; TGM 505 or POS 586; TGM 506 or 581, OR Master of Arts in Global Affairs and Management major; TGM 507
TGM	597	Thunderbird Integrative Experience	Provides a capstone experience that integrates content from several business areas including strategy, finance, cross-cultural communication, supply chains, leadership, operations and accounting. May take the form of an integrative business computer simulation or a seminar drawing on faculty from a variety of business areas to highlight key issues in those areas.	N	LEL	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 505; TGM 512; TGM 522; TGM 530; TGM 541; TGM 552; Corequisite(s): TGM 548
TGM	598	Special Topics	Topical courses not offered in regular course rotation (e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand).	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
THA	101	Elementary Thai I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose readings in Thai script.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
THA	102	Elementary Thai II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		Pre-requisites:THA 101 with a grade of C or better
THA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Prerequisite: Freshman with minimum 25 hours
THA	201	Intermediate Thai I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites:THA 102 with C or better
THA	202	Intermediate Thai II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites:THA 201 with C or better

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THE	100	Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisite(s): non-Theatre and non-Film students only
THE	100	Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
THE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended..	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
THE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THE	320	History of the Theatre I	Centers on the historiography of world theatre as art, as a medium of cultural expression and as a social institution. Involves, along with the reading of plays, advanced methodological approaches to studying the creation of theatre within cultural and political contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & H	Prerequisite(s): Theatre major: THF 220 (or THE 220) OR New College student: junior or senior standing
THE	320	History of the Theatre I	Centers on the historiography of world theatre as art, as a medium of cultural expression and as a social institution. Involves, along with the reading of plays, advanced methodological approaches to studying the creation of theatre within cultural and political contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Prerequisite(s): Theatre major: THF 220 (or THE 220) OR New College student: junior or senior standing
THE	321	History of the Theatre II	Traces major developments in theatre production from the 17th century to modern times.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & H	Prerequisite(s): Theatre major: THF 220 with C or better; THE 320 with C or better OR New College student: junior or senior standing
THE	321	History of the Theatre II	Traces major developments in theatre production from the 17th century to modern times.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Prerequisite(s): Theatre major: THF 220 with C or better; THE 320 with C or better OR New College student: junior or senior standing
THE	322	Theatre History and Culture	Critically examines major developments in theatre history, historiography, and dramatic literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & H	Prerequisites: Must NOT be a Theatre student
THE	325	Play Reading for Educational Theatre	Assigned independent readings in plays for secondary school play production.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisites: Theatre student
THE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
THE	403	Independent Film	Examines the independent film movement from the French New Wave to contemporary independent filmmakers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisites: ENG 102, 105 or 108 with C or better
THE	404	World Cinema	Films and filmmakers from Europe, Asia, Australia, the Far East, South America, and the Caribbean. Emphasizes cultural content and filmmaking philosophies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	G	Prerequisites: ENG 102, 105 or 108 with C or better
THE	405	Film: Great Performers and Directors	Examines processes and influences of one or more great film performers and/or directors.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Pre-requisites: ENG102, 105 or 108 with C or better
THE	406	American Multicultural Film	Examines Native, African, Asian, and Latina and Latino American films and film artists in cinema history and production.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & C	Pre-requisites: ENG102, 105 or 108 with C or better
THE	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
THE	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
THE	421	Shakespeare: Stage and Film	Examines Shakespeare's plays as written texts, stage performances, and film productions. Focuses on play reading, performance analysis, and film critique. Online course.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better
THE	422	Latina and Latino Theatre and Film	Explores issues of cultural identity through critical analysis of theatre and film by Latina and Latino artists in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better OR Theatre Masters students
THE	423	African American Theatre	Readings, discussion, video of the history and dramatic literature of African American playwrights and theatre companies in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	C	Prequisites: ENG 102, 105 or 108 with C or better, or Masters student
THE	424	Trends in Theatre for Youth	Surveys the history, literature, and contemporary practices in theatre for youth.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	425	Chekhov and Russian Drama	An in-depth study of Chekhov's major works, representative short stories and major plays, including "The Cherry Orchard" and "Three Sisters". Taught in English.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only RUS or THE 425
THE	426	Pre-Columbian Theatre of the Americas	Selected studies in pre-Columbian theatre forms and texts of the Aztecs, Mayans, Caribbean islands, and North American Indians.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: ENG102, 105 or 108 with C or better, or Masters Theatre student
THE	429	Studies in European Literature and Culture	Literary, cultural, and historical issues.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: ENG 200 and one other 200-level Literature course with C or better; Credit is allowed for only ENG, SLC or THE 429
THE	430	History of Fashion	Fashion is rarely set but rather evolves with eras of upheaval between one generation and the next. Clothes express the personality and rank of the individual creating an instantaneous and lasting impression. Introduces over 400 years of Western fashion history drawing parallels between the fashion and the period in which it existed.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): sophomore standing or higher
THE	440	Experimental Theatre and Performance	Explores 20th-century modernist theatrical forms and movements and development of alternative strategies for analyzing contemporary theatre and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L	Prerequisite(s): Theatre undergraduate student; THF 220 (THE 220) with C or better; THE 320 with C or better
THE	480	Methods of Teaching Theatre	Applies materials, techniques, and theories for theatre with 9th- through 12th-grade students. Emphasizes curriculum development and praxis.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Minimum junior standing; Credit is allowed for only THE 480 or 581
THE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Pre-requisites: Barrett Honors Theatre or Film student
THE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Pre-requisites: Barrett Honors Theatre or Film student
THE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
THE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-7		
THE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		
THE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
THE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
THE	500	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): graduate School of Film, Dance and Theatre major
THE	504	Studies in Dramatic Theory and Criticism	Surveys dramatic theory, criticism, and aesthetics as they relate to contemporary performance.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre student
THE	505	Critical Theory and Performance	Surveys contemporary theories of culture as they apply to theatre and performance studies.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre graduate student
THE	510	Studies in Literature	Assigned individual reading program in standard sources and masterpieces in theatre literature. May be repeated for credit.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite: Must be a Theatre Education or Theatre for Youth student
THE	520	Theatre History and Literature	Surveys historiographical issues and dramatic literature related to key periods in theatre history.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre student

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THE	524	Advanced Studies in Theatre for Youth	In-depth study of the history, literature, and contemporary practice of theatre for young audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Theatre Education or Theatre for Youth student
THE	525	Advanced Studies in Theatre for Youth II	Project-oriented explorations of theory and practice of contemporary theatre for youth audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite: THE 524 with B or better
THE	562	Literary Management Workshop	Advanced literary management for the contemporary theatre, including trends in new play development, festivals and productions throughout the United States. Participation in Arizona Playwriting Competition.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite: THP 560 with B or better
THE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THE	581	Methods of Teaching Theatre	Applies materials, techniques, and theories for theatre with 9th- through 12th-grade students. Emphasizes curriculum development and praxis.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate (degree or non-degree) student. Credit is allowed for only THE 480 or 581
THE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		
THE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
THE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
THE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Master of Art Theatre student
THE	600	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		
THE	700	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Pre-requisite: Must be a Theatre Education or Theatre for Youth student or have instructor approval.
THE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student

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THE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-15		
THE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-15		
THF	101	Acting Introduction	Introduces basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Must not be a Theatre student
THF	125	Orientation to Film, Dance and Theatre	Orientation to university and school resources and procedures. Academic success strategies, mentorship, goal setting. Community-building exercises.	N	REC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): BA Film (Film and Media Production or Filmmaking Practices) or BA Performance and Movement or BA Theatre (Acting or Design and Production or Theatre Exploratory) major; freshman standing
THF	126	School of Film, Dance and Theatre: First-Year Experience	Community building within the School of Film, Dance and Theatre; connections with faculty; foundations of creative process; attendance and written response to performance and media events.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Prerequisite(s): BA Film (Film and Media Production or Filmmaking Practices) or BA Performance and Movement or BA Theatre (Acting or Design and Production or Theatre Exploratory) major
THF	160	Introduction to Storytelling	Introduces the nature, structure, and operations of story, as well as the functions of narrative in societies and cultures. Several modules introduce a different mode of storytelling. Students learn to create their own stories utilizing several of the approaches introduced in the modules.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): BA Film or BA Performance and Movement or BA Theatre major
THF	215	Design and Composition for Theatre and Film	Introduces the aesthetic principles and practices employed by designers/artists of the stage and screen, including: basic knowledge of the elements and principles of design; conceptualization of design for theatre and film; director/designer collaboration models; methods and modes of visual communication for theatre and film (storyboards, renderings, models, etc.).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): BA Digital Culture (Theatre) or BA The Arts (Entertainment Design) or BA The Arts (Fashion Design) major OR School of Theatre and Film major
THF	220	Principles of Dramatic Analysis	Analysis, evaluation, and interpretation of dramatic literature for theatrical production. Emphasizes the traditional canon of dramatic literature and traditional structures and forms of drama.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Pre-requisites: School of Theatre and Film major or Theatre Exploratory major with minimum sophomore level; ENG 101, 105 or 107 with C or better; Pre- or Co-requisite: THF 126 with C or better
THF	370	Seminar: Acting Concentration for Stage and Screen	Designed for a student's continued growth as a preprofessional acting student. Provides a series of master workshops focused on craft. In addition, under the guidance of the faculty facilitator, students receive career guidance and information to strengthen connections to the institute, the school and the university.	N	SEM	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): admitted to Theatre (Acting) BA concentration; Credit is allowed for only THF 370 or THP 394 (Acting Concentration Seminar)
THF	397	Professional Development Seminar	Preparatory course for senior projects. Students research and create senior project proposals while formalizing faculty mentorships.	Y	SEM	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisites: Film BA or Performance and Movement BA or Theatre BA major; Minimum 56 hours
THF	497	Senior Project	Mentored practicum for culminating capstone projects.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): THF 397 with C or better; Film BA or Performance and Movement BA or Theatre BA major; Minimum 56 hours

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THP	102	Acting I: Fundamentals	Explores and applies basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Performance and Movement or Theatre major
THP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THP	201	Theatre Production Crew	Participation in university mainstage theatre production backstage and board operations.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		
THP	202	Acting II: Intermediate Techniques	Rehearsal techniques and application of action to dramatic text.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 101 or THP 102 with B or better; THP 272, 277 with B- or better. Pre- or corequisite(s): THF 220 (THE 220) with C or better if completed
THP	212	Puppetry with Children	Construction and manipulation of puppets; practice in performance skills. Emphasizes educational and recreational uses of puppetry by and with children.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		
THP	213	Introduction to Technical Theatre	Procedures of technical theatre production and demonstration. Topics include design and construction of scenery, lighting, and properties.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	4		Pre-requisites: Theatre or Digital Culture (Theatre) student
THP	214	Introduction to Costuming	Basic principles of costume design, construction, and survey of selected historical periods including makeup styles. Costume design project and production experience.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	4		Prerequisite(s): Digital Culture (Theatre) or The Arts (Entertainment Design) or The Arts (Fashion Design) or Theatre major
THP	218	Directing I: Introduction to Directing	Overview of emergence and practice of the director's craft. Explores director's role and responsibilities, play selection, conceptualizing, ground plans, blocking.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre student; THF 220 with C or better; THP 102 with C or better
THP	251	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
THP	260	Introduction to Playwriting	Basic skills of playwriting including exercises in monologues, scenes, and conflict and resolution, leading to completion of a one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: ENG101,105 or 107 with C or better
THP	272	Acting: Introduction to Movement	Movement vocabulary and physical training in relaxation, alignment, conditioning, and stage presence. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THF101 or THP102 with B- or better
THP	277	Acting: Introduction to Voice	Exercises and techniques to free the voice and improve quality and projection. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THF101 or THP102 with B- or better
THP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
THP	301	Theatre Production	Participation in university mainstage theatre productions (e.g., acting, construction, stage management).	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-2		Prerequisites: THP 213 or THP 214 with C or better
THP	302	Acting III: Advanced Techniques	Advanced practice in methods, skills, and research for rehearsal and performance.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 101 or THP 102 with C or better; THF 220 (or THE 220) with C or better; THP 202 with C or better; THP 272 with C or better; THP 277 with C or better; minimum junior standing
THP	307	Acting: Research and Performance	Acting in theatre projects, productions, or collaborative performances in directing classes.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		Prerequisite: THF 101 (or THP 101 or THP 102) with C or better
THP	311	Creative Drama with Youth	Theories, materials, and techniques for facilitating improvisational drama with children and youth in classroom and community settings.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; minimum 25 hours
THP	313	Fundamentals of Design	Art and practice of scenic, costume, and lighting design for the theatre and the media.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: THP 213 or THP 214 with C or better or Digital Culture (Theatre) major
THP	317	Stage Management	Readings in stage management and participation as a stage manager in a university theatre production.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre undergraduate student; Corequisite: THP 301
THP	318	Directing II: Intermediate Directing	Explores approaches to staging and composition. Studio work culminates in presentation of a fully rehearsed ten-minute play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP218 with C or better; THP213 or THP214 with C or better

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THP	330	Costume Design	Explores the elements of design, taking abstract ideas and formulating them into concrete forms. Encourages the student to experiment with different ideas and mediums. Emphasizes design basics, research, figure drawing, and beginning rendering techniques. Uses projects that involve complex script and character analysis to promote the student's ability to effectively communicate.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THF 215 or THP 313 with C or better
THP	331	Costume Construction	Uses of materials and techniques for stage costumes with actual construction of period apparel. May be repeated for credit.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 214 with C or better
THP	332	Makeup	Practical guide to the theory and practice of theatrical makeup. Basic principles of stage makeup design and application. Develops and increases skills in the application and design of the medium through a combination of reading assignments, lecture, demonstration and supervised practice sessions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Theatre (Design and Production) major or minimum 45 hours; Credit is allowed for only THP 332 or 494 (Makeup/Advanced Makeup)
THP	335	Advanced Stagecraft	Advanced construction techniques through applicable projects in carpentry and steel fabrication for theatre production in scenery and properties.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Minimum sophomore standing; THP 213 (or THP 301 Production) with B or better; Credit is allowed for only THP 335 or 394 (Advanced Stagecraft)
THP	340	Scene Design	Studio projects in designing scenery for contemporary stages.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 220 with C or better; THP 213 with C or better OR Digital Culture (Theatre) major
THP	345	Lighting Design	Principles and theories of stage lighting design, including design process and execution, advanced exploration of design implementation and equipment; course includes drafting and drawing.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Minimum Junior standing or Design & Production student with minimum sophomore standing
THP	350	Sound Design	Introduces the equipment, process, and recording techniques used in sound design for the theatre.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre or Film student or Digital Culture (Theatre) student; THF 215 or THP 313 with B- or better
THP	351	Arts Management	Management, organizational behavior, and human behavior in the arts; marketing, financing, and budgeting for the arts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: BA The Arts major or minimum 45 hours; Credit is allowed for only THP 351 or 394 (Management and the Arts)
THP	355	Media Design for Performance	Introduces the fundamental skills, practices and theories for media and projection design for live performance, building on traditional areas of design for the theatre.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Theatre and Film or Digital Culture (Theatre) student; THF 215 or THP 313 with B- or better
THP	360	Intermediate Playwriting	Continued development of skills in playwriting through specific exercises and completion of a full-length play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-or Co-requisite: THP 260 (with C or better if completed) or Pre-requisite: ENG 210
THP	372	Acting: Advanced Movement	Movement techniques for the classical and nonrealistic theatre.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 272 with B or better; Minimum junior standing
THP	377	Acting: Voice and Speech	Introduces phonetic alphabet, exercises, and techniques for voice and speech improvement. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 277 with B or better; Minimum junior standing
THP	385	Acting: Classical and Poetic Drama	Rehearsal and performance of Shakespeare and other classical playwrights. Emphasizes understanding poetic language, vocal and physical skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 101 (or THP 102) with B- or better; THP 277 with B- or better
THP	386	Acting: the Meisner Approach	Improvisations and exercises developed by Sanford Meisner applied to scene work.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 101 or THP 102 with B or better
THP	387	Acting: TV and Film	Professional television and film acting techniques, terminology, and on-camera experience.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre major, Theatre minor or Filmmaking Practices major; THF101 (THP 101) or THP102 with B or better, or Film and Media Production student
THP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THP	401	Theatre Practicum	Production assignments for advanced students of technical production, stage and business management, and design.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-2		Prerequisite(s): THP 301 with C or better or Master of Arts or Master of Fine Arts student
THP	406	Advanced Scenography	Process of production collaboration among scenographers, directors, and playwrights. Taught in conjunction with THP 519.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master in Fine Arts student; THP 340 plus one of the following: THP 214, THP 313, or THP 345 with C or better
THP	411	Methods of Teaching Drama	Applies materials, techniques and theories with youth, grades pre-K-5. Emphasizes curriculum development and praxis. Regular participation with children.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THP 311 with A- or better or graduate student; Credit is allowed for only THP 411 or THP 511
THP	418	Directing III: Advanced Directing	Studio work building on skills learned in intermediate directing, culminating in the presentation of a fully rehearsed one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: THP 318 with C or better or Herberger Master of Art or Master of Fine Arts student
THP	420	Acting: Solo and Collaborative Performance	Creation and development of original performance art works combining text, movement, multimedia, visual art; the actor as writer, designer, performer.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 101 or THP 102; minimum junior standing
THP	428	Theatre and the Future	Senior projects course that includes a culminating creative synthesis of student's knowledge.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre student; THP 201 or THP 301 with C or better; THE 440 with C or better
THP	431	Advanced Costume Construction	Specialized training in costume construction problems and crafts with projects in tailoring, millinery, and period accessories.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre Design & Production or Digital Culture (Theatre) students; THP 214 and 331 with C or better or Theatre Performance Design student.
THP	435	Technical Direction	Seminar in fundamental principles and practices of technical directors as managers, engineers and artisans in theatre production.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Minimum junior standing; THP 213 and 301 (Theatrical Construction) OR THP 301 (Production) with B or better; Credit is allowed for only THP 435 or 494 (Technical Direction)
THP	440	Advanced Scene Design	Advanced studio projects in designing scenery for a variety of stage forms.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: THP 340 with C or better, or must be a Theatre Scenography or Performance Design student
THP	441	Scene Painting	Studio projects in painting stage scenery.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: THP 340 with C or better, or Theatre Scenography or Performance Design student
THP	442	Drawing	Techniques in drawing and rendering for scenic, costume, and lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Digital Culture (Theatre) or The Arts (Entertainment Design) or The Arts (Fashion Design) or Theatre major
THP	444	Drafting for the Stage	Fundamentals of and practice in graphic techniques for the stage. Introduces computer-aided design for the stage.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 213 with C or better, or Theatre Performance Design or Digital Culture (Theatre) student
THP	445	Advanced Lighting Design	Specialized techniques in stage lighting. Advanced application of design process, graphic techniques of design presentation, and use of qualities of light.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP345 C or better, or Theatre Scenography or Performance Design student AND THP444 with B or better
THP	448	AutoCAD for Live Entertainment	Comprehension and practice of two-dimensional drafting techniques in AutoCAD. Focuses on applications in live entertainment.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: THF 215 or THP 313 with C or better or Theatre Design and Production major; Credit is allowed for only THP 448 or 494 (AUTOCAD)

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THP	449	AutoCAD 3D for Live Entertainment	Comprehension and practice of 3D drafting and rendering techniques in AutoCAD. Focuses on applications in live entertainment.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: THP 448 with C or better; Credit is allowed for only THP 449 or 494 (AutoCAD 3D)
THP	450	Theatre Organization and Management	Overview of nonprofit arts: organizational design, strategic planning, financial management, and leadership.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Herberger Institute for Design and the Arts student
THP	451	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre/Co-requisite: THP 450
THP	452	Arts Entrepreneurship Seminar	Challenges students to learn how individuals have used their creative skills to create new arts business models. Case studies examine how creativity can spur new opportunities in the arts industry. Students complete their own project proposals.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: THP 352 with C or better
THP	455	Advanced Media Design	Explores advanced skills, practices and theories for media and projection design for live performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Dance, Film or Theatre major; THP 355 with C or better; Credit is allowed for only THP 455 or THP 494 (Advanced Media Design)
THP	457	Digital Portfolio	Cross-disciplinary exploration of methods, technologies and aesthetics of portfolio presentation for professional designers and artists.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): The Arts (Fashion Design) or Theatre (Design and Production) major; minimum 56 hours; Credit is allowed for only THP 457 or THP 494 (Digital Portfolio)
THP	482	Theatre for Social Change	Interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	C	Prerequisite: Minimum sophomore standing
THP	483	Acting: Viewpoints and Composition	Training in Anne Bogart's viewpoints and composition techniques; application to rehearsal and performance, and creating new work.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THP 202 with C or better (or BA Performance and Movement major), junior standing or higher or MFA major
THP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): Theatre or Film student
THP	489	Acting: Audition Techniques and Career Development	Familiarization with the business of performance: preparation and techniques for auditioning; self-promotion and marketing strategies; grant resources, interviews, and unions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THP 102 or THF 101 with B or better; THF 220 (THE 220) with B or better; minimum junior standing
THP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): Barrett Honors student
THP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Prerequisite(s): Barrett Honors student
THP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
THP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-7		Prerequisites: Theatre Design & Production student
THP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
THP	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
THP	501	Performance: Solo Performance	Students begin to define their mission in art. Emphasizes the actor as a solo storyteller, speaking as herself or himself.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-8		Prerequisites: Master of Arts or Master of Fine Arts Theatre student
THP	505	Graduate Colloquium	Orientation to graduate study of theatrical practice; cohort development, introduction to the advanced literature and media in the art form.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisites: Master of Fine Art Theatre student
THP	506	Design Collaboration	Process of production collaboration. Taught in conjunction with THP 519. May be repeated for credit.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Arts or Master of Fine Arts Theatre student;

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THP	511	Methods of Teaching Drama	Applies materials, techniques and theories with youth, grades pre-K-5. Emphasizes curriculum development and praxis. Regular participation with children.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only THP 411 or THP 511
THP	512	Puppetry Workshop	Surveys puppetry in education, puppetry as an art form in design and performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate student
THP	513	Touring Theatre	Provides an understanding of the theories and aesthetics of touring theatre and a practice in its conceptualization, creation, administration, and production. Examines a variety of styles and methods of creating "movable" theatrical material, focusing on forms that require minimal scenic and design support. Focuses on process and working toward a quality product.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Fine Arts Graduate student; Credit is allowed for only THP 513 or 598 (Touring Theatre)
THP	514	Projects in Community-Based Theatre	Theories and techniques of improvisational theatre with emphasis on youth. Stresses professional development through projects combining research, theory, and practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite: Master in Arts, Master in Fine Arts or PHD Theatre major
THP	517	Stage Management	Advanced study of the principles and practices of stage management in the professional theatre.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate student in the Herberger Institute for Design and the Arts, the School of Community Resources and Development, or the W.P. Carey School of Business
THP	518	Advanced Directing Lab	Active discovery of directing concepts through practical exercises and collaboration; deconstruction of contemporary/classic literature. Explores director as primary artist.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	519	Directing: Works in Progress	Advanced projects in directing concentrating on a collaborative process among director, playwright, actors, and designers. Focuses primarily on new scripts or adaptations of literature.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	520	Directing the New Play	Advanced methods and studies in directing, focusing on new play development.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	521	Performance I: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination; emphasizes physical diagnostics and development.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	522	Performance I: Acting and Voice	Advanced studio work in the performer's voice; emphasizes physical awareness, vocal anatomy, training, and interpretation of texts.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	523	Performance II: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	524	Performance II: Acting and Voice	Advanced studio work in the performer's voice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	525	Design I: Conceptualization and Collaboration	Conceptual structures of the design process in theatre; development of creativity, flexibility, and communication in the collaborative process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	526	Design I: Drawing and Rendering	Development of drawing and rendering skills, techniques, and evaluation in the presentation, realization, and communication of performance design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	527	Design II: Conceptualization and Collaboration	Offers students the chance to develop advanced skills in creating fully realized design ideas, particularly in working with new and experimental forms. Through the coursework, readings, and projects, students develop new methods and systems of thought for dealing with challenging dramatic works.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Master of Fine Arts Theatre major
THP	528	Design II: Visualization and Presentation	Advanced skills and techniques in rendering, visualizing and presenting design ideas and materials for performance.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	529	Viewpoints and Composition		N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		
THP	540	Scene Design Applications	Conceptual and practical application of the design process including graphic and sculptural projects. Practical design problems investigated in a lab.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Art or Master of Fine Art Theatre student
THP	545	Lighting Design Applications	Advanced studio projects in stage lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Fine Arts Theatre student
THP	550	Theatre Organization and Management	Overview of nonprofit arts: organizational design, strategic planning, financial management, and leadership.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Theatre student
THP	551	Arts Management	Advanced study of the principles and practices of arts management in the nonprofit and for-profit sectors.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate student in the Herberger Institute for Design and the Arts, the School of Community Resources and Development, or the W.P. Carey School of Business

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THP	552	Arts Entrepreneurship	Project-based course in new venture creation for the arts.	N	SEM	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate student in the Herberger Institute for Design and the Arts, the School of Community Resources and Development, or the W.P. Carey School of Business
THP	555	Media Design Applications	Advanced applications for skills and practices in media design for live performance, including content creation, systems design, and playback.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	556	Performance Technology	Examines issues surrounding the integration of live performance and digital media. Students study the work of contemporary practitioners and theorists and experiment with creating their own works of digital art.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Graduate Theatre major
THP	557	The Digital Portfolio	Crossdisciplinary exploration of methods, technologies, and aesthetics for portfolio presentation for professional designers and artists.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
THP	560	Dramatic Writer's Workshop	Practice and study of creating characters, dialogue, scenes, plays, and monologues for the stage.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre Master of Arts or Master of Fine Arts student
THP	561	Scripts in Progress	Studio work with the instructor centered on revisions of original plays.	N	IND	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre student
THP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	582	Theatre for Social Change	Advanced, interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Graduate or Doctoral student
THP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Pre-requisites: Theatre student
THP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre Master of Arts or Master of Fine Arts student
THP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Pre-requisites: Fine Arts Graduate student
THP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Prerequisite(s): Fine Arts graduate student
THP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Master of Art or Dramatic Writing Theatre student
THP	611	Research in Drama Education	Current research practices in drama education. Development and execution of research projects in ethnographic and arts-based models.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	618	Theatre for Youth Practicum	Practical experience in theatre for youth projects: improvisation, education, production.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2-3		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	649	Design Studio	Projects include design of scenery, costume, lighting, or sound for lab or mainstage productions.	N	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		Prerequisites: Master of Fine Arts Theatre student
THP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Master of Fine Arts or PhD Theatre student
THP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite: Master of Arts, Master of Fine Arts, or PhD Theatre student

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THP	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
THP	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite: Master of Arts, Master of Fine Arts, or PhD Theatre student
TMC	110	Understanding the Enterprise	Introduces essential functions required in technology-based and innovative enterprises and viewed in the context of their relationship to each other; examines the enterprise's role in society.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Credit is allowed for only TMC 110 or TEM 194 (Introduction to Technology Development)
TMC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TMC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TMC	300	Career Management	Provides professional program business administration students with information on ASU business-related courses, business careers, interviewing, job hunting, and résumé skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1		Prerequisite(s): minimum 56 hours
TMC	310	Promotion of the Enterprise	Building and maintaining customers with an emphasis on developing a market identity and sales for technology-based and innovative enterprises.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; TMC 110 OR minimum 56 hours
TMC	320	Funding the Enterprise	Focuses on financial resource management techniques utilized by U.S. domestic companies and covers the unique aspects of revenue accounting and its application to company operations. Concepts covered include: data capture of requisite information from various computer systems; determination of revenues generated from sales of products and services to customers; in-depth analysis of operational expenses; preparation of accounting and financial data; monthly accounting requirements; account reconciliation; monthly/quarterly/annual reporting; development and analysis of financial reports and billing. Emphasizes accounting, planning and valuation concerns, as well as financial trends and industry prospects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): MAT 170 or higher; TMC 110
TMC	330	Leading the Enterprise	Essential practices for managers, including planning, organizing, leading and controlling the enterprise. Studies current issues affecting managers such as sustainability, environmental protection, work groups, globalization, technology management, entrepreneurship, diversity and continuous improvement.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; TMC 110 (TEM majors only)
TMC	330	Leading the Enterprise	Essential practices for managers, including planning, organizing, leading and controlling the enterprise. Studies current issues affecting managers such as sustainability, environmental protection, work groups, globalization, technology management, entrepreneurship, diversity and continuous improvement.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; TMC 110 (TEM majors only)
TMC	331	Quality Assurance	Instrumentation and methodologies for materials testing and quality control in various manufacturing processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ABS 350, ABS 401, AGB 360, ECN 221, ECN 231, EGR 280, PSY 230, STP 226, STP 420, or STS 401
TMC	331	Quality Assurance	Instrumentation and methodologies for materials testing and quality control in various manufacturing processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ABS 350, ABS 401, AGB 360, ECN 221, ECN 231, EGR 280, PSY 230, STP 226, STP 420, or STS 401
TMC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TMC	396	Professional Orientation	Senior advising, industry presentations, and career counseling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1		Prerequisite(s): Fulton Polytechnic School undergraduate; minimum junior standing; Credit is allowed for only TMC 396 or GIT 396
TMC	410	Enterprise Operations	Emphasizes basic principles of enterprise operations management, including productivity, strategic management, global environment, forecasting, capacity planning, new technologies, location and layout strategies, supply-chain management, inventory control and scheduling. Uses common decision-making issues and related qualitative and quantitative techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 330; ABS 350, ABS 401, AGB 360, ECN 221, ECN 231, EGR 280, PSY 230, STP 226, or STP 420

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TMC	430	Enterprise Strategy and Innovation	Enterprise strategic plan development and implementation, concepts of open innovation; vision, mission, steps of strategic plan development; strategic goals, objectives, tasks, schedule, resource considerations; organization's strengths and weaknesses; environmental opportunities and threats; strategy implementation, impact assessment and refinement, organizational- and management considerations, theory and practice of open innovation.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TEM 330; Credit is allowed for only OMT 494 (Strategic Planning & Management) or TMC 430
TMC	470	Enterprise Planning and Implementation	Investigates and tests tools and techniques for effective design and management of enterprise projects and programs using computer applications. Develops and demonstrates teambuilding and leadership skills in course projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisite: TMC 330 OR W.P. Carey BA Technology major with MGT 300. Credit is allowed for only OMT 570 or TMC 470
TMC	480	Senior Project	Capstone project experience refining skills in communication, research and information retrieval, critical analysis and criticism, and demonstrating technical competence in each student's area of study.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 430 and senior standing OR BAS major
TMC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TMC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-7	L	Prerequisite(s): Fulton Polytechnic School undergraduate or graduate student; minimum 2.25 GPA
TMC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		Prerequisite(s): Fulton Polytechnic School undergraduate; minimum 3.00 GPA
TMC	555	Leadership and Teams	Evaluates and discusses the latest research in leadership and teams in terms of accomplishing set goals efficiently and effectively both within large organizations and smaller groups. Addresses management and leadership styles and concepts such as team cognition and team situational awareness. Seminar-style course with a large amount of reading, discussion, synthesis and application of current research. Field trips to local airline operations and high-operational tempo organizations accompany the readings and in-class discussions.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TMC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1		Pre Requisites: Graduate or Non Degree Students Only
TMC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TSS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	501	A Deep History of the United States/Mexico Borderlands I	Using a comparative and relational approach, the seminar explores various layers of development starting with economic structures and culture and their impact on various aspects of transborder society including politics, social organization, demography, and cultural practice. Focuses on the period from pre-contact times to the Mexican American War.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TSS	502	Foundations of Transborder Studies	Using a comparative and relational approach, explores various layers of development starting with economic structures and culture and their impact on various aspects of transborder society including politics, social organization, demography, and cultural practice. Focuses on the period from the Mexican American War to the recent past. Centers on comparative economic growth and development of Mexico and the United States, the impact of unequal development on the border region and its people, and the development of a transnational society in the U.S./Mexico borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	503	Epistemologies and Transborder Thought	Examines different approaches to the production and critique of knowledge relevant to transborder social, political, economic, cultural, and institutional structures and processes. The complexity of these structures and processes require transdisciplinary methods of inquiry that go beyond a single set of disciplinary assumptions. Explores the transdisciplinary articulation of theory and method, and considers the strengths and limitations of various approaches and critiques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	504	Tools for Transborder Research	Focuses on the selection of methods appropriate for transborder research. Considers the pitfalls of conducting monodisciplinary research in a stratified, differentiated and multicausal world; the most robust methods used in various approaches; the main methodological obstacles to transdisciplinary research; and the challenges of using mixed methodology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	505	Theories and Methods of Migration, Health & Applied Social Policy in a Transborder Context	Divided conceptually in three broad analytical areas: (1) migration with an emphasis on demography, (2) health with an emphasis on epidemiology, and (3) public policy analysis. Provides basic training in the application and interpretation of quantitative and qualitative methods and techniques commonly used in researching these areas. Applies these techniques to issues that are specific to the reality of transborder and/or transnational contexts. Students are required to apply and present an analysis in their field of interest which demonstrates their grasp of theory and method.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	506	Theory and Methods of Transborder Media and Expressive Culture	Overview of the interdisciplinary theories and methods employed to research and analyze media and creative cultural production. Objects of analysis include literature, film, live performance, theater, Web-based media, popular culture production, and visual arts. Required readings elucidate strengths, limitations, and applicability of particular theories and methods to different types of creative expression and media production as well as to their historical and political contexts. Students engage with, critique, and contribute to the theories and methods presented in the course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	507	Theory and Methods of Transborder Cultural Acquisition, Language Development, and Learning	This course familiarizes graduate students with literature on relationship between culture, language, and learning, and their theoretical and methodological underpinnings within a transborder context.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	601	Internship in Transborder Studies	Academic internship helps students become full participants in globalized, transnational contexts through a combination of practical experiences in community organizations, readings about transnational life in globalized contexts, reflection, and discussion.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	607	Colloquium in Transborder Studies	Provide students the opportunity to present their skills, learning, research, and topical interests before an open forum of faculty and students at the beginning of their third year and prior to their dissertation research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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TSS	608	Transmitting Transborder Studies to Publics and Institutions	Provides students with the most recent advancements in presenting the underlying theory, methods, and techniques in transborder analysis and application. Designed to enter multiple audiences in public, professional, academic, and school settings, course takes advantage of the latest developments in multimedia, print, and electronic technology, film, and print in order to provide systematic and detailed learning opportunities. Provides the basis of developing capacities to create and develop learning modules, and programs on issues of transborder political ecology, economic transformations, cultural development and emergence, literary constructions and projections, and issues of identity, class, and gender. Course is conducted bilingually and makes use of Spanish- and English-language resources. For this reason, it is advisable, but not required, that students are at least conversationally proficient with Spanish and English.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	609	Prospectus Design in Transborder Studies	Provides doctoral students with the necessary tools to prepare a research proposal that could be submitted as a dissertation prospectus or to a funding agency. Students bring a well-formulated idea of the kind of research they wish to pursue for their dissertation. They also bring a clear idea of the relevant concepts, literature and methods, required to complete the proposal.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	611	Comparative and Transborder Perspectives on Learning	This small class emphasizes discussion, presentations by students, and written research papers. Surveys theoretical and methodological aspects related to the use of comparative and transborder perspectives to the study of education.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	612	The Political Culture of Learning & Change in Transborder Context	Examines a variety of development and learning issues confronting linguistically and culturally diverse groups with an emphasis on immigrant children and families. Includes such topics as: (1) Theoretical foundations and their related impact on organizing interventions for learning and socialization. (2) The intersection of the development of language, culture, and learning in context of linguistic diversity and immigration. (3) The influence and impact of public policy on language minority groups of immigrant backgrounds.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	614	Bilingualism in Diverse Acquisition and Practicing Contexts	Examines bilingualism, language in society, and languages in contact in transborder contexts and bilingual schooling.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): PhD student
TSS	615	Dialectical Inquiry in Transborder Contexts	Introduces the application of dialectical inquiry in value-relevant grounded research methods as a complementary approach to value-free scientific inquiry into practical problems in transborder cultural acquisition, language development, and learning.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Transborder Studies	1		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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TSS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Transborder Studies	1		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Transborder Studies	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
TWC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
TWC	301	Fundamentals of Writing for Digital Media	Foundational concepts and technologies of writing for a variety of digital media.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 45 hours
TWC	347	Written Communication for Managers	Strategies, techniques and genres for developing and presenting information intended for business and other workplace audiences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 45 hours
TWC	361	Writing for Health Care Management	Strategies, formats, and techniques for effective writing and presentation of information for nursing professionals.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better; RN-BSN student. Credit is allowed for only TWC 361 or TWC 362
TWC	362	Writing in Health Professions	Focuses on effective communication practices in health-related fields, emphasizing communicating professionally with both scholarly and workplace audiences. In addition to providing a foundation in workplace communication, emphasizes information and technology literacy to help students become proficient in collecting, analyzing, interpreting and synthesizing information using appropriate tools, sources and styles.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Medical Studies major or Nursing and Health Innovation student; Credit is allowed for only TWC 361 or TWC 362
TWC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
TWC	401	Fundamentals of Technical Communication	Basic information design principles for producing effective technical communication, including rhetorical and audience analysis, as well as common workplace genres and technical communication tools.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 401 or TWC 501
TWC	403	Writing for Professional Publication	Analyzes the market and examines the publication process, including the roles of the author, editor, and reviewer.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 45 hours
TWC	411	Principles of Visual Communication	Principles and tools of visual communication in print and electronic media, with an emphasis on document design, including typography and color.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 411 or TWC 511
TWC	414	Visualizing Data and Information	Covers how to process data and information in ways that help discover what's important about the information and what the clearest way is to communicate that information. Covers how to manage data and use a variety of software tools to communicate patterns and tell visual stories, as well as how to make choices in visualization style in ways that will assist an audience to effectively interact with and process the information.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only TWC 414 or TWC 494 (Visualizing Information or Information Visualization) or TWC 514 or TWC 598 (Visualizing Information or Information Visualization)
TWC	421	Principles of Web Authoring	Principles of writing for the Web, including information architecture, accessibility, usability and responsive design. Explores basics of markup language and content management.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 421 or TWC 521
TWC	422	Social Media in the Workplace	Analyzes different social media platforms and develops strategies and techniques for effective and appropriate use of social media in the workplace.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only TWC 422 or TWC 494 (Social Media in the Workplace)
TWC	431	Principles of Technical Editing	Principles and techniques of technical editing for print and electronic media, including standards, styles, copyediting, comprehensive editing and project management.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 431 or TWC 531

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TWC	435	Global Issues in Technical Communication	Helps students understand issues that shape workplace communication in a global environment. Technical communicators are expected to be specialists who interact effectively with a broad range of audiences. Given the global nature of today's workplace, those audiences typically include people from many cultures and countries. Through readings, written assignments, and analysis of case studies, documents, and websites, explores ways in which culture and language shape professional interactions. Also examines other critical issues such as translation, localization, technology and distributed work teams that impact writing and designing documents in a globalized work environment.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only TWC 435 or TWC 494 (Global Issues in Technical Communication) or TWC 535
TWC	443	Grant & Proposal Writing	Develops persuasive strategies and approaches for researching and writing professional funding proposals and grant applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 443 or TWC 543
TWC	444	User Experience	Explores principles, techniques and tools of user experience (UX), including user and task analysis, user-centered design and usability testing.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 444 or TWC 544
TWC	445	Content Management and Topic-Based Authoring	Explores concepts, techniques, strategies and technologies for authoring, managing, and publishing re-usable content in online documentation, help files and other types of technical communication.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 445 or TWC 545
TWC	446	Technical and Scientific Reports	Explores strategies and techniques for developing informational and analytical reports in a range of genres and for a variety of audiences in scientific and technical fields.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 446 or TWC 546
TWC	451	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws, with emphasis on electronic environment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 45 earned hours; Credit is allowed for only TWC 451 or 551
TWC	452	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 45 earned hours; Credit is allowed for only TWC 452 or 552
TWC	453	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 45 earned hours; Credit is allowed for only TWC 453 or 553
TWC	454	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 45 earned hours; Credit is allowed for only TWC 454 or 554
TWC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
TWC	490	Capstone	Development of a professional portfolio, creation of a culminating document, and synthesis of undergraduate experience.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 45 hours
TWC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
TWC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
TWC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
TWC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
TWC	501	Fundamentals of Technical Communication	Basic information design principles for producing effective technical communication, including rhetorical and audience analysis, as well as common workplace genres and technical communication tools.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 401 or TWC 501
TWC	504	Applied Rhetoric and Technical Communication	Foundation in applied and technical communication. Covers the emergence and development of technical communication as a profession and field; rhetorical concepts and their application to technical and applied communication, ethical issues; and the impact of internationalization.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): Technical Communication MS student
TWC	505	Research in Technical and Applied Communication	Explores the research process and methods appropriate for technical and professional communication. Provides a foundation for understanding the research process; designing and planning valid research within the context of technical and professional communication; collecting and interpreting information, ethical issues related to research; and reporting results.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 24 graduate TWC hours; TWC 504
TWC	511	Principles of Visual Communication	Principles and tools of visual communication in print and electronic media, with an emphasis on document design, including typography and color.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 411 or 511
TWC	514	Visualizing Data and Information	Covers how to process data and information in ways that help discover what's important about the information and what the clearest way is to communicate that information. Covers how to manage data and use a variety of software tools to communicate patterns and tell visual stories, as well as how to make choices in visualization style in ways that will assist an audience to effectively interact with and process the information.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 414 or TWC 494 (Information Visualization or Visualizing Information) or TWC 514 or TWC 598 (Information Visualization or Visualizing Information)
TWC	521	Principles of Web Authoring	Principles of writing for the Web, including information architecture, accessibility, usability and responsive design. Explores basics of markup language and content management.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 421 or TWC 521
TWC	522	Social Media in the Workplace	Analyzes different social media platforms and develops strategies and techniques for effective and appropriate use of social media in the workplace.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only TWC 422 or TWC 522
TWC	531	Principles of Technical Editing	Principles and techniques of technical editing for print and electronic media, including standards, styles, copyediting, comprehensive editing and project management.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 431 or TWC 531
TWC	535	Global Issues in Technical Communication	Helps students understand issues that shape workplace communication in a global environment. Technical communicators are expected to be specialists who interact effectively with a broad range of audiences. Given the global nature of today's workplace, those audiences typically include people from many cultures and countries. Through readings, written assignments, and analysis of case studies, documents and Websites, explores ways in which culture and language shape professional interactions. Also examines other critical issues such as translation, localization, technology and distributed work teams that impact writing and designing documents in a globalized work environment.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only TWC 435 or TWC 535 or TWC 598 (Global Issues in Technical Communication)
TWC	543	Grant & Proposal Writing	Develops persuasive strategies and approaches for researching and writing professional funding proposals and grant applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 443 or TWC 543
TWC	544	User Experience	Explores principles, techniques and tools of user experience (UX), including user and task analysis, user-centered design and usability testing.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 444 or TWC 544
TWC	545	Content Management and Topic-Based Authoring	Explores concepts, techniques, strategies and technologies for authoring, managing and publishing re-usable content in online documentation, help files and other types of technical communication.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 445 or TWC 545

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TWC	546	Technical and Scientific Reports	Explores strategies and techniques for developing informational and analytical reports in a range of genres and for a variety of audiences in scientific and technical fields.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 446 or TWC 546
TWC	551	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws; emphasizes electronic environment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Credit is allowed for only TWC 451 or 551
TWC	552	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Credit is allowed for only TWC 452 or 552
TWC	553	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Credit is allowed for only TWC 453 or 553
TWC	554	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Credit is allowed for only TWC 454 or 554
TWC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
TWC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
TWC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TWC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
TWC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TWC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
TWC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		
TWC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
TWC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
UET	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-3		
UET	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
UET	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
UET	305	Introduction to Microelectronics	Quantifies the role of microelectronics technology and its associated skills as drivers for electronics systems development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite: Academic Level greater than or equal to Junior
UET	331	Electronic Materials	Physical, chemical, electromagnetic, and mechanical properties of electronic materials. Solid-state device characteristics and their material properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 210; CHM 113; PHY 112 OR Applied Science (Electronic Energy Systems) BAS student
UET	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
UET	411	Layer Deposition Technology	Fundamentals, applications, and vacuum technology of layer deposition processes used in IC fabrication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: UET 331; Credit for UET 411 or 511
UET	416	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: UET 331; Credit is allowed for only UET 416 or 516

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UET	418	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisites: UET 331; Credit is allowed for only UET 418 or 518
UET	432	Semiconductor Packaging and Heat Transfer	Packaging theory and techniques; hermetic and plastic assembly; thermal management; electrical characteristics and reliability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisites: UET 331. Credit is allowed for only UET 432 or 532
UET	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		
UET	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
UET	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student
UET	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisites: Fulton Schools of Engineering undergraduate student; Minimum 2.25 GPA; OR Fulton Schools of Engineering graduate student
UET	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-7	L	Prerequisites: Fulton Schools of Engineering undergraduate student; Minimum 2.25 GPA; OR Fulton Schools of Engineering graduate student
UET	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-3		
UET	516	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisites: Graduate status. Credit is allowed for only UET 416 or 516
UET	518	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status; Credit is allowed for only UET 418 or 518
UET	524	Pattern Transfer Technology	Maskmaking, lithography, and etch processes for integrated circuit fabrication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status; Credit is allowed for only UET 424 or 524
UET	532	IC Packaging	IC packaging theory and techniques; assembly techniques, material issues; thermal management; electrical performance and reliability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status; Credit is allowed for only UET 432 or 532
UET	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Grad or Non Degree Grad student; 3.0 GPA or better, OR Senior level; Fulton Polytechnic School undergraduate student; 3.0 GPA or better
UET	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Grad or Non Degree Grad student; 3.0 GPA or better, OR Senior level; Fulton Polytechnic School undergraduate student; 3.0 GPA or better
UET	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Graduate or Non Degree Students OR Fulton Schools of Engineering undergraduate senior with minimum GPA 3.0
UET	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Graduate or Non Degree Students OR Fulton Schools of Engineering undergraduate senior with minimum GPA 3.0

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
UET	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Graduate or Non Degree Students OR Fulton Schools of Engineering undergraduate senior with minimum GPA 3.0
UET	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) with a 3.0 GPA or better OR be a Fulton Polytechnic School senior with a 3.0 GPA or better
UET	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Fulton Schools of Engineering senior with minimum 3.0 GPA
UET	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Fulton Schools of Engineering senior with minimum 3.0 GPA
UET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Fulton Schools of Engineering senior with minimum 3.0 GPA
UET	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Graduate or Non Degree Students OR Fulton Schools of Engineering undergraduate senior with minimum GPA 3.0
UNI	101	Student Success Seminar	Understanding human diversity, perspectives, and values as they relate to student success. Orientation to ASU resources, study skills, and academic and social issues for students. Seminar, discussion.	N	SEM	N	OPT	University College	Dean, University College	1		
UNI	110	Critical Reading and Thinking	Prepares students to be successful in college-level academics and helps them improve their critical reading and critical thinking skills.	N	LEC	N	OPT	University College	Dean, University College	3		
UNI	120	Academic Success	Assists students in creating strategies for success in their academic lives. Students explore personal and academic strengths and barriers that impact success, identify and utilize university resources available to support success at ASU, acquire and enhance academic skills necessary for success in the university, and discover ways to stay on course to meet academic goals.	N	SEM	N	GNA	University College	Dean, University College	1		Credit is allowed for only ASU 150 or UNI 120 or UNI 194 (Academic Success: Residential, Academic Success: Off-Campus, or Academic Success Seminar)
UNI	150	Major and Career Exploration	Concepts and skills in the process of selecting a major: self-assessment, research, interviewing, and decision making. Exploration of ASU opportunities and investigation of career options.	N	SEM	N	OPT	University College	Dean, University College	1		
UNI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	University College	Dean, University College	1-4		
UNI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	University College	Dean, University College	1-4		
UNI	220	Academic Refresher	Assists students who find themselves in academic trouble (failed courses, academic probations, disqualification). Students explore the barriers that may be keeping them from reaching their academic goals and acquire tools to overcome those challenges. Topics include self management, self assessment, lifelong learning, and interdependence.	N	SEM	N	GNA	University College	Dean, University College	1		Credit is allowed for only UNI 220 or 294 (Academic Refresher)
UNI	250	Choosing a Major	Advanced, one-hour career development course helps students make a thoughtful selection of major and consider the career direction that fits best for them. Students complete advanced assessments of interests, personality, and values; investigate relevant majors and careers, including connecting with working professionals; learn effective decision-making strategies; identify barriers and resources; and make connections to new major department.	N	SEM	Y	OPT	University College	Dean, University College	1		Pre-requisites: UNI 150 Career Exploration with a C or better

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UNI	270	Career Direction for a Successful Future	Actively engages students in their educational and career-planning process by exploring factors that influence personal decision making and planning for the future. Students examine their strengths and personal narrative, identify decision making factors, research career development and a particular career, and develop teamwork skills for the workplace.	N	SEM	N	GNA	University College	Dean, University College	1		Pre-requisite: UNI 250 with C or better; Credit is allowed for only UNI 270 or 294 (Next Steps in Career & Major Exploration)
UNI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		Prerequisite(s): minimum 45 hours
UNI	400	Society and the Individual	Various social institutions, how they shape the socialization process of a group and individual and give a community meaning, values and a set of norms. Focuses on Arizona as a case study for student research inquiries.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisites: Bachelor of General Studies major; Minimum 2.00 GPA; Minimum 90 hours; Credit is allowed for only UNI 400 or COM 494 (Society and the Individual)
UNI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	University College	Dean, University College	1-12		
UNI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
URB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
URB	220	Introduction to Urban America	Investigates traditional and evolving forms of civic engagement and management. Examines leadership and organizational models to urban development and decision making.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
URB	240	Urban Policy	Examines major theories about the purposes and processes of urban policy formulation, adoption, and implementation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	C	
URB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
URB	300	Urban and Metropolitan Studies	Examines the city using a multidisciplinary approach drawing from different historical, cultural, social, philosophical, and economic issues and concepts.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Credit is allowed for only URB 100 or 300
URB	301	Urban Research	Introduces the philosophy, scope, and methods of urban affairs research. Includes an overview of quantitative and qualitative methods and research design.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
URB	302	Urban Theory	Examines the sociological, economic, and political theoretical positions underlying the development and evolution of metropolitan areas.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
URB	305	Urban Governance	Examines major shifts and trends in urban America. Concentrates on the changing approaches to governance and policies of urban areas.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: Credit for URB 105 or 305
URB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
URB	400	Senior Professional Seminar	Demonstrates completion of the urban studies program by synthesizing and applying core knowledge, skills, and abilities to significant urban issues.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
URB	405	Citizen Engagement and Community Building	Develops a conceptual, critical, and practical understanding of urban dwellers' involvement in community affairs as citizens and as builders of vital neighborhoods and vibrant cities.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: minimum 30 hours
URB	406	Public Administration & Community Development	Critically examines the concepts community and development and considers how important forces such as diversity, civic life, changes in social space, and globalization, affect our understandings about these concepts and influence our actions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: minimum 30 hours
URB	410	Building Leadership Skills	Introduces understanding and developing leadership skills, including an examination of leadership theories and models from multidisciplinary and crosscultural points of view, an assessment of the student's leadership capabilities, and practical applications to improve individual leadership capabilities.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	SB	Pre-requisites: minimum 30 hours; Credit is allowed for only URB 410 or PAF 410
URB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
URB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-6	L	Prerequisite(s): Barrett Honors student
URB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
USL	210	Service Learning: Intro to Diverse Community Issues	Correlates academic coursework with community service and provides reflection opportunities that examine community needs, the importance of civic engagement and an introduction to the effects of social injustice affecting ethnic minorities and other marginalized populations in contemporary American society. Students dedicate 70 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies) directly serving a population in need or supporting activities that contribute to the greater good of our community. Weekly seminar, course readings, discussions, and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship, and how to contribute to positive social change in our community. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L & C	
USL	216	Service Learning: For Educators	Examines the effects of social justice issues on student achievement. Correlates academic coursework with required community service to analyze community needs, the importance of civic engagement and community issues affecting ethnic minorities and marginalized populations in contemporary American society, particularly how it applies to our education system. Students dedicate a minimum of 70 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services) directly serving high-needs youth or adults. Weekly seminar, course readings, discussions and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship and social injustices, and how to utilize this knowledge in the teaching profession to better serve all students. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L & C	Pre-requisite: Mary Lou Fulton Teachers College major
USL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
USL	402	Service Learning: Education & Youth	Correlates academic coursework with community service and provides reflection opportunities that examine community needs, the importance of civic engagement, and an in-depth study of the effects of social injustice affecting ethnic minorities and other marginalized populations in contemporary American society as they apply to education in Arizona and the United States (policy, student achievement, teacher and administration effectiveness and parental involvement). Students dedicate 100 service hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies), directly serving high-needs youth. Weekly seminar, course readings, discussions and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship and the importance of civic engagement particularly how it applies to the education system. Provides real-world experiences that exercise advanced academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 45 hours
USL	402	Service Learning: Education & Youth	Correlates academic coursework with community service and provides reflection opportunities that examine community needs, the importance of civic engagement, and an in-depth study of the effects of social injustice affecting ethnic minorities and other marginalized populations in contemporary American society as they apply to education in Arizona and the United States (policy, student achievement, teacher and administration effectiveness and parental involvement). Students dedicate 100 service hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies), directly serving high-needs youth. Weekly seminar, course readings, discussions and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship and the importance of civic engagement particularly how it applies to the education system. Provides real-world experiences that exercise advanced academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
USL	410	Service Learning: Diverse Community Issues	Correlates academic coursework with community service and provides reflection opportunities that examine community needs, the importance of civic engagement and an introduction to the effects of social injustice affecting ethnic minorities and other marginalized populations in contemporary American society. Students dedicate 100 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies) directly serving a population in need or supporting activities that contribute to the greater good of our community. Weekly seminar, course readings, discussions and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship and how to contribute to positive social change in our community. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L & C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; 45 minimum hours
USL	410	Service Learning: Diverse Community Issues	Correlates academic coursework with community service and provides reflection opportunities that examine community needs, the importance of civic engagement and an introduction to the effects of social injustice affecting ethnic minorities and other marginalized populations in contemporary American society. Students dedicate 100 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies) directly serving a population in need or supporting activities that contribute to the greater good of our community. Weekly seminar, course readings, discussions and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship and how to contribute to positive social change in our community. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L & C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; 45 minimum hours
USL	410	Service Learning: Diverse Community Issues	Correlates academic coursework with community service and provides reflection opportunities that examine community needs, the importance of civic engagement and an introduction to the effects of social injustice affecting ethnic minorities and other marginalized populations in contemporary American society. Students dedicate 100 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies) directly serving a population in need or supporting activities that contribute to the greater good of our community. Weekly seminar, course readings, discussions and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship and how to contribute to positive social change in our community. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L & C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; 45 minimum hours
USL	410	Service Learning: Diverse Community Issues	Correlates academic coursework with community service and provides reflection opportunities that examine community needs, the importance of civic engagement and an introduction to the effects of social injustice affecting ethnic minorities and other marginalized populations in contemporary American society. Students dedicate 100 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies) directly serving a population in need or supporting activities that contribute to the greater good of our community. Weekly seminar, course readings, discussions and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship and how to contribute to positive social change in our community. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L & C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; 45 minimum hours
USL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
USL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
USL	496	Service Learning Capstone	Graded internship that allows students to integrate coursework with a hands-on service learning experience. Applies theory from service learning pedagogy and educational studies to real-world application and academic success. Provides field experience for students to exercise academic knowledge and skills applicable to career experience and program studies. Students must (a) successfully assess a community need in education that correlates to current research and (b) collectively plan a sustainable service project that benefits high-needs children. The student-directed service project addresses social justice issues in education related to corresponding research.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: USL 210 or 216

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
USL	497	Service Learning Capstone Project	Graded internship that allows students to integrate coursework with a hands-on service learning experience. Implements a sustainable service project addressing social justice issues in education. Student-directed project corresponds to research and planning completed during the previous semester. Provides field experiences for students to implement academic knowledge and skills acquired through the Educational Studies program and to create realistic solutions to national and local community issues that impact student achievement.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: USL 210 (216); 410 and 496
VIP	194-BMI	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
VIP	194-CSE	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
VIP	194-HON	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Prerequisite(s): Barrett Honors student
VIP	194-PSY	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
VIP	294-BMI	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
VIP	294-CSE	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
VIP	294-HON	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Prerequisite(s): Barrett Honors student
VIP	294-PSY	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
VIP	394-BMI	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
VIP	394-CSE	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
VIP	394-HON	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Prerequisite(s): Barrett Honors student
VIP	394-PSY	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
VIP	494-BMI	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
VIP	494-CSE	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
VIP	494-HON	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Prerequisite(s): Barrett Honors student
VIP	494-PSY	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
VTN	101	Elementary Vietnamese I	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	
VTN	102	Elementary Vietnamese II	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites:VTN 101 with C or better
VTN	201	Intermediate Vietnamese I	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisite: VTN 102 with C or better
VTN	202	Intermediate Vietnamese II	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisite: VTN 201 with C or better
VTN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	321	Advanced Vietnamese and Literature I	Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisite : VTN 202
VTN	322	Advanced Vietnamese and Literature II	Continuation of VTN 321. Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisite: VTN 321
VTN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
WAC	101	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ACT English score of 0-18, or SAT Verbal score of 0-510 (or SAT Verbal score of 0-460 if taken before 2016), or Accuplacer score of 0-4

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
WAC	101	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ACT English score of 0-18, or SAT Verbal score of 0-510 (or SAT Verbal score of 0-460 if taken before 2016), or Accuplacer score of 0-4
WAC	101	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ACT English score of 0-18, or SAT Verbal score of 0-510 (or SAT Verbal score of 0-460 if taken before 2016), or Accuplacer score of 0-4
WAC	107	Introduction to Academic Writing	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): TOEFL score below 560PBT/220CBT/83iBT, or IELTS score 0-6.5, or ACT English score 0-18, or SAT Verbal score 0-510 (or SAT Verbal score 0-460 if taken before 2016), or Accuplacer score 0-4
WAC	107	Introduction to Academic Writing	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): TOEFL score below 560PBT/220CBT/83iBT, or IELTS score 0-6.5, or ACT English score 0-18, or SAT Verbal score 0-510 (or SAT Verbal score 0-460 if taken before 2016), or Accuplacer score 0-4
WAC	107	Introduction to Academic Writing	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): TOEFL score below 560PBT/220CBT/83iBT, or IELTS score 0-6.5, or ACT English score 0-18, or SAT Verbal score 0-510 (or SAT Verbal score 0-460 if taken before 2016), or Accuplacer score 0-4
WAC	107	Introduction to Academic Writing	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): TOEFL score below 560PBT/220CBT/83iBT, or IELTS score 0-6.5, or ACT English score 0-18, or SAT Verbal score 0-510 (or SAT Verbal score 0-460 if taken before 2016), or Accuplacer score 0-4
WAC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
WAC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Department of English	1-4		
WPC	101	Student Success in Business	Introduces students to resources that help them to succeed in the W. P. Carey School of Business.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1		Credit is allowed for only ASU 101 (or equivalent) or WPC 101 or WPC 201 OR 194 (Business Student Development)
WPC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WPC	196	WPC Domestic Exchange Placeholder	Reserved for undergraduate participants in a W.P. Carey Domestic Exchange program. This placeholder course remains on the student's academic record until the student's record is updated by WPC following the completion of the student's domestic exchange program. This course is then dropped and replaced with the ASU course(s), credit(s), and grade(s) equivalent to the coursework completed during the domestic exchange program. Students must register for at least the number of credits equivalent to full-time study at ASU (i.e., 12 hours during the fall and spring semesters, or 1-6 hours during the summer session). NOTE: This placeholder course is not an indication of the level of coursework or the total number of credits the student may complete during the domestic exchange program. Acceptance to an WPC Domestic Exchange program is required.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1-18		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WPC	201	Business Student Development	Introductory business course for students transferring into the W. P. Carey School of Business. Focuses on ASU resources and developing professionalism.	N	LEC	N	GNA	W.P. Carey School of Business	Prebusiness Office	1		Prerequisite(s): WPC major with 15-44 earned hours. Credit is allowed for only ASU 101 (or equivalent) or WPC 101 or WPC 201 OR 194 (Business Student Development)
WPC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WPC	301	Business Forum	Provides professional program business students with information on careers, interviewing, job hunting, and resumé skills. Must be taken in the first semester of the professional program for business students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1		Pre-requisites: Must be a W.P. Carey degree program business student
WPC	302	Honors Professional Development	Provides a foundation for developing key professional knowledge and skills required for future business and personal success. Strategic thinking and design, scenario development, verbal and written persuasion, direct marketing techniques, systems thinking, relationship development, research design, and decision-making models.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1		
WPC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must have a minimum GPA of 2.00; Must have a minimum total earned hours of 56
WPC	470	Business Administration Capstone	Develops a general manager's or business owner's perspective on how organizations can create value. Creating long-run value by repeatedly producing goods and services that customers buy at prices that cover the costs of producing them is the key to success for business organizations. The starting point for thinking about how an organization might create value and gain sustainable competitive advantage is analyzing current and future environments to understand threats and opportunities in various institutional settings around the world. Evaluates the impact of institutional settings in different countries and ethical values on decision making. Students learn how to successfully manage relations with key stakeholders including customers, employees, suppliers of capital as well as other component goods and services, and stakeholders from various levels of government in different countries.	N	LEC	N	GNA	W.P. Carey School of Business	Prebusiness Office	3		Prerequisite(s) with C or better: W.P. Carey Business Admin BA major; FIN 300, 302, or 303; LES 305; MGT 300 or 303; MKT 300, 302, or 303; SCM 300 or 303; WPC 301 or 302; Intl Business course; senior standing; Credit is allowed for only WPC 470 or 480
WPC	480	W. P. Carey Capstone Course	Develops a general manager's or business owner's perspective on how organizations can create value. Creating long-run value by repeatedly producing goods and services that customers will buy at prices that cover the costs of producing them is the key to success for business organizations. Analyzing current and future environments to understand threats and opportunities in various institutional settings around the world is the starting point for thinking about how an organization might create value and gain sustainable competitive advantage. Evaluates the impact of institutional settings in different countries and ethical values on decision making. Students learn how to successfully manage relations with key stakeholders including customers, employees, suppliers of capital as well as other component goods and services, and stakeholders from various levels of government in different countries.	N	LEC	N	GNA	W.P. Carey School of Business	Prebusiness Office	3	L	Prerequisite(s) with C or better: W.P. Carey BS major; FIN 300 or 302 or 303 (or IEE 300 if Egr Mgt); LES 305; MGT 300 or 303; MKT 300 or 302 or 303; SCM 300 or 303; WPC 301 or 302 (unless SCM/SUS conc deg); Intl Bus course; senior standing
WPC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		
WPC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-6		Prerequisite(s): Barrett Honors student
WPC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Prebusiness Office	1-6	L	Prerequisite(s): Barrett Honors student
WPC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must be W. P. Carey BS or BA degree program student; junior or senior standing.
WPC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-6		Prerequisite(s): Barrett Honors student
WPC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-3		
WPC	501	Understanding Facts: Statistics for Managers	Fundamentals of statistical analysis to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	2-4		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WPC	502	Self-Discovery Through Career Coaching	Prepares students to navigate the challenging MBA world of work. Applies theories and best practices of career management and job search to help students make informed career choices, to obtain an internship between year one and year two of the program, and to obtain a full-time position upon graduation.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	0-4		Prerequisite(s): W.P. Carey MBA degree major; Credit is allowed for only WPC 502 or MGT 594 (Career Leadership)
WPC	503	Frontline to Boardroom Communication	Provides opportunity to develop and enhance all aspects of business communications including presentation skills, business writing, informal business communication and giving feedback. Students (1) use PowerPoint or other presentation tools to deliver an effective team presentation; (2) write an effective memo proposing a course of action to solve a business problem; (3) deliver effective feedback to peers to enable them to improve their communications skills; and (4) communicate effectively in a team problem solving setting.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	0-4		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only WPC 503 or MGT 594 (Leadership Communication)
WST	100	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Credit is allowed for only WST 100 or WST 300
WST	100	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Credit is allowed for only WST 100 or WST 300
WST	100	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Credit is allowed for only WST 100 or WST 300
WST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
WST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	220	Gender, Media and Culture	Introduction to gender and the media including magazines, films, advertising, new media, and other popular culture forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C	
WST	235	Disability, Justice and Advocacy	Overarching history of the disability rights movement and how it is similar to and different from other civil and rights movements. Examines how policies and activism are interconnected within this movement, in addition to looking at other human categories related to disabilities such as gender, sexuality, race and socioeconomic status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only COM 235, JUS 235, SST 235, WST 235 or SST 294 (Disability Justice and Advocacy)
WST	270	Global Perspectives on Women	Through lectures, creative class activities and discussions, presents a comprehensive overview of gender and globalization with special emphasis on lived realities of women worldwide. Understands women's lives and gendered experiences through the issues of work, identities (nationality, race, class, age, ability), bodies and embodiment, belief systems, political economy and difference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only WST 270 or 294 (Global Perspective on Women)
WST	276	U.S. Women's Movements	Historical survey of sources influential in the development of the feminist movement in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AMS 276 or WST 276
WST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
WST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
WST	300	Women and Gender in Contemporary Society	Advanced interdisciplinary examination of such topics as gender, intersectionality, media and representations, sexuality, politics, health, violence and feminism.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Pre-requisite: 30 minimum hours; credit is allowed for only WST 300 or WST 100
WST	300	Women and Gender in Contemporary Society	Advanced interdisciplinary examination of such topics as gender, intersectionality, media and representations, sexuality, politics, health, violence and feminism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisite: 30 minimum hours; credit is allowed for only WST 300 or WST 100
WST	300	Women and Gender in Contemporary Society	Advanced interdisciplinary examination of such topics as gender, intersectionality, media and representations, sexuality, politics, health, violence and feminism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Pre-requisite: 30 minimum hours; credit is allowed for only WST 300 or WST 100
WST	302	History of Black Women in America	Advanced examination of the challenges that black women have faced historically in America and how they have responded to those challenges socially, politically, economically, and culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 302 (or AFS 302) or HST 335 or WST 302

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	305	Poverty and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & G	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 305 or SSH 305 or WST 305
WST	305	Poverty and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or SB) & G	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 305 or SSH 305 or WST 305
WST	313	Women and Sexuality	Explores U.S. women's sexuality in social context, including how women's sexuality is portrayed in popular media, medicine and education; how girls learn to think about sexuality; and how public policies address women's sexuality.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	318	African and African Diaspora Women Writers	An in-depth study of themes such as race, class, gender, and ethnicity in the creative fiction of black women writers of African descent in the United States, the Caribbean, and Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit allowed only for AFR 318 (or AFH 318) or WST 318
WST	320	Gender, Drugs and Alcohol	Drug and alcohol use have multiple and diverse meanings shaped by their historical, social and cultural context. Examines how and why alcohol and drug use have been identified as social problems and the role of gender in shaping this process. Reviews multiple social and cultural aspects of gender, drug and alcohol use, as well as the emergence of gender-based health disparities within this context. Fulfills a science and society requirement. Basic scientific principles such as the formulation of research questions, data collection and analysis, have been used to develop our understanding of gender, drugs and alcohol. How society influences the nature of those questions, the perceived value attached to particular scientific studies over others, and how to critically evaluate law and policy around drugs and alcohol in light of those studies.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only WST 320 or WST 394 (Gender, Drugs and Alcohol)
WST	330	Women, Film, and Culture	Critical examination of the way films can reflect, reinforce or challenge mainstream cultural ideas about women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 30 hours
WST	330	Women, Film, and Culture	Critical examination of the way films can reflect, reinforce or challenge mainstream cultural ideas about women.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 30 hours
WST	331	Asian Pacific American Genders and Sexualities	Explores gender and sexuality issues as they relate to Asian Pacific American experiences, including interracial relationships, stereotypes, feminism, queer theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Credit is allowed for only APA 330 or WST 331
WST	333	Critical Perspectives on Sexuality	Examines critical theories of sexuality, including history, commerce, pleasure, LGBT issues, identity, medicalization of sexuality, disorders, sex crime, and pornography.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Pre-requisites: WST 100 or 300 with C or better
WST	335	Lost in Space: Gender, Race, and Sexuality in Science Fiction	Surveys the complex interrelationships of biomedical research and discourses of biological difference as reflected in science fiction. Explores such questions as: How have biological scientists explained human differences along axes of gender, race, class, sexuality? In what ways have these scientific discussions manifested themselves in science fiction?	N	LEC	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only APA 394 (Science Fiction Adventures Race/Gender) or WST 335 or WST 394 (Lost in Space: Gender, Race, & Sexuality in Sci Fi)
WST	340	Gender, Science, and Technology	In-depth examination of the complex interrelationships of gender, science, technology, and society in a number of different contexts. Looks at the participation of women in scientific and technical fields both historically and cross-culturally, and addresses such topics as: gender segregation by status and discipline, feminist theories of gender and science, the conditions under which women have succeeded in the sciences, gender and biological determinism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Pre-requisites: WST 100, 300 or minimum 30 hours
WST	341	Latin American Women Writers	In the 20th and 21st centuries, Latin America has seen a proliferation of literature published by women authors. While this explosion of the written word owes in part to changing socioeconomic factors and the opening of the international markets, Latin American women's literary history is often ignored in the canon. Examines the concepts of feminism through a Mexican framework, starting from the point of view of Mexican women theorizing about their own. This is not a history of feminism, but it does aim to highlight certain fundamental texts and key concepts of Mexico's history from the position of women writers, including feminism's critique of social structures beyond the bounds of gender relations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only LAS 340 or WST 341

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	345	Gender, Religion, and Global Violence	In-depth study of forms of gendered violence in which religion plays a key role in either the practice or perpetuation of that form of violence in a myriad of cultures and contexts. Analyzes current responses and proposes new approaches to combating or redefining these forms of violence, emphasizing the need to understand and respect the religious and cultural contexts in which these actions occur.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Pre-requisites: WST 100, 300 or minimum 30 hours
WST	360	Women as Healers	Advanced examination of the role of women as caregivers, healers, physicians, midwives, and nurses in different cultures and historical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	364	Unruly Voices: Black Women and Cultural Narratives	In-depth study of African American women writers and how they (re)define female identities and engage a critical cross-cultural dialogue within the context of cultural history in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 earned hours; Credit is allowed for only AFR 365 (or AFH364) or WST 364
WST	365	Women and International Health	Advanced study of gender-based disparities and global health, including impact of poverty, gender discrimination, political economy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	G	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	370	Chronicling Women's Lives	Explores the lives of a selected group of American women as a point of departure for the chronicling of contemporary women's lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C	Pre-requisites: WST 100 or 300 with C or better
WST	371	Sex and the City: Women, Sexuality, and Popular Culture	An in-depth study of the changing media representations of young, sexually autonomous women in the city.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	372	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better and minimum 24 earned hours or WST 100 or 300 with C or better; Credit is allowed for only JST 373, REL 373 or WST 372
WST	373	Latina/Chicana Issues	Critical examination of the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States and along the border.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 30 hours. Credit is allowed for only TCL 373 or WST 373
WST	374	Desperate Housewives	In-depth examination of the representations of women as wives and/or mothers in the popular discourse from the 20th century to current day through an analysis of various forms of popular culture such as film, magazines, popular writing and television.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Minimum 30 hours; Credit is allowed for only WST 374 or 394 (Desp Housewives: Gender, Family & Pop Culture)
WST	375	Women and Social Change	In-depth course on feminist activism and social change. Combines research and theory on a contemporary social problem with a community action experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	376	Feminist Theory	Explores feminist theories and the intersection of gender, race, ethnicity, and class through critical analyses.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H & C	Pre-requisites: WST 100 or 300 with C or better
WST	377	History of American Feminist Thought	Critical analysis of the origins and development of American feminist thought and political movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	H & C	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	378	Global Feminist Theory	In-depth studies of global feminist theories and exploration of the intersections of gender, race, ethnicity, class, and nation through critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & G	Pre-requisites: WST 100 or 300 or minimum 30 hours
WST	380	Race, Gender, and Class	In-depth examination of how social inequalities are reproduced and perpetuated. Explores the intersections of race, class and gender in culture and society.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only AMS 380 or ETH 380 or WST 380
WST	380	Race, Gender, and Class	In-depth examination of how social inequalities are reproduced and perpetuated. Explores the intersections of race, class and gender in culture and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only AMS 380 or ETH 380 or WST 380
WST	380	Race, Gender, and Class	In-depth examination of how social inequalities are reproduced and perpetuated. Explores the intersections of race, class and gender in culture and society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only AMS 380 or ETH 380 or WST 380
WST	382	American Indian Women	Investigate the economic, political and ideological factors contributing to American Indian women's intellectual and creative activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Pre-requisites: WST 100, 300, or AIS 180 with a C or better; or co-requisite if completed 30 hours or more: AIS 180, or WST 100 or 300. Credit for only AIS 381 or WST 382

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
WST	385	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: WST 100 or 300 with C or better
WST	390	Women and Religion	Role of women in religious traditions and/or religious sects, including a study of myth and symbols as they are used to establish, maintain, and enforce sex roles within specific religions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only REL 390 or WST 390
WST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	413	Queer Studies	In depth exploration of lesbian, gay, bisexual, transgender, and queer experiences in the U.S. and globally, from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 45 hours
WST	420	Women of Color in Film	An in-depth analysis of the history and representations of women of color in film and the film industry through the intersections of gender, race, sexuality, class, and nationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 418 (or AFS 420) or FMP 420 or FMS 420 or WST 420
WST	421	Girlhood and Adolescence	Critical analysis of the changing construction of girlhood and female adolescence through history, memoir, fiction, myth, music, and media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite: WST 100 or WST 300 or minimum 30 hours
WST	422	Women, Law and Social Control	Examines social, economic, and legal factors that are relevant to mechanisms of social control of women, including formal legal control and informal control through violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites:ENG 102, 105 or 108 with C or better; minimum 36 hours; Minimum 2.00 GPA; Credit is allowed for only JUS 422 or WST 422
WST	430	Gender on the Borderlands	Examines women's status in the U.S.-Mexico borderlands through key issues such as migration, labor, violence, education, and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours OR WST 100 or 300 with C or better; Credit is allowed for only ETH 430 or LAS 430 or WST 430 or JHR 598 (Gender on the Borderlands)
WST	440	Politics of Women's Health	In-depth and interdisciplinary exploration of how women's social, cultural, and economic position affect their health and health care.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisite: WST 100 or WST 300 or minimum 45 hours
WST	444	Gender, Health, and Bodies	Explores gender and health from a feminist perspective, including critical analyses of medicine, science, and popular culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	Pre-requisites: WST 100 or 300 with C or better; Credit is allowed for only MAS 598 (Gender, Health, and Bodies) or WST 444
WST	447	Gender, Culture, and Development	In-depth analysis of gender roles related to health, family, work, education and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & G	Prerequisite(s): WST 100 or 300 or minimum 45 hours; Credit is allowed for only SGS 454 or SOS 447 or TCL 447 or WST 447 or TCL 598 (Gender, Culture & Development)
WST	449	Hate Speech, Manifestos, and Radical Writings	Examines writings, speeches and texts that provoke radical or even revolutionary social change. At its core, this course asks: What is the radical and what does it do? How do radical writings function as texts, speech acts, inspirational documents, testimonies, accounts of madness, frightening moments, calls to arms, peacekeeping entities or speaking truth to power? Examines injurious speech and provocative writings that span a range of social movements and topics, including radical feminism, radical queer, Black power, indigenous rights, art and performance, anti-technology, animal rights, violence, madness and revolutionary resistance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): minimum 35 hours; minimum 2.50 GPA; Credit is allowed for only AMS 449 or ETH 449 or WST 449 or WST 394 (Hate Speech and Manifestos)
WST	457	Women, Cultures, and Societies	Examines issues such as poverty, dependency, interdependency, race, class, and gender in different societies of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G	Pre-requisites: WST 100 or 300 with C or better
WST	460	Women and the Body	In-depth analysis of the cultural construction of the gendered body and societal prescriptions about beauty, body image, and size.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisite: WST 100 or WST 300 or minimum 45 hours
WST	467	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Latina, and Asian-American.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C	Prerequisite(s): WST 100 (or WST 300) with C or better. Credit is allowed for only ENG 460 or WST 467

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WST	469	Abject Bodies and the Politics of Trash	Examines the possibilities inherent in "theorizing from the gutter"; looking at the world not from a lofty "Ivory Tower" but from the slime, the muck, the dumpster, the trash heap, the wasteland, the discarded and the downtrodden. Takes its theoretical framework from a radical 1960s manifesto called SCUM Manifesto by Valerie Solanas and from the French feminist philosophies of Julia Kristeva, who theorized the abject as a relationship with the grotesque that reveals the deep-seated fear of death. Uses these theoretical positions to examine trash, both abstractly and literally. Works through a variety of concepts ranging from actual trash, garbage, waste, toxic sludge, pollution and dirt, and tackles more abstract notions of trash such as the knowledge produced on the fringe in circuses, amusement parks, "trailer trash" zones, freak shows and the bodies of those marked as "Other" or different.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 36 hours; Credit is allowed for only AMS 469 or ETH 469 or WST 469 or WST 494 (Trash, Freaks and SCUM) or JHR 598 (Trash, Freaks and SCUM) or MAS 598 (Trash, Freaks and SCUM)
WST	470	Gender and Popular Culture	Advanced interdisciplinary examination of how gender is constructed in various popular cultural forms such as film, television, magazines, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisites: WST 100 or WST 300 or minimum 45 hours
WST	471	Women's International Human Rights	In-depth study of the core themes of a global movement for women's international human rights. Analyzes the historical evolution of the development of international human rights and women's rights within the United Nations and regional human rights systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): WST 100 or WST 300 or minimum 45 hours. Credit is allowed for only AFR 470 (or AFS 470) or AFR 494 (or AFS 494) (Women's International Human Rights) or AFR 598 (or AFS 598) (Women's International Human Rights) or WST 471
WST	472	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
WST	473	Indigenous and Latina/Chicana Representation	Examines from an interdisciplinary perspective contemporary issues experienced by Indigenous and Chicana/Latina women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 45 hours; Credit is allowed for only ETH 473 or LAS 473 or WST 473
WST	475	Women of the Diaspora across Cultures	Examines the socioeconomic condition, political formation, and identities of contemporary indigenous, ethnic minority, immigrant, and migrant women globally.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
WST	477	Women and Violence	Critical examination of forms of violence against women globally at individual, institutional, and cultural levels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisites: WST 100 or WST 300 or minimum 45 hours
WST	480	Gender Issues in Education	Examines the relationship between gender and educational access and outcomes as a result of public policy in a variety of communities and settings.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Pre-requisites: WST 100 or 300 with C or better
WST	483	Women Writers Across Cultures	Comparative approach to contemporary writings by women from around the world.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Pre-requisites: WST 100 or 300 with C or better
WST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
WST	485	Women, Gender, and Leadership	Explores the gendered nature of leadership and studies strategies that enable women to lead successfully in areas such as business, education, and public service.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Pre-requisites: WST 100 or 300 with C or better
WST	490	Transborder Queer Performativity	Explores a rich and diverse body of border-crossing performative expression created by queer and/or Latina/o artists. Course readings and discussions include solo and collaborative works with an emphasis on solo autobiographical performance scripts as well as performer interviews and performance scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 45 earned hours; Credit is allowed for only TCL 490 or WST 490
WST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
WST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
WST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
WST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
WST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		

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WST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
WST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
WST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7	L	Pre-requisites: WST 100 or 300 with C or better; ENG 101 or ENG 107 or ENG 105; Majors only
WST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: WST 100 or 300 with C or better; ENG 101 or ENG 107 or ENG 105; Majors only
WST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-3		
WST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
WST	501	Foundations of Feminist Thought	Provides key concepts and theories that have shaped the field of women and gender studies. Also provides overview of resources for research in women's studies scholarship at ASU and prepares students to participate in the field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only WST 501 or WST 691 (Foundations of Fem Thought)
WST	502	Interdisciplinary Gender Research Methods	Describes the ways in which feminist scholars conceptualize and design their research. Explores the decisions scholars make in their research including the choice of research topics, applications of feminist theories and methodologies, the choice of methods and how and why feminist scholars have increasingly incorporated interdisciplinary methods, and what is at stake in these decisions for the research design and research outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
WST	547	Gender, Activism, and the Built Environment	Explores issues of gender in the built environment. Includes traditional attitudes toward gender underlying the physical form and continuing impacts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) ; Credit is allowed for only PUP 547 or WST 547
WST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
WST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
WST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: degree-seeking graduate students only
WST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Componen t Primary	Crse Repeatable	Gradin g Basis	College	Department	Units	General Studies	Requirements
WST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
WST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		
WST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	LEC	N	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	601	Critical Concepts of Gender	Key concepts, theoretical frameworks, disciplinary and interdisciplinary approaches, and the critical debates that have shaped the field of gender studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: degree-seeking graduate students only
WST	602	Mapping the Intersections of Gender	Theoretical concepts, metaphors, and frameworks employed by feminist scholars to understand the way gender articulates with other categories of difference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Degree-seeking graduate students only
WST	603	Engendering Methodology	Focuses on the methodologies, epistemologies, and ethical dilemmas of researching gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Degree-seeking graduate students only
WST	615	Masculinities	Explores the theoretical concepts, frameworks and disciplinary and interdisciplinary approaches that have accompanied the emerging analysis of masculinity studies as a field. Interrogates the ways in which masculinities have been defined in relation to femininities and other institutionalized constructions of difference, and how these definitions have contributed to material conditions and specific socio-historical contexts in which gendered bodies are included or excluded, privileged or disadvantaged, taken for granted or contested. Considers the articulations and contestations of diverse masculinities as expressed through gender, race, sex, ethnicity, sexuality, kinship, politics, popular culture, economics, nationalism, science and medicine, and violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only WST 615 or WST 691 (Masculinities)
WST	620	Advanced Feminist Theory in a Transnational Context	Concentrates on transnational feminist theory and its intersections with queer theory, postcolonial theory, and critical race theory. Also looks at the ways in which (or indeed, whether) academic discourses have anything useful to say about the worlds in which we live. Among the questions we'll need to have constantly in our minds are: In what ways has feminist theorizing changed over time? Does transnational feminist theory challenge or even undermine previous feminist theoretical discussions or the perspectives you might be familiar with from your undergraduate days? What kinds of engagements do our authors have with theorists in other areas (queer studies, postcolonial studies, critical race theory)? Can you discern any sort of new feminist grand narrative emerging from these works? In what ways might our authors' perspectives help you conceptualize and contextualize your own work?	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only WST 620 or WST 691 (Feminist Theory) or WST 791 (Feminist Theory)
WST	640	Visual and Narrative Culture	Feminist analysis of gender representations in visual and narrative culture, including film, dramatic literature, fiction, and autobiography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Degree-seeking graduate students only
WST	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Degree-seeking graduate students only

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	701	Research Design and Proposal Development in Gender Studies	Prepares students for careers in gender studies by developing skills in research design, proposal writing, and identifying funding outlets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Degree-seeking graduate students only
WST	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Degree-seeking graduate students only
WST	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
WST	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		
WST	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		

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Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AAD	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
AAD	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AAD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
AAD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AAD	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
AAD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
AAD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Building Design MS student
AAD	552	Architectural Management II	Organizational, human performance, and market influences on architecture firms and projects. Readings, case studies, and analysis of managerial problems and solutions.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Building Design MS, Master of Architecture, Master of Urban Design or Master of Landscape Architecture student
AAD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
AAD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Herberger Institute of Design and the Arts Graduate student
AAD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
AAD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ABS	130	Introduction to Environmental Science	Introduces the interconnected nature of Earth's hydrosphere, lithosphere (soils and rocks), atmosphere, and biosphere.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	Credit is allowed for only ABS 130 or BIO 130
ABS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Liberal Arts and Sciences	College of Integrative Sciences and Arts	1-4		
ABS	207	Applied Plant Taxonomy	Introduces identification of vascular plants emphasizing seed plants. Surveys seed plant families.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 182 or BIO 282
ABS	225	Soils	Fundamental properties of soils and their relations to plant growth, nutrition of man and animals, and environmental quality. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	Prerequisite(s): CHM 101 or CHM 113
ABS	226	Soils Laboratory	Selected exercises to broaden the background and understanding of basic soil principles. Both ABS 225 and ABS 226 must be taken to secure General Studies SQ credit.	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	Pre- or corequisite(s): ABS 225

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	260	Fundamentals of Sustainable Horticulture	Principles and practices of horticulture, emphasizing development, growth, and propagation of horticultural plants and environmental factors that affect these processes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SG	
ABS	270	Sustainable Biological Systems	Ecological foundations of sustainable biological systems, anthropogenic impacts on ecosystem structure and function, and ecological risk assessment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
ABS	271	Veterinary Medicine Today	Introduces the role of the veterinarian as related to the fields of food supply and veterinary medicine.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
ABS	274	Introduction to Wildlife Management	Managing wildlife in the Southwest, including life histories of small game, fur bearers, big game, and selected nongame specials.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): BIO 182 (or BIO 187) or BIO 282
ABS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ABS	302	Ethical and Policy Issues in Biology	Policy environment and ethics in the practice of biology. Covers ethical reasoning, policy formulation, and regulatory agencies with examples from biotechnology and the environment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	2		
ABS	311	Molecular and Cellular Biology	Overview of the biology of the cell; emphasizes structure and function of biomolecules within the cell and their applications associated with recombinant DNA technology, genetic engineering, plant and agriculture biotechnology, and human pharmaceutical development.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 181 or 281 with C or better
ABS	312	Structure and Function	Surveys structural and functional attributes of plant and animals of particular importance in the applied biological sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 182 or 282 with C or better
ABS	314	Applied Plant Physiology	Understanding control of plant growth and developmental processes through innovated technologies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 182 or 282
ABS	350	Applied Statistics	Statistical methods with applications in the biological sciences and natural resource management. Uses computers and the Internet.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Prerequisite(s): one course meeting General Studies MA requirement with C or better
ABS	355	Ecology and Adaptations of Vertebrates	Evolution, classification systematics, diversity, anatomical and physiological adaptations anatomy, and physiology, specializations and conservation status of the vertebrates.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre- or corequisite(s): BIO 182 or 282
ABS	360	Southwest Home Gardening	Multimedia course for nonmajors surveying contemporary topics in Southwest home horticulture, including landscaping, flower and vegetable gardening, citriculture, interiorscaping, and others.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	2		
ABS	362	Landscape Plants	Identification, design, and use of plants in urban landscapes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): minimum 45 hours
ABS	363	Sustainable Landscape Practice	Landscape technologies and practices including landscape design theory, job costing and bidding, sprinkler and drip irrigation design, landscape installation, landscape valuation techniques, landscape ordinances, and maintenance practices of commercial and residential landscapes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): ABS 260
ABS	364	Urban Forestry	Care, maintenance, and valuation of the urban forest, including public and private landscape codes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: ABS 260
ABS	368	Plant Propagation	Theory and application of sexual and asexual propagation techniques. Considers plant materials used both for urban horticulture and ecological restoration applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
ABS	370	Ecology	Interactions between organisms and their environments; structure and dynamics of populations, communities, ecosystems, and landscapes, with emphasis on vegetation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 182 or 282
ABS	376	Wildlife Ecology	Examines ecological principles underlying wildlife population dynamics with emphasis on physiology, genetics, nutrition, and habitat factors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre/Co-requisites: ABS 274; ABS 370
ABS	377	International Wildlife Conservation	Studies wildlife around the world including biogeography, biodiversity, conservation topics and the complexity of conserving wildlife in both developed and developing nations.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 182 or 282; Credit is allowed for only ABS 377 or ABS 494 (International Wildlife Conservation)
ABS	378	Animal Nutrition	Principles of nutrient metabolism in animal species; emphasizes understanding the interaction of animals with their environment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: BIO 181 or BIO 182; CHM 101 or CHM 113
ABS	380	Restoration and Wildlife Plants	Important wildland plants, including invasive and endangered species, wildlife food species, and species used for ecosystem restoration.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: ABS 207
ABS	381	Natural Resources Policy	Policies and regulations affecting management of natural resources, with emphases on wildlife and ecological restoration.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 45 hours
ABS	384	Natural Resources Measurements	Inventory, sampling and monitoring techniques of natural resources. Data evaluation and interpretation as related to management, restoration and conservation needs of natural resources.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): Minimum 45 hours
ABS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ABS	401	Intermediate Statistics	Analysis of variance, multiple comparisons, multiple regression.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
ABS	425	Soil Classification and Management	Principles of soil genesis, morphology, and classification. Presents management and conservation practices.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ABS 225
ABS	430	Watershed Management	Hydrologic, physical, biological, and ecological principles applied to watershed management. Impact of ecosystem manipulations on water yield and quality.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	434	Soil Ecology	Soils viewed in an ecosystem context, soil-plant relationships, nutrient budgets, and abiotic factors that influence soil processes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: ABS 370 or BIO 320; Credit is allowed for only ABS 434 or BIO 418
ABS	435	Applied Systems Ecology	Simulation modeling as a tool to study ecological processes and human impact on ecosystems and organisms.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: ABS 370, ABS 350 (or STP 420)
ABS	440	Ecological Restoration Techniques	Techniques for ecological restoration, riparian and wetland restoration, and monitoring restoration success.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ABS 370
ABS	441	Ecological Restoration Practicum	Field experience in the evaluation and monitoring of implemented ecological restoration projects.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre/Co-requisite: ABS 440
ABS	460	Organic Gardening	Applies principles and practices of organic gardening in the low desert, including environmental impacts of modern food production.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	2		
ABS	462	Greenhouse/Nursery Management	Greenhouse structures, environment, and nursery operations. Includes irrigation, nutrition, and other principles relative to production of nursery crops.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Pre-requisite: ABS 260
ABS	463	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: ABS 260
ABS	464	Desert Horticulture	Students learn about and practice the principles of sustainable horticulture in an arid climate. Includes capstone projects on sustainability issues related to horticultural practice in arid environments.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ABS 260; Credit is allowed for only ABS 464 or ABS 494 (Sustainable Desert Horticulture) or ABS 498 (Desert Horticulture)
ABS	470	Life History of Mammals	Evolution, classification, environmental, anatomical and physiological adaptations, ecology, and conservation of mammals worldwide. Emphasis on the identification, habitat relationships, conservation, and management techniques of Arizona and select North American mammals.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ABS 355 or BIO 370
ABS	472	Applied Herpetology	Systematics, evolution, ecology and life history of amphibians and reptiles emphasizing wildlife management methodologies.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: ABS 355 or BIO 370; Credit is allowed for only ABS 472 or 498 (Applied Herpetology)
ABS	473	Applied Ornithology	Evolution, ecology, classification and life history of birds, emphasizing wildlife management methodologies.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ABS 355 or BIO 370; Credit is allowed for only ABS 473 or ABS 494 (Applied Ornithology)
ABS	474	Riparian Ecosystem Management	Management principles of riparian ecosystems based on fluvial geomorphological and ecological concepts. Discusses human impacts to riparian ecosystems.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): Minimum 45 hours
ABS	475	Habitat Management for Small Wildlife	Habitat management considerations and practices for small game and nongame wildlife species in North America.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ABS 370 or BIO 320
ABS	476	Big Game Habitat Management	Habitat management considerations and practices for big game wildlife species in North America.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ABS 370 or BIO 320
ABS	479	Ecosystem Management and Planning	Principles of ecosystem management, with emphasis on economic and policy constraints on the planning process. Risk assessment and management.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisite: Senior standing
ABS	481	Riparian and Wetland Restoration	Principles and problems in the restoration of degraded riparian and wetland ecosystems. Construction of wetlands.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ABS 370
ABS	482	Ecology and Planning for Restoration	Ecological principles and resource planning processes applied to the restoration of degraded landscapes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ABS 225
ABS	483	Restoration Planning Practicum	Field experience in ecological restoration techniques, selection of mitigation techniques, and implementation planning.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	2		Pre- or corequisite(s): ABS 482
ABS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
ABS	485	GIS in Natural Resources	Principles of Geographic Information Systems (GIS) utilized in natural resource management. Use of computers for spatial analysis of natural resources.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 45 hours
ABS	486	Introduction to Remote Sensing	Remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery. Not for graduate credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): minimum 45 hours
ABS	489	Undergraduate Research	Undergraduate research under the supervision of an applied biological sciences faculty member.	N	RSC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		Pre-requisite: Junior or Senior standing
ABS	490	Applied Biological Sciences Seminar	Current literature and significant developments related to applications of the biological sciences. May be repeated for credit.	N	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre-requisite: Senior standing
ABS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
ABS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
ABS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ABS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7		Prerequisite(s): minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
ABS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
ABS	541	Advanced Rangeland Ecosystem Management	Combines the principles of ecology, planning and restoration in the application of rangeland ecosystem management. Studies fundamental topics such as range plant physiology, range plant ecology, rangeland stocking-rates and grazing systems in considering management practices for rangeland ecosystems.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Pre-requisite: Degree-or non-degree seeking graduate; Credit is allowed for only ERM 541 or ABS 598 (Adv Rangeland Ecosystem Management)
ABS	542	Management of Fire Adapted Ecosystems	Fire adapted ecosystems which evolved with high-frequency and low-intensity fires now support a range of regimes from no fire to uncharacteristically large and intense fires, causing a concern about the current and future role of wildland fire as well as forest and rangeland health. Explores management considerations and techniques for reintroducing fire to these ecosystems.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ABS 598 (Fire Ecology), or ERM 542
ABS	550	Vegetation Dynamics	Dynamics of vegetation linking physiological, population, and community ecology. Collection and analysis of vegetation data.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	551	Advanced Environmental Analysis	Advanced statistical procedures and experimental design for the biological sciences. Techniques for analyzing data that do not meet statistical assumptions.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	553	Riparian Ecology	Review of recent literature, developments, and methods related to riparian ecology. Applies soil and landscape ecology to riparian systems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	555	Wildlife Dynamics	Explores major concepts in population and community ecology with an emphasis on their application to the study and management of wildlife species. Explores the theory and sometimes controversial nature of these concepts in the form of lectures and discussions. Instructor and student workshops and oral presentations of student research.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ABS 555 (or ERM 550) or ABS 598 (Wildlife Dynamics) or ETM 598 (Wildlife Population Ecology)
ABS	560	Ecological Modeling	Mathematical modeling of animal populations, food-web structural and ecological processes in space and time. May use modeling tools on computer clusters.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate (Degree and non-degree) students; Credit is allowed for only ABS, BIO 560 or MAT 561
ABS	570	Advanced Animal Nutrition	Metabolic and physiological interactions of nutrients in wild and domesticated animals consuming natural feeds.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	586	Remote Sensing in Environmental Resources	Principles and application of remote sensing technologies in natural resource management using computerized data from aerial photography and satellite imagery.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ABS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ABS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	101	Accountancy LEAP Program	The Leadership, Ethics, Accountability & Professionalism (LEAP) program aims to ensure a successful transition from high school to college and, ultimately, one's career. Based on the hallmarks of the accounting profession, provides the tools, resources, and expectations to succeed at ASU, W.P. Carey School of Business and the School of Accountancy.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1		
ACC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-3		
ACC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	231	Uses of Accounting Information I	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): CIS 105 or 236 with C or better OR CSE 205 if Engineering Management major OR EDT 180 if Technological Entrepreneurship Management major; minimum 25 hours
ACC	232	Financial Accounting I	Develops an understanding of the theory, concepts, principles and practices underlying preparation, interpretation, and use of external financial reports. Emphasizes interpreting the economic substance of events and transactions and their association with contemporaneous and prospective events, relationships, and outcomes. Gains understanding of the accounting information model and develops an ability to analyze and record business transactions and analyze basic financial statements. Meant for prospective accounting and finance majors (and students who plan current majors in these areas) and develops skills and abilities facilitating success in higher-level accounting courses.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): Accountancy or Finance majors; CIS 105, 220 or 236 with C or better
ACC	241	Uses of Accounting Information II	Introduces the uses of accounting information focusing on the evolution of the business cycle and how accounting information is used for internal and external purposes.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): ACC 231, 261, or 303 with C or better
ACC	242	Managerial Accounting I	Develops an understanding of the theory, concepts, principles, and practices underlying managerial accounting. Emphasizes three functions managers must perform within their organizations: plan operations, control activities, and make decisions. Explains what accounting information is necessary, how to collect it, and how to interpret it. Meant for prospective accounting and finance majors and students who plan current majors in these areas and develop skills and abilities facilitating success in higher-level accounting courses.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: Open to W. P. Carey Accountancy and Finance majors, and others with School of Accountancy approval; ACC 231, ACC 232, ACC 261 or ACC 303 with C or better
ACC	261	Honors Fundamentals of Financial Accounting	Covers basic financial accounting concepts and applications. Develops an understanding of the environment in which financial reporting choices are made.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey School of Business Honors student; CIS 105 or CIS 220 or CIS 236 with C or better
ACC	271	Honors Fundamentals of Managerial Accounting	Covers basic managerial accounting concepts and applications.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey School of Business Honors student; ACC 231, ACC 232, ACC 261 or ACC 303 with C or better
ACC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	340	External Reporting I	Financial accounting theory and practice related to external reporting.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s) with C or better: ACC 241, 242 or 271; ECN 221 or 231; MAT 211, 266 or 271; W.P. Carey Accountancy BS or Finance BS student; Pre- or corequisite(s): FIN 300, 302 or 303
ACC	350	Internal Reporting	Internal reporting systems for planning, control, and decision making.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 241, ACC 242 or ACC 271, AND ECN 221 or ECN 231 with C or better

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ACC	360	Ethics for Professional Accountants	Addresses ethical obligations and responsibilities of professional accountants.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s) with C or better: ACC 241, 242 or 271; ECN 221 or 231; MAT 211, 266 or 271; W. P. Carey BS Accountancy major
ACC	382	Accounting and Financial Analysis	Introduces nonbusiness majors to financial accounting concepts related to operating, financing, investing, and ethical decisions.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: Non-Business student; must not have previously earned credit in ACC 230, 231, 232, 240, 241, 242, 261, 271 or BUA 381; min ASU cum GPA of 2.00 and min 56 total earned hours OR non-deg student with min ASU cum GPA of 2.00, OR grad student
ACC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		
ACC	430	Taxes and Business Decisions	Federal income taxation of sole proprietors, partnerships, corporations, fiduciaries, and individuals with an emphasis on tax consequences of business and investment decisions.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): W. P. Carey Accountancy BS student; ACC 340 with C or better; LES 305 with C or better
ACC	440	External Reporting II	Continuation of ACC 340 with emphasis on the recognition, research, and resolution of financial reporting issues.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey Accountancy BS or Finance BS student; ACC 340 with C or better
ACC	444	Enterprise Process Analysis and Design	Addresses the major business processes of an enterprise, the impact of recent technological innovations and requisite internal controls. Advances an understanding of the current regulatory environment as it pertains to process controls.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey Accountancy BS or Computer Info Systems BS student; ACC 241(or 242 or 271) with C or better; ECN 221 with C or better; FOR CIS MAJORS: CIS 235 or 236 with C or better
ACC	445	Honors Enterprise Process Analysis and Design	Analysis and design of efficient and effective business processes. Emphasizes taking advantage of new information technologies to improve managerial decision making.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey School of Business Honors student AND Accountancy BS or Computer Info Systems BS student; ACC 241, 242 or 271 with C or better; ECN 221 or 231 with C or better
ACC	450	Principles of Auditing	Standards and procedures in auditing. Planning, evidence gathering and accumulation, and reporting. Ethical and legal considerations.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Pre-requisites: W. P. Carey Accountancy BS student; ACC 440 with C or better
ACC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisites: W. P. Carey BS Accountancy major; 3.50 cumulative GPA; Minimum 72 hours; ACC 340, 350, 430, 440 and 450 with C or better
ACC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-6		Prerequisite(s): Barrett Honors student
ACC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	W.P. Carey School of Business	School of Accountancy	1-6	L	Prerequisite(s): Barrett Honors student
ACC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Accountancy BS student
ACC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-6		Prerequisite(s): Barrett Honors student
ACC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-7		Prerequisite(s): Accountancy BS, Finance BS, or Economics BS major
ACC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-3		Pre-requisite: Accountancy BS student
ACC	502	Financial Performance Reporting and Analysis	Contemporary financial accounting and reporting systems; emphasizes the interpretation and evaluation of a company's external financial reports.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	1-4		Prerequisite(s): MBA degree program student

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ACC	503	Internal Measures of Success: Managerial Accounting	Managerial accounting concepts and procedures for internal reporting applied to the decision making activities of the professional managers.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	1-4		Prerequisite(s): MBA degree program student
ACC	511	Taxes and Business Strategy	Economic implications of selected management decisions involving application of federal income tax laws. Recognition of tax hazards and tax savings.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	512	Advanced Auditing	Builds on the skills obtained in the beginning auditing (assurance) course and focuses on audit planning, risk assessment, evidence, and reporting procedures and fraud.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: Master of Accounting student
ACC	513	Advanced Financial Accounting	Focuses on advanced financial accounting topics along with their application in the financial reporting process.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: Specific Business Graduate majors
ACC	560	Ethics for Professional Accountants	Reviews ethics in business, fiduciary responsibility, ethical issues, codes of conduct in the field of accounting. Individualized instruction.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): Master of Accountancy or Master of Taxation student; Credit is allowed for only ACC 560 or ACC 591 (Ethics for Professional Accountants II)
ACC	571	Taxation of Corporations and Shareholders	Tax aspects of the formation, operation, reorganization, and liquidation of corporations and the impact on shareholders.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	573	Taxation of Pass-Through Entities	Tax aspects of the definition, formation, operation, liquidation, and termination of a partnership. Emphasizes tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	575	Family Tax Planning and Wealth Transfer Taxation	Tax treatment of wealth transfers at death and during lifetime, with emphasis on tax planning.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	577	Tax Research, Professional Responsibilities & Property Transactions	Federal tax issues and consequences, tax authority, property transactions and tax consequences of acquiring, holding and disposing of property.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): Master of Taxation major. Credit is allowed for only ACC 577 or ACC 591 (Tax Research, Professional Responsibilities & Property Transactions)
ACC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	582	Information Security of Interorganizational Systems	Function and responsibility of the information security officer. Advanced topics in security methods and technology.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	585	Performance Measurement and Advanced Managerial Accounting	Applies quantitative techniques to accounting problems.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: Business Graduate student
ACC	586	Shareholder Value Creation and Financial Statement Analysis	Develops skills necessary to exploit financial reporting information in a business environment and appreciation of reporting issues faced by management.	N	LEC	N	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	587	Multi-Jurisdictional Taxation I	Multistate taxation and interplay between multistate tax issues and federal and state constitutional limitations.	N	LEC	N	GNA	W.P. Carey School of Business	School of Accountancy	3		Prerequisite(s): Master of Taxation major
ACC	588	Professional Accounting Research	Applies the technical knowledge of accounting theory and principles developed in other academic courses through the use of "real life" case studies, where such knowledge and professional judgment is applied in resolving advanced accounting problems and issues.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: W. P. Carey Master of Accountancy student
ACC	589	Multijurisdictional Tax II	Addresses the U.S. taxation of U.S. individuals and businesses that do business outside the U.S. as well as the U.S. taxation of foreign persons and tax treaties, allocation of income, foreign tax credits, and transfer pricing. Emphasizes planning related to some of the tax issues that commonly arise in cross-border businesses.	N	RSC	N	OPT	W.P. Carey School of Business	School of Accountancy	3		Pre-requisite: W. P. Carey Master of Taxation student
ACC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Specific Business Graduate majors
ACC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ACC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-4		Pre-requisite: Specific Business Graduate majors
ACC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	School of Accountancy	1-12		Pre-requisite: Business Administration (Accountancy) PHD student
ACC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	School of Accountancy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	School of Accountancy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ACC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	School of Accountancy	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ACO	100	All About Data: Design, Query, and Visualization	Data modeling and design, spreadsheets, relational databases and querying, visualization and XML.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	
ACO	101	Introduction to Computer Science	Concepts of problem solving, structured and object-oriented programming in Java, fundamental algorithms, computer system concepts. Social and ethical responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s): MAT 117 with C or better OR Mathematics Placement Test with a score of 50% or higher
ACO	102	Object-Oriented Programming	Object-oriented programming using introductory algorithms and data structures. Overview of concepts in computer science.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisite: ACO 101 with C or better. Credit is allowed for only ACO 102 or CSE 205 or CST 200
ACO	201	Data Structures and Algorithms	Static and dynamic data structures, recursive and iterative sorting and searching, object-oriented design and programming, software design models and implementation/testing strategies, professional responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisites: ACO 102 and MAT 210 with C or better
ACO	220	Introduction to Database Systems	Introduces database management systems concepts. Entity-relationship and relational data models. Database design. Relational algebra, calculus, and SQL query languages. Query optimization.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s) with C or better: ACO 210; MAT 243. Credit is allowed for only ACO 220 or ACO 320 or CSE 412 or CST 433

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ACO	240	Introduction to Programming Languages	Introduces the procedural (C/C++/Python), applicative (LISP/Scheme) and declarative (Prolog) languages.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: CSE 205 or Applied Computing major with ACO 102 or Geographic Information Science major with GIS 321; Credit is allowed for only ACO 240 or CSE 240
ACO	320	Database Systems	Entity-relationship and relational data models. Database design theory. Relational algebra, calculus and SQL query languages. Query optimization. XML fundamentals. Transactions, recovery and concurrency control.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 201; Credit is allowed for only ACO 220 or ACO 320 or CSE 412 or CST 433
ACO	321	Database Development & Applications	Stored procedures and triggers. Security and authorization. Call-level interface. Database Web applications. Advanced topics.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 320 with C or better; Credit is allowed for only ACO 321 or CSE 414 or IFT 458
ACO	330	Computer Networks	Network architecture and protocols, principles of network applications, socket programming, flow and congestion control, switching and routing, link-layer technologies, traffic capture and analysis, security.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 201; Credit is allowed for only ACO 330 or CSE 434
ACO	331	Network Design	Fundamental network design principles, internetworking design, network architectures, network management, traffic analysis, security management, case study and hands-on experiments.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: ACO 330 with C or better
ACO	350	Systems Programming	Introduces operating systems as resource managers, processes, threads, memory allocation, file systems, protection, system calls, application program interfaces.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s): ACO 201 with C or better
ACO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
ACO	399	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	N	RSC	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		Prerequisite(s): ACO 102; minimum 30 hours
ACO	420	Large-scale Data Management	Modern technologies to manage, process and analyze big data. Data processing of large data sets with Map/Reduce. NoSQL data stores. NewSQL databases. Data visualization. Applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: ACO 320 with C or better
ACO	421	Data Mining and Warehousing	Introduces data mining from a database perspective, including classification, clustering, and association rules. Data warehousing methodologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: ACO 320 with C or better
ACO	422	XML and Databases	XML data model, schema specification and validation, querying, storage, indexing, and current research topics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: ACO 320 with C or better
ACO	430	Wireless Networks	Wireless transmission fundamentals, wireless LAN, cellular networks and systems, Bluetooth, mobile application development, sensor networks, performance analysis and recent advances.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 330
ACO	431	Network Security	Digital threats and attacks, cryptography, confidentiality, authentication protocols, message integrity, security in network applications, intrusion detection, malicious software countermeasures, firewalls.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 330
ACO	432	Distributed Systems	Distributed system models, distributed programming technique, clock synchronization, distributed snapshot, distributed mutual exclusion, concurrency control, fault tolerance, security, recent advances.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ACO 330
ACO	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
ACO	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
ACO	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
ACO	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
ACO	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7	L	
ACO	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
ACT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
ACT	201	Introduction to Elements and Techniques of Actuarial Science	Introduces important aspects of actuarial work. Exposes the development of actuarial techniques in the context of life insurance, casualty and property insurance, superannuation and investment. Develops problem-solving skills and gives basic tools for risk management and financial modeling, including the use of Excel spreadsheets for both, calculations and simulations. Shows how studies in related disciplines (such as accounting, demography, economics, statistics, computing and mathematics) are essential to the education of an actuary. Guest speakers from the industry share their knowledge and insight on how to become a successful actuary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): CIS 105 with B or better; MAT 270 with B or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ACT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
ACT	310	Mathematics of Finance	Prepares potential actuaries to master national exams. Provides an understanding of the fundamental concepts of financial mathematics and how those concepts are applied in calculating present and accumulated values for various streams of cash flows as a basis for future use in: reserving, valuation, pricing, asset/liability management, investment income, capital budgeting and valuing contingent cash flows. Topics include: mathematics of compound interest including annuities certain, amortization schedules, yields curves, sinking funds and bonds. Gives an introduction to financial instruments including derivatives and the concept of no-arbitrage as it relates to financial mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4		Prerequisite(s): ACT 201 with B or better; MAT 270 with B or better; Credit is allowed for only ACT 310 or MAT 340
ACT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
ACT	415	Probability for Risk Management	Prepares potential actuaries to master national exams. Develops knowledge of the fundamental probability tools for quantitatively assessing risk. Topics include: introduction to probability concepts including definition of probability, independence, conditional probability, random variables, specific discrete and continuous probability distributions, multivariate random variables, moments and moment generating functions, functions of random variables, sampling distributions and central limit theorem. Emphasizes the application of these tools to problems encountered in actuarial science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 201 with B or better; MAT 272 with B or better; Credit is allowed for only ACT 415 or STP 326
ACT	430	Mathematics of Financial Derivatives	Prepares potential actuaries to master the national exams. Develops knowledge of the theoretical basis of certain actuarial models and the application of those models to insurance and other financial risks. Topics include: option pricing, Black-Scholes formula, delta hedging, exotic options, Brownian motion, interest rate models and simulations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 310 with B or better; ACT 415 with B or better
ACT	435	Actuarial Business Forecasting	Business forecasting using statistical techniques such as: simple linear regression, multiple linear regression, hypothesis testing and confidence intervals in linear regression models, testing of models, data analysis and appropriateness of models, linear time series models, moving average, regression based and/or ARIMA models, estimation, data analysis and forecasting with time series models, forecast errors and confidence intervals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 342 or 343 with B or better; STP 420 with B or better
ACT	440	Life Contingencies I	Prepares potential actuaries to master the national exams. Develops knowledge of the theoretical basis of life-contingent actuarial models and the application of those models to insurance and other financial risks. Topics include: life tables, present value determination for life insurances and annuities, benefit premiums and reserves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 310 with B or better; ACT 415 with B or better; MAT 343 with B or better
ACT	441	Life Contingencies II	Prepares potential actuaries to master the national exams. Develop the student's knowledge of the theoretical basis of life-contingent actuarial models and the application of those models to insurance and other financial risks. Topics include: multiple life functions, multiple decrement models and benefit reserves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 440 with C or better
ACT	450	Actuarial Models and Modeling I	Prepares potential actuaries to master the national exams. Helps student understand the steps involved in the modeling process and how to carry out these steps in solving business problems. Students analyze data from an application in a business context, determine a suitable model including parameter values and provide measures of confidence for decision making based upon the model. Topics include: survival, severity, frequency and aggregate models and their modifications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 415 with B or better; STP 427 with B or better
ACT	451	Actuarial Models and Modeling II	Prepares potential actuaries to master the national exams. Helps students understand the steps involved in the modeling process and how to carry out these steps in solving business problems. Students analyze data from an application in a business context, determine a suitable model including parameter values and provide measures of confidence for decision making based upon the model. Topics include: construction and selection of parametric models, Bayesian estimation, credibility and simulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): ACT 450 with C or better
ACT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
ACT	491	Actuarial Exam Preparation Seminar	Provides potential actuaries with review and practice for an actuarial examination.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s) with B or better: ACT 310 (or ACT 415 or 430 or both ACT 440 and 441 or both ACT 450 and 451)
ACT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
ACT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ACT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
ADE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
ADE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ADE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ADE	321	Architectural Studio I	Introductory building design problems. Emphasizes design process, communication methods, aesthetics, construction, and technology.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Architecture student; ALA 226 with C or better
ADE	322	Architectural Studio II	Site and building design problems. Emphasizes programmatic and environmental determinants and building in natural and urban contexts.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Architectural Studies student; ADE 321 with C or better
ADE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ADE	421	Architectural Studio III	Topical design problems of intermediate complexity, including interdisciplinary problems.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: ADE 322 with C or better; Co-requisites: APH 421, ATE 451
ADE	422	Architectural Studio IV	Topical design problems of advanced complexity, including interdisciplinary problems.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Architectural Studies student; ADE 421 with C or better
ADE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
ADE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
ADE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
ADE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ADE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
ADE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
ADE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Master of Architecture, Master of Landscape Architecture, or Master of Urban Design
ADE	510	Foundation Architectural Studio	Fundamentals of architectural design, methodology, visualization, and representation.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	6		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	511	Core Architectural Studio I	Applies design fundamentals in architectural problems, including construction, technology, programmatic and environmental determinants.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	6		Pre-requisites: Master of Architecture student; ADE 510 with C or better
ADE	512	Core Architectural Studio II	Applies architectural design fundamentals to increasingly complex problems, including specific sites and activities.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	6		Pre-requisites: Master of Architecture student; ADE 511 with C or better
ADE	521	Advanced Architectural Studio I	Design problems emphasizing theory, aesthetics, and tectonics as influences on architectural form.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Architecture student; Co-requisite: ATE 553 and ATE 563
ADE	522	Advanced Architectural Studio II	Design problems emphasizing the comprehensive integration of building systems and technologies as influences on architectural form.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Architecture student; ADE 521 with a C or better; Co-requisites: APH 505 and ATE 556
ADE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student

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ADE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	PRA	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Herberger Institute of Design and the Arts Graduate student
ADE	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
ADE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	621	Advanced Architectural Studio III	Design problems emphasizing the urban context, planning issues, and urban design theory as influences on architectural form.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Architecture student; ADE 522 with a C or better; Co-requisite: APH 515 OR Bldg Des(Energy Perform/Bldgs) MS student
ADE	622	Advanced Architectural Studio IV	Individual, student-initiated project reflecting a culminating synthesis of architectural ideas.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): ADE 621 with C or better; Master of Architecture student; Corequisite(s): APH 515 or Built Environment (Energy Perf/Climate Responsive Arch) MS student
ADE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ADE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		
AEE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
AEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
AEE	313	Aircraft Dynamics and Control	Aircraft static stability; equations of motion; dynamic modes and stability; stability derivatives; response to controls; introduces automatic control of aircraft.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 (or MAE 360) with C or better; MAE 301 and 318 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEE	325	Aerospace Structures and Materials	Applies structural analysis to aircraft and spacecraft structures. Loads on aerospace structures, buckling and stability, stiffened panels, primary wing and launch-vehicle structure, vibration of large structures, properties and selection of aerospace structural materials.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisites with C or better: Aerospace Engr major: MAE 213 & 384; MAT 267 or 272, OR Mat Sci & Engr major: MSE 211 & 415 (or 315); MAT 267 or 272; Credit is allowed for only AEE 325 (or MAE 325), MEE 322, or MAE 394 (Structural Materials in Aerospace)
AEE	344	Fundamentals of Aircraft Design	Aircraft performance, RFP's, Federal Aviation Regulations, aircraft sizing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 (or MAE 360) with C or better; MAE 214 and 384 with C or better; Pre- or corequisite(s): AEE 325 (or MAE 325) or MAE 394 (Aerospace Structures and Materials) with C or better if completed
AEE	360	Aerodynamics	Airfoils and wings, ideal flow, boundary layers, finite-difference solutions, wind-tunnel testing. Both AEE 360 and AEE 362 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4	L	Prerequisite(s): Fulton Engineering undergraduate student; ENG 102, 105, or 108 with C or better; MAE 240 and 384 with C or better; MAT 267 or 272 with C or better
AEE	362	High-Speed Aerodynamics	Compressible flow at subsonic and supersonic speeds; ducts, nozzles, and diffusers; normal and oblique shocks, transonic flow, numerical solutions; experimental applications. Both AEE 362 and AEE 360 must be taken to secure L General Studies credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4	L	Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 (or MAE 360) with C or better; MAE 384 with C or better
AEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
AEE	415	Vibration Analysis	Free and forced response of single and multiple degree of freedom systems, continuous systems; applications in mechanical and aerospace systems numerical methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 213 and 318 and 384 with C or better; Credit is allowed for only AEE 415 or MAE 598 (Vibration Analysis)
AEE	426	Design of Aerospace Structures	Flight vehicle loads, design of semimonocoque structures, local buckling and crippling, fatigue, aerospace materials, composites, joints, and finite element applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Aerospace Engineering BSE major; AEE 325 (or MAE 325) or MAE 394 (Aerospace Structures and Materials) with C or better; Credit is allowed for only AEE 426 or MAE 598 (Design of Aerospace Structures)
AEE	445	Fundamentals of Spacecraft Design	Spacecraft subsystems. Systems engineering, space mission design, space environment. Cost analysis. Risk and reliability analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Aerospace Engineering (Astronautics) BSE major; AEE 325 with C or better; AEE 462 with C or better; MAE 214 with C or better; MAE 318 with C or better; Credit is allowed for only AEE 445 or MAE 494 (Fundamentals of Spacecraft Design)
AEE	462	Space Vehicle Dynamics and Control	Attitude dynamics and control, orbital mechanics, orbital transfer/rendezvous, spacecraft control systems design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 301 and 318 with C or better
AEE	463	Aircraft Propulsion	Fundamentals of gas-turbine engines. Analysis and design of components. Alternative aircraft propulsion systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 362 with C or better; MAE 384 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AEE	465	Rocket Propulsion	Rocket flight performance; nozzle design; combustion of liquid and solid propellants; component design; advanced propulsion systems; interplanetary missions; testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): undergraduate Aerospace or Mechanical Engineering major; AEE 362 with C or better; AEE 462 with C or better
AEE	466	Rotary Wing Aerodynamics and Performance	Introduces helicopter and propeller analysis techniques. Momentum and blade-element, helicopter trim. Hover and forward flight. Ground effect, autorotation and compressibility effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 with C or better; Credit is allowed for only AEE 466 or MAE 566
AEE	468	Aircraft Systems Design	Group projects related to aircraft vehicle design, working from mission definition and continuing through preliminary design.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 313 and 344 with C or better; MAE 400 with C or better; Pre- or corequisite(s): AEE 463 with C or better if completed
AEE	469	Projects in Astronautics or Aeronautics	Various multidisciplinary team projects available each semester. Projects include design of high-speed rotocraft autonomous vehicles, liquid-fueled rockets, microaerial vehicles, satellites.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student
AEE	471	Computational Fluid Dynamics	Numerical solutions for selected problems in fluid mechanics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 or MEE 340 with C or better; MAE 384 with C or better; Credit is allowed for only AEE 471 or MAE 561
AEE	478	Fundamentals of Autonomous Aircraft Systems	First of a two-semester capstone sequence. Introduces autonomous aircraft performance and operations, aircraft performance prediction, ground control and support, sensors, communications and telemetry, aerospace ethics and law, design methods.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s) with C or better: AEE 313, 360
AEE	479	Design of Autonomous Aircraft Systems	Interdisciplinary capstone design project for aerospace and electrical engineering students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: MAE 400 with C or better; AEE 478 with C or better
AEE	480	Space Systems Design	Group projects related to space systems design, working from mission definition and continuing through conceptual design.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 445 (or MAE 445) with C or better; EEE 350 with C or better; MAE 214 with C or better; Pre- or corequisite(s): AEE 465 (or MAE 465) with C or better if completed
AEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
AEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		Prerequisite(s): Barrett Honors student
AEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
AEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
AEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-7		
AEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		Prerequisite(s): minimum 45 hours

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AEP	501	Practical and Professional Ethics	Acquaints students with practical and professional ethics. Assumes no prior experience in ethics, and provides practicable knowledge as well as theoretical knowledge. The first in a series of courses for the MA program in Applied Ethics and the Professions, the course is primarily intended to prepare students in that degree program for their subsequent courses. However, it has been designed to be useful to all graduate students who are interested in learning about practical and professional ethics. The beginning of the course is devoted to the more general subjects of practical ("everyday") ethics and professional ethics, while the remaining weeks are spent focusing on the ethical issues that occur in the context of specific professions, with particular emphasis given to those professions that seem most relevant to the aspirations and interests of the students enrolled in the course.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): graduate student or Barrett Honors student
AEP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AEP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AES	101	Air Force Today I	Survey course designed to introduce students to the United States Air Force and Air Force Reserve Officer Training Corps (AFROTC). Featured topics include: mission and organization of the Air Force, officership and professionalism, military customs and courtesies, Air Force officer opportunities, group leadership problems, and an introduction to communication skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2		
AES	102	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Emphasizes common Air Force customs and courtesies, drill and ceremonies, health and physical fitness through group participation.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 101

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AES	103	Air Force Today II	Introduce students to the United States Air Force and encourage participation in Air Force Reserve Officer Training Corps (AFROTC). Featured topics include: introduction to leadership, Air Force core values, introduction to interpersonal communication and team building, and a continuation of communication skills.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Aerospace Studies	2		
AES	104	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Emphasizes learning the environments and dynamics of an Air Force officer.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 103
AES	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AES	201	The Evolution of USAF Air and Space Power I	Focuses on facilitating the transition from Air Force ROTC cadet to Air Force ROTC candidate. Examines the general aspects of air and space power through a historical perspective. Utilizing this perspective, covers a time period from the first balloons and dirigibles to the modern technology currently used in overseas contingency operations. Featured topics include: Air Force heritage, Air Force leaders, introduction to ethics and values, group leadership problems and continuing application of communication skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2		
AES	202	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Provides application of advanced drill and ceremonies; issuing commands; knowing flag etiquette; and developing, directing, and evaluating skills to lead others.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 201
AES	203	The Evolution of USAF Air and Space Power II	Provides knowledge-level understanding for general element and employment of air and space power. Furthermore, discusses the importance of Air Force Core Values with use of operational examples and historical Air Force leaders. Continues to develop communication skills. Topics include: the Air Force mission and organization, modern joint expeditionary Airmen, officer opportunities, and professionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	2		
AES	204	Leadership Lab	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Emphasizes preparation for field training.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 203
AES	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-4		
AES	301	Air Force Leadership Studies I	Study of communication skills, leadership and quality management fundamentals, leadership ethics, and professional knowledge required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3	L	
AES	302	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Advanced leadership experiences applying leadership and management principles to motivate and enhance the performance of other cadets.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 301
AES	303	Air Force Leadership Studies II	Continuation of AES 301. Topics include: communication skills, ethics, leadership, professional knowledge, and quality management required of an Air Force officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3	L	
AES	304	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Emphasizes planning the military activities of the cadet corps and applying advanced leadership methods.	N	LAB	Y	YGB	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 303
AES	401	National Security Affairs	Examines advanced ethics, Air Force doctrine, national security process, and regional studies. Special topics include: civilian control of the military, military justice, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3	L	
AES	402	Leadership Laboratory	Dynamic and integrated grouping of leadership developmental activities designed to meet the needs and expectations of prospective Air Force second lieutenants and complement the AFROTC academic program. Advanced leadership experience demonstrating learned skills in planning and controlling the military activities of the corps.	N	LAB	Y	GNA	Liberal Arts and Sciences	Department of Aerospace Studies	0		Co-requisite: AES 401
AES	403	Preparation for Active Duty II	Continuation of AES 401. Topics include: civilian control of the military, doctrine, ethics, military justice, the national security process, and officership.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	3		
AES	404	Leadership Lab	Continuation of AES 402 with emphasis on preparation for transition from civilian to military life.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	0		
AES	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Aerospace Studies	1-7		

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AES	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-3		
AES	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Aerospace Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	210	Measurements and Testing	Measurement systems, components, system response, and the characteristics of experimental data.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): PHY 112; Pre/Corequisite(s): MAT 266
AET	215	Aircraft Systems	Principles and design features of aircraft structures, systems, and materials.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	2		
AET	300	Aircraft Design I	Applied aerodynamics, standard atmosphere, speed measurement, infinite and finite wings, airplane performance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: AET 215; MET 211, ECE 210, or MAE 212
AET	365	Comm Pilot Cert		Y	LEC	Y	CNV	Ira A. Fulton Engineering	INACTIVE - Mech & Manufacturing Engrng Tchnlgy	2		
AET	415	Gas Dynamics and Propulsion	Introduces compressible flow, internal and external flow, and aerothermodynamic analysis of propulsion systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): AET 300; MET 340 or MAE 340 or Fulton Schools of Engineering graduate student
AET	417	Aerospace Structures	Analysis and design of aircraft and aerospace structures. Shear flow. Semimonocoque structures. Effects of dynamic loading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MET 213, MET 313 (or ECE 313); MET 212, AET 312 (or ECE 312); AET 300
AET	420	Experimental Aerodynamics and Wind Tunnels	Experimental applied aerodynamics related to aeronautical and mechanical design. Wind tunnel design and testing. Low speed flows.	N	LAB	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1		Pre-requisites: AET 300; MET 340
AET	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
AET	524	Application of Heat Transfer	Energy conservation, steady-state and transient conduction, convection transfer, free and forced convection Reynolds analogy, blackbody and environmental radiation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 432 or MAE 340; Credit is allowed for only AET 524 or AET 432
AET	525	Advanced Propulsion	Mechanics and thermodynamics of propulsion systems. Solid, liquid propellant rocket design performance. Electrical nuclear propulsion systems. Space missions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 434, AET 415 or MAE 340
AET	560	Numerical Methods in Engineering Technology	Analyzes problems in physical sciences, models physical problems, perturbation techniques, curvefitting, data analysis, numerical solutions, ordinary and partial differential equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Fulton Engineering students; Senior or higher academic level
AET	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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AET	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AET	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	191	First Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AFR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	200	Introduction to African Studies	Introduces the study of African and African-descended peoples; theory, themes, and perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	
AFR	202	Immigration and Ethnic Relations in the U.S.	The ethnic and social consequences of international migration with a focus on the United States. Examines the impact of immigration on both American society and immigrant ethnic minorities over time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Credit is allowed for only AFR 202 (or AFS 202) or ASB 202
AFR	210	Introduction to African American Studies	Examines the political, historical, and cultural origins of African American studies as an academic discipline.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	
AFR	212	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only AFR 212 (or AFS 210) or APA 210 or JUS 210 or TCL 210
AFR	215	Bob Marley and Reggae: Lyrics of Resistance	Studies political content, influence, and impact of Caribbean popular music, in particular the music of Bob Marley.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Credit is allowed for only AFR 215 or AFR 394 (Bob Marley: Reggae and Resistance) or JUS 215
AFR	225	Black Movements in America	Survey course on the historical and political development of mass movements by African Americans and Black resistance in the United States. Traces nearly 400 years of Black resistance against injustices and mass struggles for equality and liberation. Topics include the anti-slavery movement, anti-lynching campaign, the Civil Rights movement, the Black Power movement, prison abolitionism, the reproductive justice movement, and movements for economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only AFR 225 (or AFS 225) or JUS 200 (Black Movements in America) or JUS 225
AFR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
AFR	300	Precolonial Africa	In-depth course study of contemporary Africa, providing thorough examination of the continent's pre-colonial history, particularly before 1900. The course will study the continent and its people, the way the history of the continent has been interpreted by non-Africans, how the continent's anatomy has affected historical development, and the methodology and interdisciplinary scholarship in the study of Africa	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 300 (or AFH 300) or ASB 310
AFR	301	Race and Racism in Africa/African Diaspora	Advanced study of the concepts of race and racism and how they manifest themselves in the USA, the Caribbean, and Africa. Examines the construction of race, racism, and race relations in Africa and the African Diaspora as well as practices to challenge ethnicity, racism, and racial oppression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 301 (or AFS 301) or JUS 300
AFR	302	History of Black Women in America	Advanced examination of the challenges that black women have faced historically in America and how they have responded to those challenges socially, politically, economically, and culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 302 (or AFS 302) or HST 335 or WST 302
AFR	304	Islands of Globalization: Caribbean Politics and Political Economy	In-depth study of the complexities of contemporary Caribbean politics and political economy. Examines the countries that constitute the Caribbean community and common market and the Caribbean Latin American countries such as Cuba and the Dominican Republic and analyzes the historical evolution of the region's political and economic systems and the impact of globalization. Traces the development of the region's political economy from the colonial period to the present; looks at the impact of globalization on contemporary politics, economics, and culture and the region's response.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 304 (or AFS 304) or JUS 304
AFR	305	The Global History of the Trans-Atlantic Slave Trade	Reading- and writing-intensive course that employs critical thought to look at the origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or HST 109 or minimum 45 hours; Credit is allowed for only AFR 305 (or AFH 305) or LST 200

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AFR	310	African/African American Psychology	In-depth study of the historical development of African and African American psychology. Course will critically examine the African American frame of reference as well as examine African and African American psychology from a contemporary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	312	Contemporary African and African Diaspora Women	A critical analysis of recent literary, theoretical, and methodological themes concerning the study of African and African Diaspora women. Particular study will focus on the historical impact these themes have had on the phenomena of transformation by various African and African Diasporan women's populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	317	Genes, Race and Society	An in-depth examination of the biological and social construction of race in western societies. Special emphasis is placed on examining these constructs from a historical perspective	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H & C	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	318	African and African Diaspora Women Writers	Intersection of race, class, gender, and ethnicity in black women's fiction from the United States, the Caribbean, and Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit allowed only for AFR 318 (or AFH 318) or WST 318
AFR	320	Africa: Politics, Environment, and Development	An in-depth analysis of the African experience as a way to understand the consequences of human environment relationships, wealth and power differentials, and individual and global citizenship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	325	Music as Political Discourse: Reggae, Calypso, and Hip Hop	This is a reading and writing intensive course that employs critical thought that explores African Diaspora popular music as a medium of social and political expression. It examines the political content of Reggae, Calypso and Hip Hop and their role in triggering and influencing popular discourse in the Caribbean and the USA. Course material will analyze the interrelationships among the musical forms and their role in fostering Black and Pan African Cultural Identity, Political Consciousness and World Peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & H & G	Prerequisite(s): AFR 200 (or AFS 200); minimum 45 hours; Credit is allowed for only AFR 325 (or AFS 325) or JUS 326
AFR	327	Human Rights in Africa	In-depth study of the development of African organizations and instruments engaged in the dynamic processes of conceptualizing human rights that reflect its particular histories. It will also assess the effectiveness and appropriateness of efforts to address the human rights abuses and violations found in Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	330	Survey of African American Politics	In-depth study of the dynamics of the African American political experience. Examines the historical development of African American politics from the anti-slavery era to the Civil Rights breakthrough of the 1960's through the present political climate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 330 or JUS 330
AFR	331	Studies in African American Women Writers of Pre-Harlem Renaissance	In depth analysis and advanced comparative study of novels, short stories, essays, speeches, and dramas that gave voices to African American woman in the pre-Harlem Renaissance era.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) and ENG 101 or 105 or 107 with C or better OR ENG 101 or 105 or 107 with C or better and minimum 45 hours
AFR	332	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only AFR 332 (or AFS 332) or ASM 332
AFR	333	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
AFR	333	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
AFR	335	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 101 & ENG 102 with C or better. Credit is allowed for only AFR 335, HST 323 or TCL 335
AFR	336	African Art	Anthropological perspective of ancient visual art traditions of Africa. In-depth studies focus on several important themes and case studies that are pivotal to the understanding of the rich and diverse artistic heritage of the African continent.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Prerequisite(s): AFR 200 (or AFS 200) or ASB 102 or minimum 45 hours; Credit is allowed for only AFR 336 (or AFH 336) or AFR 335
AFR	340	The Making of Modern Africa	Advanced study of the events and processes leading up to the colonization of Africa and the subsequent changes in African societies under colonial rule and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AFR	345	Peoples and Cultures of the Caribbean	Traces the socio-political history of the wider Caribbean from the 15th century to the present. Focuses on the following broad areas: the early years of European settlement and colonization; the construction of slavery and plantation society; and the transition from colonization to political independence. Critically examines the origins and building blocks of Caribbean society as well as analyzes the linkages between the region and the rest of the African diaspora.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 345 (or AFS 345) or JUS 345
AFR	350	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
AFR	352	Race, Space and the Production of Inequality	Explores how the relationship between race and space has been important to the development of broad patterns of social inequality in the United States. Through a variety of readings, films and other material, examines how ideas of race and space have been important to the making and maintenance of national boundaries, citizenship, regional histories and spatial typologies such as border, ghetto, suburb and prison.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): APA 200 or 210; minimum 45 hours; Credit is allowed for only AFR 352 (or AFS 352) or APA 352 or JUS 353 or TCL 353 or APA 394 (Race, Space and the Production of Inequality)
AFR	353	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 353 (or AFH 353) or AMS 353 or ENG 353 or ETH 353
AFR	354	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or AMS 354 or ENG 354 or ETH 354
AFR	355	Democracy and Civil Society in Africa	Advanced examination of contending perspectives on the state and civil society of Africa. Course will specifically analyze the democratic struggles in sub-Saharan Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	360	Black Families in the Diaspora: U.S. and Caribbean	Within a historical, cultural, social-economic, and international context, the institution of Black families begins with their lives in Africa, South America, and the Caribbean and follows the cultural continuities and adaptations impacting the structure and functioning of contemporary African America families. Theoretical models provide focus to studying voluntary and involuntary migration, family labor force involvement, gender roles, marital relations, parenting, kinship and community networks. Throughout the course attention is given to the role of social policies in shaping the well-being of Black families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): AFR 200 (or AFS 200) or FAS 101; Credit is allowed for only AFR 360 (or AFS 360) or FAS 360
AFR	363	African American History to 1865	In-depth examination of African Americans' roles in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H & C	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 363 (or AFS 363) or HST 333
AFR	364	African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
AFR	364	African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
AFR	365	Unruly Voices: Black Women and Cultural Narratives	In-depth study of African American women writers and how they (re)define female identities and engage a critical cross-cultural dialogue within the context of cultural history in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 365 (or AFH 364) or WST 364

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AFR	366	African Archaeology: Precolonial Urban Culture	In-depth analysis of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data. Places special study on the evidence relating to dynamics of civilizations in ancient Africa, their foundation, growth, and failure, which spans a period of two million years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 366 (or AFS 366) or ASB 366
AFR	370	Family, Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Credit is allowed for only AFR 370 (or AFS 370) or FAS 370
AFR	372	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 372 (or AFS 372) or REL 362 or SGS 366 or AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History)
AFR	373	Islam and World Affairs	Advanced examination of complex trends to construct the roles of Islam as a belief, its institutions, leaders and ordinary believers in contemporary world affairs. Studies different developments, including the rise of (political Islam) fundamentalism, to subsequent changes in the Muslim world, challenges Muslims face, and domestic and international conflicts. Challenges students to reconceptualize and broaden their understanding of the powerful presence of religion in this era of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 373 (or AFS 373) or REL 363
AFR	375	Race, Gender and Sport	Advanced and interdisciplinary examination of the social concepts of race and gender and their economic impact on sports in America. In-depth studies will focus on the role of regulatory agencies, the impact of these regulatory agencies have on sport as well as multiple legal issues surrounding athletics	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours
AFR	380	Health Issues in the African American Community	In-depth examination and discussion of African American health across the lifespan. Discusses the factors associated with disparities in health and healthcare.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 380 (or AFS 380) or 394 (Hlth Issues Af/Am Community)
AFR	383	Blacks in Science, Medicine and Public Health	In-depth study of Blacks who have made significant contributions to science and medicine in the U.S. Begins with a critical examination of ancient African scientific contributions. Highlights specific individuals, analyzing their life's path to their respective careers. Also discusses the role of racism and discrimination and their efforts to overcome these.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 383 (or AFS 383) or AFS 394 (Blacks in Science, Medicine, and Public Health)
AFR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	418	Women of Color in Film	An in-depth analysis of the history and representations of women of color in film and the film industry through the intersections of gender, race, sexuality, class, and nationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 418 (or AFS 420) or FMP 420 or FMS 420 or WST 420
AFR	420	Race Ethnicity and Politics in the African Diaspora	Reading and writing intensive course that employs critical thought to look at the competition for political power among different ethnic groups in Africa, the Caribbean and the USA and the implications for political stability, economic development, democratic governance, democratization, nationhood and the empowerment of African and African Diasporan populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): AFR 200 (or AFS 200) and minimum junior standing OR minimum 9 upper-division hours in any classes with the following prefix: AFH, AFS, AFR, APA, JUS, POS, SGS, SOC, WST; Credit is allowed for only AFR 420 or JUS 421
AFR	428	Critical Race Theory	In-depth analysis of the ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only AFR, APA, JUS or SST 428
AFR	459	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & G	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours; Credit is allowed for only AFR 459 (or AFH 459) or ENG 459

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AFR	460	Race, Gender and Media	Reading seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR non-JMC student with minimum 2.0 GPA OR ASU Online student with a minimum 2.00 GPA OR Graduate Mass Communications student; Credit for AFR or MCO 460
AFR	465	Harlem Renaissance: a Cultural History: 1877-1945	Socio-political, historical contexts and worldwide ramifications of the cultural productions (theater, music, visual arts, and literature) of the Harlem Renaissance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		
AFR	466	Peoples and Cultures of Africa	An in-depth study of the diversity of African people and culture from an interdisciplinary perspective. Emphasizes social, political, and economic relations, as well as inequality, art, gender roles, slavery, and slave trade.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 466 (or AFS 466) or ASB 466
AFR	470	Women's International Human Rights	In-depth study of the core themes of a global movement for women's international human rights. Analyzes the historical evolution of the development of international human rights and women's rights within the United Nations and regional human rights systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): WST 100 or WST 300 or minimum 45 hours. Credit is allowed for only AFR 470 (or AFS 470) or AFR 494 (or AFS 494) (Women's International Human Rights) or AFR 598 (or AFS 598) (Women's International Human Rights) or WST 471
AFR	480	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AFR 480 (or AFS 480) or REL 461 or SGS 442
AFR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
AFR	490	Field Studies in the Diaspora	Introduces methods and principles of research applied to Black communities within and outside Arizona. Involves working with field officer and faculty.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		
AFR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
AFR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
AFR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
AFR	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
AFR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7	L	Prerequisite(s): 9 upper-division hours, or AFR 200 (or AFS 200) and minimum junior standing
AFR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
AFR	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AFR	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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AFR	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AFR	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	100	Introduction to Agribusiness	Overview of agribusiness industries and career opportunities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-3		
AGB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
AGB	250	Economics of Resource Allocation: Food and Agriculture	Beginning class that focuses on the specific microeconomic principles that are needed to understand the food industry, agricultural production, food safety and production of renewable natural resources. Focuses extensively on the detailed information that students need to understand the nuances of specific issues associated with the food, agriculture and renewable natural resources, including a keen understanding of monopolistic competition, the economic rationale for governmental regulation, effects of property rights on renewable resources, agricultural price supports, prospect theory and behavioral economics.	N	LEC	N	GNA	W.P. Carey School of Business	Morrison School of Agribusiness	3		Credit is allowed for only AGB 250 or AGB 294 (Economics of Resource Allocation)
AGB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
AGB	302	International Management and Agribusiness	Management and agribusiness issues in the transition of developing countries from subsistence to global operations and competition.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3	G	Prerequisite(s): ECN 212 or 214 with C or better; Credit is allowed for only AGB 302 or MGT 302 or BUA 394 (Perspectives in Global Business)
AGB	321	Agribusiness Marketing	Focuses on food and consumer products marketing at an intermediate level. Covers strategic concepts such as situational analysis, planning and objectives, and target marketing and positioning. Illustrates both the theory and application of strategic decision making through case analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 100
AGB	333	Agribusiness Finance	Introduces financial markets and institutions. Interest rate determination, money and banking, equity markets, farm credit system, vendor financing.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): ACC 231
AGB	340	Food Processing	Introduces processed food quality assurance, statistical sampling, and inspection procedures.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	360	Agribusiness Statistics	Statistical methods with applications in agribusiness and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3	CS	
AGB	366	Agribusiness Production Technologies	Examines methods for managing diverse crop and livestock enterprises with an emphasis on growth, development, marketing, and loss prevention.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	367	Agribusiness Processing Technologies	Biotechnology and other methods used in the production, processing, and distribution of food.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
AGB	410	Agribusiness Management	Principles of human resource management in agribusiness firms.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 100
AGB	414	Food and Agribusiness Policy Issues	Analysis of agribusiness firm decisions in the ecological, economic, social, and political environments. Special emphasis on ethical issues surrounding food production and consumption.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3	L	Prerequisite(s): minimum 87 hours
AGB	420	Food Advertising and Promotion	Focuses on advertising and promotional strategies in the food industry, with emphasis on consumer packaged goods.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321 or MKT 300 or MKT 302 or MKT 303 or MKT 390
AGB	422	Consumer Behavior	Applies behavioral concepts in analyzing consumer food purchases and their implications for marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321, FIN 300, or TMC 320
AGB	425	Food Supply Networks	Information, methods and resources used in the management of global food supply networks. Emphasizes systems of food marketing and distribution from the farm to the consumer.	N	LEC	N	GNA	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 250 or ECN 212

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AGB	429	Marketing Research	Examines the marketing research process and its role in facilitating agribusiness decisions. Emphasizes problem identification, survey design, and data analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: AGB 321 and MKT 300 with C or better.
AGB	431	Agribusiness Financial Management	Comprehensive treatment of topics in financial management of agribusiness: capital structure, dividend policy, asset valuation, mergers and acquisitions, risk management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321, FIN 300 or TMC 320
AGB	433	Agribusiness Financial Markets	Role and function of agribusiness in U.S. financial system. Topics include rural banking, farm credit system, monetary policy, and federal reserve.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 333 or FIN 300
AGB	435	Commodity Futures and Options Markets	Provides an understanding of how to use futures and options markets in a risk management and pricing context, especially as it pertains to the marketing and procurement of agricultural commodities by grain and livestock merchandisers, food manufacturers, and producers/distributors/consumers of natural resources.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 250 or ECN 212
AGB	440	Food Safety	Control, prevention, and prediction of microbial and chemical food-borne diseases.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
AGB	445	Food Retailing	Critical examination of trends, problems and management functions of food retail managers across various retail institutions. Emphasizes the biological nature of food products and the dietary preferences of consumers.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321 or MKT 300 or MKT 302 or MKT 303 or MKT 390
AGB	452	Global Food and Agricultural Policy	Applies international trade theory to analyze the effects of government policies and trade agreements on the global food and agribusiness sector.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): minimum 45 hours
AGB	454	Global Food and Agribusiness Trade	Business practices of multinational food and agribusiness firms in the cross border trading of agricultural commodities, technology and value-added products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 302
AGB	456	Food Product Innovation and Development	The food product development process and how it interfaces with food technology and packaging concepts. Emphasizes the team approach, which is prevalent in the food industry.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 321 or MKT 300 or MKT 302 or MKT 303 or MKT 390
AGB	481	Strategic Pricing in Food Markets	By applying the basic concepts of microeconomics to real-world data, this course allows the student to not only gain a book-oriented understanding of how businesses in the food industry behave, but practical, hands-on experience that lasts far beyond the classroom.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): AGB 250 or ECN 212
AGB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		
AGB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-6		Prerequisite(s): Barrett Honors student
AGB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-6	L	Prerequisite(s): Barrett Honors student
AGB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
AGB	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-7		
AGB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-3		
AGB	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		
AGB	511	Advanced Agribusiness Management	Analysis of organization behavior, change, and resource requirements within agribusiness systems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	514	Advanced Agribusiness Analysis	Vertical integration and differentiation in food and agricultural industries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	528	Advanced Agribusiness Marketing	Theory and analysis of marketing strategy related to food and fiber products. Covers concepts of strategic market planning (e.g., segmenting, targeting and positioning), with application of these concepts at an advanced level. Also examines the broad social, cultural, political and economic issues that impact marketing.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	529	Advanced Agribusiness Marketing Channels	Analyzes agribusiness market channel systems. Formulation of marketing strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	532	Advanced Agribusiness Finance	Financial management of agribusiness firms; agribusiness financial analysis, investment analysis, agricultural risk management, and introduction to agricultural financial intermediaries.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	535	Commodity Analysis	Analysis of commodity markets.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	552	International Agricultural Policy	Uses international trade theory to analyze the effects of government policies, trade agreements, and exchange rates on agribusiness.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AGB	554	Advanced International Trade	Advanced international practices in trading of agribusiness, technology, and resource products and services.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	560	Advanced Agribusiness Management Systems	Development and use of decision support systems for agribusiness management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	561	Applied Econometrics	Uses model building, hypothesis testing, and empirical analysis in solving agribusiness problems.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	570	Managerial Economics for Agribusiness	Concepts in micro- and macroeconomics applied to agribusiness management environments: price formation, market structure, information economics, fiscal and monetary policy.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	589	Agribusiness Capstone	Strategic management of organizations focusing on developing value-creating strategies in dynamic environments.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Morrison School of Agribusiness	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	701	Advanced Agribusiness I: Advanced Agribusiness Analysis	Advanced topics include benefit-cost analysis, input-output analysis, consumer demand, agricultural policy, international trade, welfare economics and applied mathematical economics.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	702	Advanced Agribusiness II: Applied Econometrics	Econometric analysis techniques applied to multinomial and count models, welfare economics, demand models and maximum likelihood estimation using STATA.	N	LEL	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	703	Advanced Agribusiness III: Advanced Empirical Models	Microeconomics applied to empirical models involving agribusiness including consumer and producer theory, empirical industrial organization, strategic choice and price behavior.	N	SEM	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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AGB	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AGB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Morrison School of Agribusiness	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	180	Introduction to American Indian Studies	Introduces the study of American Indian justice issues from an interdisciplinary perspective. Primary topics include sovereignty, law, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	
AIS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
AIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	280	American Indian Sovereignty and the Courts	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	H & C	
AIS	285	Federal Indian Policy	Examines the sovereign status of American Indians and legal relationships between the tribes and the U.S. government.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	H & C	
AIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	320	American Indian Philosophies and World Views	Does it make sense to speak about American Indian intellectuals, thinkers or philosophers? Not only have Indians been thinking and thinking deeply for generations, but they have also produced a body of written works that have formed the foundation of contemporary American Indian studies. Covers some of the major figures, their works, and the ideas and opinions (many of which were controversial) that shaped their thinking.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	HU & C	Prerequisite(s): junior standing; ENG 102, 105 or 108 with C or better. Credit is allowed for only AIS 320 or 394 (American Indian Philosophical/World Views)
AIS	360	Issues in Urban Indian Country	In-depth examination of the historical, social, economic, and political implications of indigenous migrations to urban areas. Over 50% of Native people are living in cities. What are they doing? Why are they there? Are they still under the federal trust relationship? Evaluates the social, political, and economic structures built by American Indians living in the urban environment.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum Junior standing; Credit is allowed for only AIS 360 or 394 (Issues in Urban Indian Country)
AIS	370	American Indian Languages and Cultures	Emphasizes understanding of Indian language families and the relationship of oral traditions to culture.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	Pre-requisite: AIS 180 with C or better
AIS	380	Contemporary Issues of American Indian Nations	Surveys legal, socioeconomic, political, and educational state of contemporary reservation and urban Indians.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	
AIS	381	American Indian Women	Draws from a diverse range of Indigenous critical traditions to examine discourses of gender, identity, and sexuality as sites of cultural revitalization and conflict and theorizes the meaning of each of these categories from diverse Indigenous communities. Considers contemporary and traditional works by Indigenous women with a special emphasis on the historical, socio-cultural, and legal contexts of each work.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	C	Pre-requisites: WST 100, 300, or AIS 180 with C or better OR co-requisite if completed 30 hours or more: AIS 180, or WST 100 or 300. Credit is allowed for only AIS 381 or WST 382
AIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	420	American Indian Studies Research Methods	Surveys diverse research methods, including statistical, historical, interpretative, and narrative approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	L	Pre-requisite: AIS 180 with C or better
AIS	430	Contemporary Indigenous Spirituality	Why do so many indigenous people across North America want to revitalize their traditional ways when there is supposedly so much opportunity awaiting them in all segments of American society? What are the benefits of such an endeavor and what might be the consequences if this objective is not pursued? This course is premised on the hypothesis that indigenous customs and beliefs contain knowledge that is not only vital to the well-being of the communities in which this native wisdom is found, but also to those communities seeking a more sustainable way of living in the land they call home. After delving into a critique of the religious principles that went into the settling of America, complete with notions of manifest destiny, a way is opened for a more native-oriented discourse on community, nature, economy, and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum Junior standing; Credit is allowed for only AIS 430 or 494 (Ind Spirituality in Postmodern)
AIS	440	Cultural Professionalism	Emphasizes professional and leadership skills to prepare students for academic and career endeavors after undergraduate degree completion. Explores indigenous perspectives on communication, research, professional and leadership skills. Research focuses on addressing the needs of Arizona Indian Nations and Tribes and culminates in a research paper, in-class presentation and community development poster presentation. Showcases research posters in a research symposium in which guests vote on the most innovative and practical poster proposal.	N	LEC	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3	C	Prerequisite(s): minimum junior standing; Credit is allowed for only AIS 440 or AIS 494 (Cultural Professionalism)

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AIS	455	Human Rights and Cultural Resource Laws	Examines how U.S. laws, policies, executive orders, and court decisions have affected Indian nations and peoples in matters of cultural resources and burial rights. Considers the protests, legal battles, and political campaigns Indians have waged to reaffirm their fundamental human rights in the areas of repatriation and sacred sites protection. Examines the ways in which filmmakers and the media present these issues to the public. Assesses the present status of Indian religious rights and cultural resource laws. Sovereignty and its relationship to Indian spirituality is a theme that permeates the course.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum Junior standing; Credit is allowed for only AIS 455 or 494 (American Indian Cultural Resources)
AIS	470	Tribal Governance	Critical and historical examination of Indigenous governance and leadership. Includes a survey of historical policy developments and political change that laid the foundation for contemporary Indian government and an assessment of the effectiveness of modern tribal administrations and decision-making bodies. Explores the diverse approaches to tribal governance, community-based political strategy and local interpretations and assertions of sovereignty and self-governance. Project work facilitates focused student learning on the challenges and opportunities in government for a specific Indian nation. Case work and consultation with practitioners in Indian government complement textbook reading in law, history and policy.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3		Pre-requisite: AIS 285; Credit is allowed for only AIS 470 or AIS 494, Tribal Governance
AIS	480	Actualizing Decolonization	Provides an in-depth investigation of the theory and concepts of colonization, decolonization, and Indigenous peoples in America, with brief comparisons with global Indigenous peoples and experiences. Covers classic scholarly works on colonization and decolonization to understand the frameworks in which colonization and decolonization develops, expands, and impacts Indigenous peoples. Through that theoretical understanding, examines and formulates ways in which decolonization can impact and be integrated into Indigenous lives and communities. Students shift from theory to praxis by writing and presenting on an informal grant proposal for a decolonizing project that can be implemented in an Indigenous or non-Indigenous community.	N	LEC	N	OPT	Liberal Arts and Sciences	American Indian Studies Program	3	HU & C & G	Pre-requisites: ENG 101; ENG 102; Junior standing; Credit is allowed for only AIS 480 or 494 (Readings-Decolonization)
AIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		
AIS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-6		Prerequisite(s): Barrett Honors student
AIS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-6	L	Prerequisite(s): Barrett Honors student
AIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		
AIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-7	L	
AIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-3		
AIS	501	American Indian Studies Paradigms	American Indian Studies emerged as an academic discipline in the late 1960s in part because of increasing dissatisfaction among Indians about the works of historians, anthropologists, and other scholars that was very often marred by methodological and conceptual flaws. Course provides an overview of ways of "doing" Indian studies from an American Indian Studies paradigm(s) through a critical examination of some of the most significant works emanating from this growing body of literature. Critiques paradigms that selected scholars have employed in the researching and writing of their topics. Seminar format allows students to take the lead in discussing each week's readings. Covers a range of scholarship dealing with American Indian issues; explores the development of American Indian Studies as an academic discipline; probes paradigms that Indigenous scholars have developed; and considers how those paradigms differ from those used by other disciplines.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	502	American Indian Studies Research Methods	Prepares students for thesis research, writing, and completion. Surveys graduate research methods in the field of American Indian Studies including historical, interpretative, and narrative approaches. Focuses on methodological issues specific but not limited to American Indian and Indigenous Studies. Focuses on Indian-centered methodological approaches to research that are essential to qualitative writing of the various topics in Indian country and other issues.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	503	Contemporary Issues of American Indian Nations	Provides an overview of the current status of American Indian Nations with regard to sovereignty, policy, politics, economy, and society. An exploration of current issues illustrates the unique challenges and innovative solutions put forth by Indian communities.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AIS	504	American Indian Film and Activism	Examines the American Indian film and activism with emphases on American Indian production, directing, editing, investigative journalism, documentary film, entertainment, and research. Exposes students to the development of activism in film and how film has been utilized to educate, inspire, and contribute to the challenges in Indian Country.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	505	Contemporary Visual Arts of American Indians	Focuses on a critical analysis of art, film, and media as they intersect with shaping the image and sustaining the culture of American Indians in North America. Examines the persistent and inappropriate stereotypes of American Indians as portrayed in film and media, including explanations for the persistence of negative stereotypes drawing on various aspects of critical race theory including power, politics, and race. Also introduces the scope and diversity of American Indian art and artists and highlights how native artists portray their views and culture through contemporary image making and representations. Stresses the interplay of art with sovereignty, identity, and politics. Emphasizes the powerful and significant connection between contemporary American Indian art and the persistence of indigenous cultures.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	506	Indigenous American Literature and the Tribal Community	Teaches Indigenous (Indian, Native American, First Nations) literature's role in Indigenous history, cultural history, philosophy, society, culture, and developing cultural traditions. Students learn how tribal communities articulate themselves intellectually and artistically through literature and its development locally, nationally, and internationally.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	508	Revitalizing Indigenous Languages	Critically examines Indigenous languages, their decline and revitalization from a language ecology and a self-determination perspective. Includes historical, sociopolitical, educational, linguistic, sociolinguistic, and cultural issues that have had and continue to impact Indigenous peoples and their languages worldwide and their reclamation efforts. Also examines various epistemologies, theories, ideologies, and practices of Indigenous people (including American Indian, Indigenous Alaskan, Hawaiian, Maori, Quechua). Topics include: language policy and planning, language acquisition, child language socialization, identity development, bilingual education, Indigenous language pedagogy, and current models and approaches for Indigenous language maintenance and revitalization (ILMR).	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	509	American Indian and Indigenous Rights	Examines the rights of American Indian peoples with an emphasis on asserting indigenous rights in national as well as international forums. Challenges students to address issues related, but limited to: treaty rights, land rights, water rights, self-determination, rights to a distinct culture, religion, language, spiritual practices, customs, ceremonies, nationhood, autonomy, to seek redress and justice, rights to education, rights to protect from destruction and violence, rights to economic development, rights to protect lands from military, ecological, cultural, and environmental threats, and other rights that may effect the lives of American Indian people.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	510	Social Change in American Indian Communities	Committed to the preservation of political autonomy and cultural identity, American Indian communities are increasingly gaining rule over the effects of social change impinged upon them. Recapturing their histories and redefining colonial relationships, they are forging a preferred future grounded in their own traditional institutions of community, religions, and strengthening of self-determination. Provides students with: (1) an understanding of the enduring struggle of American Indian communities to resist the movement of collective assimilation and retain the right of self-determination; (2) an examination over time of social changes in American Indian communities' social structures and their political and social movements towards the establishment of environmental, economic, and social justice; and (3) knowledge of strategies and tactic for achieving social change within American Indian communities that support Indian self-determination and self-governance.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	511	Genders and Sexualities in American Indian Societies	Grounds students in the theory and concepts of American Indian genders and sexualities. In American Indian societies, there were more than two genders. With colonization through laws, boarding schools, and loss of culture, language, and land, these different genders were attacked and made to disappear. Examine the concepts of gender and sexuality from Native perspectives and theory, and through western imperial views. Also covers the ways in which decolonization plays a role in understanding indigenous genders and sexualities.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AIS	512	Historical Trauma, Healing, and Decolonization	In recent years, scholars have begun to explore the prevalence of historical trauma among American Indian communities. This research argues that the genocide, violence, breakdown of customary cultures through external coercion; and oppression that Indians continue to face at the hands of foreign colonizers has left Indians with harmed with intergenerational self-destructive behavior, domestic violence, suicide, anxiety, depression, low self-esteem, and anger. As a result of this violence and oppression, they have developed models of recovering healthy nations while challenging violations of their human rights in the domestic and international arenas. This history has given rise to a widespread cultural revitalization movement often referred to as decolonization. Scholars from an array of academic disciplines are producing a growing body of literature about decolonization.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	513	Urban Indian Issues	According to the 2010 Census, 64.1% of the American Indian/Alaskan Native population resides in a place outside of tribal areas. Cities such as Los Angeles, New York, and Phoenix have historically counted more than 25,000 American Indian residents. What draws Indigenous families to urban areas? How does an urban address impact the federal trust relationship with nonreservation Indians? What are the social, political, and economic implications for a family who lives off the reservation and away from tribal homeland? Course explores these issues and dynamics and challenges the student to examine the unique identity and contributions of urban Indians. Students learn the history of Indigenous migrations to the city and assess current needs and concerns through consultation work coordinated with Phoenix area Indian Centers and nonprofit organizations.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	514	American Indian Intellectuals	Does it make sense to speak about American Indian "intellectuals," "thinkers," or "philosophers"? Not only have Indians been thinking and thinking deeply for generations, but they have produced a body of written works that have formed the foundation of contemporary American Indian studies. Course covers some of the major figures, their works, and the ideas and opinions (many of which were controversial) that shaped their thinking.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	515	The Work and Legacy of Vine Deloria, Jr	Vine Deloria, Jr, Standing Rock Sioux (1933-2005) has often been referred to as "Uncle Vine" for his role in the intellectual development of innumerable scholars, as well as legal and political figures, all of whom have striven along side Deloria at making the world a better and more just place for indigenous communities. As such, Deloria has also been labeled "the Dean of American Indian Studies" because of his work at shaping the intellectual and political agenda, which began in 1969 with the seminal publication of Custer Died for Your Sins: An Indian Manifesto and continued posthumously with works on the medicine man traditions throughout North America and a reflection on Carl Gustav Jung's analyses of American Indian customs and beliefs. This seminar, the first of its kind, takes a comprehensive look at Deloria's philosophical and legalistic legacy by examining his major works and analyzing, in addition to critiquing, the ideas and opinions that shaped his intellectual career.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	516	Concepts of Power and Indigeneity	Grounds students in the theory and concepts of power and indigeneity with comparisons with global Indigenous peoples and experiences. Through that theoretical understanding, examines and understands ways in which these concepts impact Indigenous communities and formulates ways in which to develop practical ways to address these issues.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	517	Customary Tribal Law and Governance	Examines traditional governance systems, institutions, and cultures of American Indians, with emphasis on customary law, justice, and government.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	518	Tribal Jurisdiction	Examines traditional governance systems, institutions, and cultures of American Indians, with emphasis on customary law, justice, and government.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	519	Burial Rights, Repatriation, and Sacred Places Matters	Probes U.S. laws and policies, court cases, and Indian struggles for dignity, burial rights, repatriation, and religious freedom from the late 1800s to the present. Examines developments in the United Nations and international arena pertaining to Indigenous human rights, religious freedom, repatriation, and sacred places protection. U.S. policies, laws, practices, court decisions, land developers, pot hunters, and archaeologists have restricted the human rights of American Indians in term of burial rights and religious freedom. Congress has enacted cultural resource and environmental protection laws, religious freedom, and reburial laws that aim to regulate the use and abuse of cultural resources and Indian rights.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AIS	521	American Indian Leadership and Resistance	Examines the modern leadership struggles in American Indian communities with a foundation of traditional concepts of leadership. Topics include leadership qualities and systems pre-contact, federal-tribal relations, state-tribal relations, tribal politics, internal disputes, activism, mobilization, cultural continuity, social change, community leadership, political/elected leadership, diplomacy, political agendas, and other topics related to American Indian leadership and resistance.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	522	Tribal Governance	Explores American Indian leadership, political ideology, and the history and current state of tribal government. What makes tribal governments tick? Examines past and present challenges faced by leaders and members of indigenous communities. Brainstorms potential strategies for the further enhancement, protection, and assertion of this indigenous "brand" of governance. How do politics, policy development and the ever-changing face of indigenous sovereignty impact the way we think about governance? How can we educate and inspire tribal communities to have greater ownership and interest in government? Students engage with the current research, debate the issues, and learn from people who provide governance to indigenous communities. Case studies focus on specific issues in local communities. Individual portfolio project work facilitates learning and the articulation of leadership and governance as practiced by one particular tribe of your choice.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	523	Community Development with American Indian Communities	Tribal community development is more complicated than large urban population centers or even rural communities because tribal communities continue to struggle with years of colonial, paternalistic, and assimilationist federal policies that have impeded their efforts to become self-determined and self-governing nations. Provides students with the knowledge and skills they need to support community development in American Indian communities within a self-determined and self-governing context. Content includes: (1) a framework for review of current economic, political, social, and cultural issues facing American Indian communities; (2) an overview of community development theories, of the underlying values behind those ideas, and of the linkages between theory and practice in American Indian and other Indigenous communities; and (3) a sampling of intervention strategies and tactics for effective community development in American Indian communities.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	524	Indian Control of Indian Education: Tribal Colleges and Universities	Examines American Indian control of education from a tribal college and university perspective. Focuses on the tribal college movement, including the historical and contemporary political, policy, research, and best practices that have influenced and sustained tribal colleges and universities.	N	SEM	N	GNA	Liberal Arts and Sciences	American Indian Studies Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-12		
AIS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	American Indian Studies Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	American Indian Studies Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	American Indian Studies Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AIS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	American Indian Studies Program	1-12		
ALA	100	Introduction to Environmental Design	Surveys environmental design: includes historic examples and the theoretical, social, technical, and environmental forces that shape them.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H & G	Credit is allowed for only ALA or PUP 100
ALA	102	Landscapes and Sustainability	Surveys ideas relating to landscapes and sustainability and the role of landscape architecture in the creation of humanized environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & G	
ALA	121	Design Fundamentals I	Development of visual literacy. Introduces drawing and graphic representation as methods of seeing and problem solving.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Architectural Studies, Environmental Design, Interior Design, or Landscape Architecture major; Credit is allowed for only ALA 121 or INT 120

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ALA	122	Design Fundamentals II	Exercises in basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): ALA 121 with C or better; Architecture, Environmental Design or Landscape Architecture major. Corequisite(s): ALA 124
ALA	124	Design Fundamentals II Lecture	Theory and applications of basic design principles, history and theory of how architecture and landscape architecture design is impacted by basic design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): Architectural Studies, Environmental Design, Interior Design, or Landscape Architecture major; Corequisite(s): ALA 122 or INT 221; Credit is allowed for only ALA 124 or INT 222
ALA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ALA	225	Design Fundamentals III	Applies history and theory of design fundamentals with an emphasis on architectural and landscape architectural design issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	4		Prerequisites: Architecture or Landscape Architecture student; ALA 122 with C or better; Passed milestone; Co-req: ALA 225
ALA	226	Design Fundamentals IV	Basic design, stressing creative problem-solving methods, principles of composition, and aesthetic evaluation. Development of vocabulary for environmental design.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	4		Prerequisites: ALA 225 with C or better
ALA	235	Introduction to Computer Modeling	Fundamentals of computer operation, geographic information systems, geometric modeling of 3-D forms and rendering of light, mathematical modeling of processes using spreadsheets.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	CS	Prerequisite(s): Architecture or Environmental Design or Landscape Architecture major. Corequisite(s): ALA 225 (or EDS 200)
ALA	240	Sustainable Design in Built Environment	Reviews the physical principles used in the design of sustainable buildings, landscapes, and urban environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
ALA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ALD	101	Introduction to Aging Issues	Introduces students to general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in midlife and beyond, living options, caregiving, and retirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3	SB	
ALD	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	202	Field Placement I	Provides students an opportunity to work directly with older adults in a variety of settings.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	203	Field Placement II	Provides students an opportunity to work directly with older adults in a variety of settings.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1		Pre-requisites: ALD 101 with C or better; ALD 202
ALD	204	Field Placement III	Provides students an opportunity to work directly with older adults in a variety of settings.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1		Pre-requisites: ALD 101 with C or better; ALD 202; ALD 203
ALD	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	301	Research Methods in Aging	Examines social science approaches to the study of aging. Includes particular methodological issues that must be considered when studying older adults.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1		Pre-requisites: ALD 101 with C or better or currently enrolled
ALD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	403	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	404	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	420	Health Issues and Older Adults	Analyzes and synthesizes the biological, social, and behavioral aspects of health and healthcare delivery in the later adult years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3	SB	Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC); Credit is allowed for only ALD 420, 520 or FAS 421
ALD	431	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC); Credit is allowed for only ALD 431, 531 or FAS 421

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ALD	440	Social Policy and Aging	Critical analysis and evaluation of the historical, socio-political, and economic issues that are specific to older Americans. Includes federal, state, and local policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	460	Alzheimer's and Related Dementias	In-depth analysis of Alzheimer's disease and related dementias from a caregiver's perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	472	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
ALD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		
ALD	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-6	L	Prerequisite(s): Barrett Honors student
ALD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		
ALD	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-7	L	
ALD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-3		
ALD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	505	Perspectives on Aging and the Life Course	Overview of general issues of aging, including theoretical background, influences of earlier-life experiences, physical changes, social policies, relationships in mid-life and beyond, living options, caregiving, and retirement. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	520	Health Aspects of Aging Adults	Examines biological, social, and behavioral aspects of health in the later years, and the organization and delivery of care. Includes an emphasis on wellness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); ALD 505 with a grade of C or better, or co-enrolled. Credit is allowed for only ALD 420 or 520
ALD	525	Mental Health in Midlife and Beyond	Focuses on the psychological, emotional, and cognitive changes as individuals age. Includes assessment and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	531	Caregiving Issues for Families and Professionals	Examines the issues of caregiving by family members, in-home aids, and professionals in care facilities. Focuses on issues related to providing care to older adults in a variety of settings. Includes social policy toward caregiving, caregiver stress and reward, the role of social workers, and cultural concerns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre/Co-requisites: ALD 505 with C or better if completed; Credit is allowed for only ALD 431, 531 or FAS 421
ALD	535	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	REC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	540	Public Policy Issues and Aging	Examines in detail the historical, socio-political, and economic issues that are specific to older Americans at the federal, state, and local levels. Requires applied project.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	545	Elder Abuse and Neglect	Provides a comprehensive review of crimes against older adults. Includes all types of abuse and neglect, as well as prevention, intervention, and public policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	560	Dementia	Thorough examination of dementia and dementia syndromes, including Alzheimer's disease. Includes the complexity and diversity of behaviors that define dementia, and implications for planning interventions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ALD 460 or 560
ALD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ALD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ALD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	LEC	Y	Z2	Liberal Arts and Sciences	School of Aging and Lifespan Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ALT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
ALT	360	Renewable Energy Technologies: Fundamentals and Integration	Technical fundamentals, economic, and social aspects of renewable energy technologies with emphasis on solar cells, hydrogen economy, and fuel cells.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MAT 266; PHY 112; CHM 113
ALT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
ALT	401	Hydrogen Generation, Storage, and Distribution	Overview of primary technologies, economic aspects, and social policy issues related to development of hydrogen systems and hydrogen economy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre- or corequisite(s): ALT 360. Credit is allowed for only ALT 401 or ALT 501
ALT	405	Power Conditioning	Fundamentals of power electronics; DC-DC converters and DC-AC inverters; battery charge controllers. Lab experience.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 310; Credit is allowed for only ALT 405 or 505
ALT	410	Solar Cells and Module	Basic device physics and engineering of solar cells. Lab experience on fabrication, characterization, and testing of solar cells and module.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: UET 331
ALT	412	Village Energy Systems	The role of energy resources in economic development. The need for and use of energy at the Base of the Economic Pyramid (BoP). Individual Problem Based Learning (PBL) investigations of potential solutions to energy-poverty at the BoP.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Senior Standing in Engineering, Engineering Technology, Mathematics or another Science-based curriculum. Credit is allowed for only ALT 412 or ALT 494 (Village Energy Systems)
ALT	420	Electrochemical Energy Technologies	Thermodynamic and electrochemical principles of fuel cells. Hands-on experience on fabrication and testing of fuel cells; problem solving skills.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: CHM 113; ALT 360
ALT	435	Applied Photovoltaics	Overview of solar radiation, operating principles of photovoltaics, qualitative analysis on influencing parameters. market trends, basics of PV systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: ALT 360; ALT 410 (not required for BAS students); Credit is allowed for only ALT 435 or 535
ALT	445	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific application.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: ALT 360; CHM 113; Credit is allowed for only ALT 445 or 545
ALT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
ALT	502	Batteries for Portable Electronics	Theoretical and practical overview of primary, secondary, and lithium batteries. Key performance characteristics, construction materials, typical applications, recycling, and disposal.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALT	503	Fuel Cells for Portable Electronics	Overview of electrochemistry, portable electronics industry, principles of fuel cells, and prospects for micro fuel cells.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALT	505	Power Conditioning	Fundamentals of power electronics, DC-DC converters and DC-AC inverters, battery charge controllers.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Credit is allowed for only ALT 405 or 505
ALT	507	Evaluations of Photovoltaic and Fuel Cell Systems	Field testing, data collection, and evaluation of real-world photovoltaic and fuel cell systems available on campus and data analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ALT	512	Village Energy Systems	Establishes leadership in the development of energy resources at the Base of the Economic Pyramid (BoP). Individual Problem-Based Learning (PBL) investigations of potential solutions to energy-poverty at the BoP.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Graduate Standing in Engineering, Engineering Technology, Mathematics or another Science-based curriculum; Credit allowed for only ALT 512 or ALT 598 (Village Energy Systems)
ALT	515	Alternative Energy Reliability and Standards	Alternative energy systems and their reliability issues, accelerated life and safety testing, standards and codes, regulatory requirements.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ALT	535	Applied Photovoltaics	Term projects, overview of solar radiation, operating principles, qualitative analysis on influencing parameters, market trends, basics of PV systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status; Credit is allowed for only ALT 435 or 535
ALT	545	Automotive and Stationary Fuel Cell Systems	Practical overview of fuel cell systems for stationary, residential, and transportation applications based on load and duty cycle requirement of specific applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status. Credit is allowed for only ALT 445 or 545
ALT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	101	ASU Digital Culture Experience	Orientation to the Digital Culture program with emphasis on resources for academic success.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1		Prerequisite(s): Herberger Institute for Design and the Arts Digital Culture BA major; Credit is allowed for only AME 101 or AME 194 (ASU Digital Culture Experience)
AME	111	Introduction to Digital Culture	Examines the effects of digital technology on the way we live, communicate, learn, and create. Proposes that we are moving towards a hybrid (physical-digital) existence and culture. Traces that evolution, looks at current examples of hybrid cultural processes and outcomes, and discusses possible future trends. Discusses how these changes are influencing the work and career possibilities of people involved in all aspects of human culture. Comprises diverse readings, media products, class interaction, group discussion and hands-on collaborative projects exploring concepts covered in class. Also includes a number of guest lectures from ASU faculty.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3	CS	Credit is allowed for only AME 111 or 194 (Introduction to Digital Culture)
AME	112	Computational Thinking for Digital Culture	Introduces fundamental concepts relevant for understanding computation. What are algorithms and how can computer code express them? Basics of how real-world signals are captured, encoded, recorded, retrieved and decoded. Designed for students with little or no background in programming.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Credit is allowed for only AME 112 or 194 (Computational Thinking for Digital Culture)
AME	120	Digital Culture Studio	Provides advice on career preparation and industry skills through a series of guest lectures. Sample topics include resumes, personal Websites and portfolios, how to pitch a project idea, and topics chosen by guest industry presenters.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1		Credit is allowed for only AME 120 or AME 194 (Digital Culture Studio)
AME	130	Prototyping Dreams	How do you build your dreams? Explores the idea of inspirational prototyping across multiple media, including physical fabrication, science fiction, virtual worlds and film. Students create and iterate their own prototypes for visions of the future: new technologies, solutions to challenges, and tools or systems that expand the horizon of human potential. These prototypes do not have to be functional tools, but they must be functional stories, effectively sharing the creator's vision with others. Just as the Star Trek communicator inspired early cellphones, these prototypes will help shape new conversations about the future we want to build. Surveys a series of creative paradigms for inspirational prototyping, including design fiction, rapid fabrication and 3D printing, science fiction prototyping, gaming and virtual world-building.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Credit is allowed for only AME 130 or AME 194 (Prototyping Dreams)
AME	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	210	Media Editing	Introduces the fundamental principles of media editing including form, composition, structure, pattern, sequence and rhythm. Using a combination of open source, commercial and custom-designed tools and platforms, students design, construct, communicate and interpret rich media messages. Through creating and critiquing visual compositions, audiovisual artifacts, spatial narratives or generated graphs, students explore the practice of media editing as a spatial, temporal and dynamic process.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Credit is allowed for only AME 210 or AME 294 (Media Editing)

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AME	220	Programming for the Web	Introduces a range of technologies used for Web development: marking up content with HTML, styling with CSS and interaction using Javascript. Explores the latest foundational Web standards such as HTML5 and CSS3 to learn how to create compelling content for the World Wide Web. Goes beyond simply coding a Web page to understanding how the Web works. The World Wide Web is used in an incredible variety of applications that we now find integral to our lives, from talking to our friends on Facebook to discovering music on the iTunes Music Store, paying bills from our bank's Web site to finding the route to our vacation destination on Google maps. Investigates how Web standards have enabled the creation of dynamic applications delivered over the Internet.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): AME 230; Credit is allowed for only AME 220 or AME 294 (Programming for the Web)
AME	230	Programming for the Media Arts	Introductory-level course in practical aspects of programming systems for media arts. Explores techniques in programming in the context of images, sounds, interaction, networking and data visualization. Uses the processing programming language, an accessible yet powerful environment for learning how to program. Students create images, animations and interactive programs, and learn how to use images, movies, sound files, microphones and cameras in their programs.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3	CS	Credit is allowed for only AME 230 or AME 294 (Programming for Media Arts)
AME	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	310	Media Literacies and Composition	When we integrate computational systems into the core of our cultural and social practices, we reinvent how we tell stories. The roles of creators, critics and audiences are blurring at the same time that digital tools allow us to infinitely reproduce and remix narratives, radically changing what we mean by the "work" or "text." These new media platforms empower us to create, share and respond to cultural narratives that defy traditional notions of how stories operate, demanding new literacies. Explores our powers and responsibilities as readers, writers and creators of new cultural languages, including new forms such as games, digital video, electronic literature and social media. Students study relevant media narratives and cultural ecosystems from the 20th and 21st centuries, acquiring a set of literacies that they hone through practices of authorship, critique and collaboration, culminating in the presentation of their own digital media narratives.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; ENG 101, 105, or 107; minimum 45 hours; Credit is allowed for only AME 310 or AME 394 (Media Literacies & Composition)
AME	320	Motion Capture for Integrative Systems	Presents the broad principles and techniques for movement study in oneself and others that includes applied, dynamic anatomy. Also presents the functional techniques for motion capture with a special emphasis on the capture of human movement from visual sensors. Students understand the technology behind motion capture; a high-level understanding of movement and anatomical systems; the ability to perform motion capture and customize it to suit the requirements of specific creative applications in animation, sound and live performance as well as applications in movement rehabilitation and education. Looks at the technology behind various modern motion capture systems based on markers, inertial sensors, accelerometers, and depth sensors, so the student appreciates the technical capabilities and limitations of each technique.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; minimum 45 hours. Credit is allowed for only AME 320 or AME 394 (Motion Capture for Integrative Systems)
AME	330	Digital-Physical Systems	Hands-on course where students explore digital-physical systems by working with the fundamental building blocks of interactive technologies and examining exemplar works of media art. Basics of electronics, circuit design, sensors, actuators, simple mechanical design, the iterative design process and microcontroller programming. Emphasizes media and arts applications such as real-time interactive performance, robotic installations and tangible computer interfaces. Prior knowledge in hardware/circuit design is not required.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; AME 230; minimum 45 hours; Credit is allowed for only AME 330 or AME 394 (How to Build a Digital-Physical System)
AME	340	Compositional and Computational Principles for Media Arts	In much of today's contemporary art practice there is a tight coupling of compositional form, content and underlying computational mechanisms. This integration holds the potential to yield new modes of expression and wholly new art experiences as is evident in emerging forms of real-time generative art, network-based art, game-based art, and interactive performance. As both practitioners and participants, we must develop a critical understanding of the relevant compositional and computational principles that frame this work. Students study relevant media art works from the 20th and 21st century, develop a working understanding of fundamental compositional and computational principles, and apply their understanding through the realization of exploratory media artworks that are presented at the end of the semester.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; minimum 45 hours. Credit is allowed for only AME 340 or AME 394 (Compositional & Computational Principles for Media)

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AME	385	Collaborative Projects and Research I	Project-based class for experience in collaborative design principles, project pitching and research. Includes readings and small projects with teams formed at the outset of the class. Over the course, teams develop their own project along with a schedule for realization. Project themes vary, yet all projects must explore relationships of digital technologies and cultural products or processes. Includes presentations, discussion and analysis of team projects.	N	STO	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): BA in the Arts (Digital Culture) or BA Design Studies (Digital Culture) or Digital Culture major; Minimum 45 earned hours; Credit is allowed for only AME 385 or 394 (Collaborative Projects & Research I)
AME	386	Collaborative Projects and Research II	Project-based class for experience in collaborative design principles, project pitching and research. Includes readings and small projects with teams formed at the outset of the class. Over the course, teams develop their own project along with a schedule for realization. Project themes vary, yet all projects must explore relationships of digital technologies and cultural products or processes. Includes presentations, discussion and analysis of team projects.	N	STO	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Pre-requisites: AME 385; Credit is allowed for only AME 386 or 394 (Collaborative Projects & Research II)
AME	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	410	Interactive Materials	Focuses on embedding computational media into the physical world. Students make, tinker and experiment with high-tech and low-tech materials, ranging from electronics (microcontrollers, sensors and actuators) to softer components including textiles, paper, paints, food and organic/living systems. Hands-on, materially oriented work is grounded in theoretical concepts from HCI (Human Computer Interaction), design and information studies to prototype tangible interactive systems.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): AME 330 or AME 394 (How to Build a Digital-Physical System); Credit is allowed for only AME 410 or AME 494 (Interactive Materials)
AME	430	Mac Development for Media Arts	Explores native application development for OS X (Macintosh) for use in the domain of media arts. Project-based course covers the native Xcode development environment and the C and Objective-C programming languages. Native applications are able to achieve the highest levels of performance; they leverage the unique technologies built for a platform and they are able to participate in the native user experience (look and feel) that all users of a popular platform expect. To understand native apps for OS X, the course examines a number of code frameworks provided for developers by Apple (the core of which are often called Cocoa), including Foundation, AppKit, AV Foundation, Core Animation and SpriteKit.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): AME 230; Credit is allowed for only AME 430 or AME 494 (Mac Development for Media Arts)
AME	444	Media Installations	Investigates historical and contemporary instances of the media installation, not only as a form of art but as a cultural artifact that appears in a variety of contexts. Students design and build media installations by learning to gather, manipulate and present many different kinds of media using a variety of high- and low-tech tools and techniques. Advanced skills with the tools and techniques for creating and manipulating digital images, sounds, graphics and video. Students learn how to make installations interactive by integrating sensors, input devices and computer vision systems. Design, build and refine media installations, and learn to document these installations at a high level using the latest video editing tools.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): AME 294 (Introduction to Interactive Environment); Credit is allowed for only AME 444 or AME 544 or AME 494 (Media Installations)
AME	470	Programming for Social and Interactive Media	Web sites, desktop applications connected to the "cloud" and mobile applications depend on services supplied by server-based software that is the invisible center of users' networked experiences. Applications and data servered over the Web are at the core of popular software from social applications such as Facebook, Twitter or Instagram to networked media like iTunes, Netflix or Hulu. Investigates the development of Web applications and services. Creates modern dynamic Web applications using open source technologies.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major; minimum 45 hours; Credit is allowed for only AME 470 or AME 570 or AME 494 (Programming for Social and Interactive Media) or AME 598 (Programming for Social and Interactive Media)
AME	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		
AME	485	Digital Culture Capstone I	Senior capstone projects in digital culture are interdisciplinary team projects that offer experience in diverse collaborations for solving complex problems, a proficiency widely demanded by employers. Students integrate, extend and apply information, principles, theories and/or methods learned in previous courses while supervised by the instructor.	N	STO	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): Digital Culture major, minor, or certificate; minimum 70 hours; Credit is allowed for only AME 485 or AME 494 (Digital Culture Capstone I)
AME	486	Digital Culture Capstone II	Senior capstone projects in digital culture are interdisciplinary team projects that offer experience in diverse collaborations for solving complex problems, a proficiency widely demanded by employers. Students integrate, extend and apply information, principles, theories and/or methods learned in previous courses while supervised by the instructor.	N	STO	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Pre-requisites: AME 485; Credit is allowed for only AME 486 or 494 (Digital Culture Capstone II)
AME	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6		Prerequisite(s): Barrett Honors student
AME	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-6	L	Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AME	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		
AME	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-7	L	
AME	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-3		
AME	530	Experiential Media Methodology and Theory I	Engages students in the theory and practice of designing and evaluating experiential media systems. Building on ideas and concepts explored in the companion introductory course, students create and critique a variety of integrated media systems demonstrating technical competence, aesthetic knowledge, analytic rigor and theoretical relevance.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student. Credit is allowed for only AME 530 or 598 (Experiential Media Methodology and Theory I)
AME	531	Experiential Media Methodology and Theory II	Focuses on media arts and sciences in the 20th and 21st century, discussing issues surrounding the definition of the field, media art creation practices, methods of criticism and analysis, interdisciplinary/transdisciplinary work and research, collaboration and current trends. Also focuses on the methodology, theory and history behind the design and development of experiential media systems. Directed toward those interested in researching, designing, building or critiquing experiential media systems that are culturally provocative, socially meaningful and deeply essential.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): AME 530; credit is allowed for only AME 531 or 598 (Experiential Media Methodology and Theory II)
AME	532	Creating by Algorithm	Focuses on creation of media of all kinds using computation. Using algorithms it is possible to create complex media that is difficult or impossible by traditional methods. Some techniques can capture the unpredictable evolutionary and emergent behavior found in nature. Investigates influential algorithmic methods including stochastic processes and Markov chains, Perlin noise, cellular automata, fractals, L-systems and genetic algorithms.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	533	Realtime Data Analysis and Pattern Recognition for Interaction	Real-time computing is increasingly used in a variety of settings and scenarios--no more so than in mobile computing. Embedded within our mobile devices are a multitude of onboard sensors, including a three-axis accelerometer, magnetometers, microphones, cameras and GPS. Explores, through the frame of mobile computing, the foundations of employing real-time sensor, visual or audio signals to deliver novel media applications. Introduces computational techniques for classification, detection and recognition of these diverse signal sources through practical example and relevant literature, including signal smoothing, feature extraction, clustering, pattern recognition, neural networks and content classification. Introduces the technical possibilities for such systems as well as the considerations involved in designing and developing real-time solutions.	N	LEC	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	541	Interactive Forms	This course explores how computational models can enhance the form, meaning, and engagement of interactive mediated experiences. Special emphasis is given on how new computational models (stochastic procedures, non-linear dynamics) can be used to mediate the complexity of our current experiences.	N	LEC	N	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	544	Media Installations	Investigates historical and contemporary instances of the media installation, not only as a form of art but as a cultural artifact that appears in a variety of contexts. Students design and build media installations by learning to gather, manipulate and present many different kinds of media using a variety of high- and low-tech tools and techniques. Advanced skills with the tools and techniques for creating and manipulating digital images, sounds, graphics and video. Students learn how to make installations interactive by integrating sensors, input devices and computer vision systems. Design, build and refine media installations, and learn to document these installations at a high level using the latest video editing tools.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only AME 444 or AME 544 or AME 598 (Media Installations)
AME	570	Programming for Social and Interactive Media	Web sites, desktop applications connected to the "cloud" and mobile applications depend on services supplied by server-based software that is the invisible center of users' networked experiences. Applications and data servered over the Web are at the core of popular software from social applications such as Facebook, Twitter or Instagram to networked media like iTunes, Netflix or Hulu. Investigates the development of Web applications and services. Creates modern dynamic Web applications using open source technologies.	N	LEL	N	GNA	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only AME 470 or AME 570 or AME 494 (Programming for Social and Interactive Media) or AME 598 (Programming for Social and Interactive Media)
AME	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AME	590	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	691	Seminar	A small class emphasizing discussion, presentations by students and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AME	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	Arts, Media and Engineering Sch T	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	100	Introduction to Applied Mathematics for the Life and Social Sciences	Introduces quantitative techniques as applied to problems in the life and social sciences. Includes challenges like understanding the complexities of the human genome or the implications of globalization for infectious disease, human health, and economic stability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	MA	Prerequisite(s): MAT 117 with C or better or Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only AML 100 or SOS 101
AML	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	253	Introduction to Mathematical Tools and Modeling for the Life and Social Sciences	Introduces the evaluation and construction of mathematical models used in the life and social sciences. Includes the basic steps in developing a model, analyzing it, and testing it with actual data. Covers the first steps concerning how to use formal mathematical techniques including developing equation-based relationships, plotting graphs, linear regression, and solving equations using computer software.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): AML 100 or SOS 101 with C or better

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AML	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	330	Social Simulation	Students will apply computer simulation and agent-based modeling techniques to study social systems relating to concrete research questions.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4	CS	Prerequisite(s): AML 100 or MAT 142, 170, 210, 265, or 270 with C or better OR Mathematics Placement Test score of 50% or higher; minimum 56 hours; Credit is allowed for only ASB 430 or CPI 430 or AML 330
AML	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	406	Directed Reading and Research in Applied Mathematics for the Life and Social Sciences	Collaborative, practice-oriented course where students produce individual or team-initiated research project reports on pertinent topics in the life and social sciences. Students select topics, design, identify and formulate effective research ideas, and then translate them into clear and effective research plans.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites:AML 100 and MAT 342 (or MAT 343); 86 minimum hours
AML	441	Mathematical Concepts and Tools in Sustainability	Explores various mathematical analysis and models pertinent to sustainability science drawn from both social and natural sciences and introduced in a problem-based context. Demonstrates basic concepts from game theory such as pure-strategy and mixed-strategy Nash equilibriums in such classic games as prisoner's dilemma, hawk-dove, coordination. Explores the evolutionary dynamics of these games through the replicator equations. Studies important concepts of stability and regime shift for selected problems. Also discusses some basic solution concepts in cooperative game theory (depending on interest and time).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s) with C or better: AML 253, or SOS 210(or SOS 294 Intro to Math Tools & Modeling). Credit is allowed for only AML 441 or 494 (Math Concepts & Tools in Sustainability) or SOS 441 or 494 (Mathematical Concepts and Tools in Sustainability)
AML	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
AML	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
AML	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Prerequisite(s): Barrett Honors student
AML	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
AML	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
AML	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7	L	
AML	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
AML	520	Agent-Based Modeling	Introduces agent-based modeling to simulate social and social-ecological systems. Topics include design, analysis, and empirical grounding of agent-based models to a variety of application domains including collective action, diffusion processes, resource use, health, and complex societies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	540	Statistical Modeling for Sustainability	Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to begin conducting empirical analyses in their domains of interest; bring students to a high level of competency in using a cutting-edge statistical software package (Stata) for data management and data analysis tasks; expose students to applications of statistical methods in the economics/policy/social science sustainability literatures in order to develop an understanding for how statistical tools are operationalized in the research world; and develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations and command of statistical tools that constitute quality empirical research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: Graduate (degree or non-degree) student; Credit is allowed for only AML, ESS or SOS 540

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AML	541	Mathematical Concepts and Tools in Sustainability	Explores various mathematical analysis and models pertinent to sustainability science drawn from both social and natural sciences and introduced in a problem-based context. Demonstrates basic concepts from game theory such as pure-strategy and mixed-strategy Nash equilibria in such classic games as prisoner's dilemma, hawk-dove, coordination. Explores the evolutionary dynamics of these games through the replicator equations. Studies important concepts of stability and regime shift for selected problems. Also discusses some basic solution concepts in cooperative game theory (depending on interest and time).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit allowed for only AML 494 (Math Concepts & Tools in Sustainability), AML 541, SOS 494 (Math Concepts & Tools in Sustainability), SOS 541 or SOS 598 (Math Concepts & Tools in Sustainability)
AML	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	610	Topics in Applied Mathematics for the Life and Social Sciences	Introductory course in applied mathematics for the life and social sciences, combined with the first semester of a two-semester course in mathematical biology. Provides a solid introduction to the modeling of biological and social processes as well as to some of the mathematical approaches involved in their analysis and simulation.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	612	Applied Mathematics for the Life and Social Sciences Modeling Seminar	Presents and applies mathematical modeling principles and techniques for representing the structure and operation of complex life and social systems and processes. Helps students identify potential problems in the life and social sciences and the corresponding mathematical and statistical methods that can be used for their study.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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AML	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AML	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AMS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
AMS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
AMS	201	Introduction to American Studies	Provides an intellectual foundation for the interdisciplinary study of American culture, history, and society. Introduces students to ideas, methods, tools, and theories in the vibrant field of American studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
AMS	276	U.S. Women's Movements	Historical survey of sources influential in the development of the feminist movement in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AMS 276 or WST 276
AMS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
AMS	310	History of American Systems to 1865	First of a two-part survey of political, legal, and economic institutions, placed in the context of the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H	
AMS	311	History of American Systems Since 1865	Second in a two-part survey of political, legal, and economic institutions, placed in the context of a dynamic industrialist capitalist society, from the age of industrialism and modern America.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H	
AMS	320	American Cultural History I	First of a two-part survey of American culture, broadly defined as historically transmitted patterns of meaning expressed in symbolic forms, including ideas, ideals, the arts, and social and economic standards from the nation's colonial background and early national period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 320 or HST 313
AMS	326	Popular Culture	Topics in American popular culture, including theories of popular culture; the history and analysis of mass media, including television, film, and the music industry; and vernacular art and the folk tradition.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	327	Regional Cultures	Examines the concept of regionalism and regional cultures in America with a special emphasis on the Southwest/Borderlands.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	330	American Lives	Examines American society through the study of autobiography and ethnography.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C	Prerequisite(s): minimum 30 hours
AMS	332	Studies in Race and Ethnicity	Topics relating to issues of race and ethnicity in American life. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	334	Class in America	Explores social class and inequality in the U.S. including history, culture, work, politics, globalization, and intersections of gender, race, ethnicity, and place.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): minimum sophomore standing
AMS	335	American Biography	Topics in biographies of individuals, comparative biographies, the art of biography, and the function of autobiography.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Minimum 45 hours

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AMS	336	The American Southwest in Literature and Film	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AMS 336 or ENG 334 or ETH 334
AMS	353	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 353 (or AFH 353) or AMS 353 or ENG 353 or ETH 353
AMS	354	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or AMS 354 or ENG 354 or ETH 354
AMS	380	Race, Gender, and Class	In-depth examination of how social inequalities are reproduced and perpetuated. Explores the intersections of race, class and gender in culture and society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only AMS 380 or ETH 380 or WST 380
AMS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
AMS	412	Studies in American Politics & Law	Topics in American political and legal systems, including social movements in the United States and women and the law. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	417	Religious Traditions of the American Southwest	Examines the sacred traditions that have evolved within the North American Southwest context.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
AMS	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
AMS	422	Studies in American Literature	Topics in American literature, including contemporary American comic fiction, literature of the American South, literature of American wars, Hispanic chronicles of the Southwest, literature of la Chicana, and American rhetoric. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	428	Chicano Cultures in the Southwest	Examines the history and cultures of people of Mexican descent in the Southwestern region of the United States through exploration of "cultural citizenship" and "belonging" as they relate to the pursuit of civil rights, equality, justice and cultural production.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AMS 428 or ETH 428 or LAS 428 or MAS 598 (Chicano Cultures in Southwest)
AMS	429	Interdisciplinary Topics	Senior-level seminar that examines issues relevant to two or more American cultures' fields. Topics may include Southwest/border Hispanic folklore, Southwestern corridors, American art and the city, and the West of the imagination. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	431	Gender Studies	Topics relating to issues of gender in American life. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
AMS	449	Hate Speech, Manifestos, and Radical Writings	Examines writings, speeches and texts that provoke radical or even revolutionary social change. At its core, this course asks: What is the radical and what does it do? How do radical writings function as texts, speech acts, inspirational documents, testimonies, accounts of madness, frightening moments, calls to arms, peacekeeping entities or speaking truth to power? Examines injurious speech and provocative writings that span a range of social movements and topics, including radical feminism, radical queer, Black power, indigenous rights, art and performance, anti-technology, animal rights, violence, madness and revolutionary resistance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): minimum 35 hours; minimum 2.50 GPA; Credit is allowed for only AMS 449 or ETH 449 or WST 449 or WST 394 (Hate Speech and Manifestos)
AMS	450	Latina/os, Schooling and Social Inequality	Advanced interdisciplinary understanding of the issues facing Chicano, Mexican American and Latino communities in relation to K-16 schooling in the southwestern United States. Examines various schools of thought that have shaped social discourse and policies, develops a critical perspective on the social and political issues affecting education, and identifies issues--both historical and contemporary--affecting Chicanos in public education.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only AMS 450 or ETH 450 or LAS 450 or AMS 429 (Latino/a School & Social Inequity)

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AMS	469	Abject Bodies and the Politics of Trash	Examines the possibilities inherent in "theorizing from the gutter"; looking at the world not from a lofty "Ivory Tower" but from the slime, the muck, the dumpster, the trash heap, the wasteland, the discarded and the downtrodden. Takes its theoretical framework from a radical 1960s manifesto called SCUM Manifesto by Valerie Solanas and from the French feminist philosophies of Julia Kristeva, who theorized the abject as a relationship with the grotesque that reveals the deep-seated fear of death. Uses these theoretical positions to examine trash, both abstractly and literally. Works through a variety of concepts ranging from actual trash, garbage, waste, toxic sludge, pollution and dirt, and tackles more abstract notions of trash such as the knowledge produced on the fringe in circuses, amusement parks, "trailer trash" zones, freak shows and the bodies of those marked as "Other" or different.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 36 hours; Credit is allowed for only AMS 469 or ETH 469 or WST 469 or WST 494 (Trash, Freaks and SCUM) or JHR 598 (Trash, Freaks and SCUM) or MAS 598 (Trash, Freaks and SCUM)
AMS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
AMS	490	Writing Certificate Portfolio	Preparing a portfolio demonstrating advanced writing skills. Limited to and required of students in the Writing Certificate Program.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1		
AMS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
AMS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
AMS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
AMS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	Prerequisite(s): ENG 101 or 105 with C or better; AMS 301 with C or better
AMS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
AMS	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
AMS	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
AMS	502	American Studies: Theory and Method	Explores some of the major themes in American studies scholarship by considering American cultural formation and change over the last two centuries.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): MA American Studies major
AMS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AMS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AMS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
AMS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
AMS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AMS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
AMS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	101	Introduction to Aeronautical Management Technology	Facilitates entry into aeronautical management technology programs. Emphasizes General Catalog; major and concentration requirements, registration, careers, and Polytechnic campus resources. Introduces various learning styles and strategies that assist students in becoming successful learners. Emphasizes time management techniques and academic integrity.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	1		

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AMT	105	Flight Operations and Safety I	Supervised private pilot operations, flight instruction, flight safety briefings and recurrent aviation subjects appropriate for private pilots. Flight instruction is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons and FAA Practical Exam(s) within the appropriate flight training syllabus and satisfactorily completing all academic requirements. Flight instruction costs are not included in university tuition and fees. Students following the single engine flight training track earn their Single Engine Private Pilot certificate. Students following the multiengine flight training track earn their Single Engine Private Pilot Certificate and their Multiengine Private Pilot certificate.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Professional flight program secondary application; Pre- or corequisite(s): AMT 182 and AMT 220 with C or better if completed
AMT	110	Flight Operations & Safety II	Concludes supervised private pilot operations and flight training and introduces students to supervised commercial pilot operations, flight training, flight safety briefings, and recurrent aviation subjects appropriate for private and commercial pilots. Flight instruction costs are not included in university tuition and fees.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 105 with C or better; Pre- or corequisite(s): AMT 222 with C or better if completed
AMT	150	Flight Operations & Safety III	Continuation of supervised instrument pilot operations, flight instruction, flight safety briefings and recurrent aviation subjects appropriate for instrument pilots. Flight instruction is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons and the FAA practical exam within the appropriate FAA-approved Part 141 training syllabus and satisfactorily completing all academic requirements. Flight instruction costs are not included in university tuition and fees. Students earn their Instrument Rating.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 110 with C or better
AMT	170	Introduction to Unmanned Aircraft Systems	Introduces the history of unmanned aircraft systems and current and future developments in civil and military operations. Specific blocks deal with elements that form an unmanned aircraft system: unmanned vehicles, communication, navigation, launch and recovery, control stations, payloads, and support equipment. Explores other current issues in unmanned aircraft operations: aviation regulatory system and integration, safety and human factors, ethical and legal issues, and the future unmanned aircraft systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		
AMT	182	Private Pilot Ground School	Ground school preparation for Private Pilot Certificate. Aerodynamics, navigation, performance, and regulations.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		
AMT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		
AMT	201	Air Traffic Control	Ground and air operations; weather services communications and routing; flight plans, IFR operations, departures and arrivals; and airport conditions and emergencies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: BAS Applied Science (Aviation Management Technology) OR BS Aeronautical Management Technology OR BS Air Traffic Management major
AMT	205	Flight Operations and Safety IV	Continuing introduction to commercial pilot flight operations. Flight instruction, lecture, quizzes and discussion of the current flight syllabus topics, student handbook/general operations manual, monthly safety and informational briefings. Students must maintain enrollment in the appropriate flight operations and safety course while engaging in flight training activities. The flight training is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons within the appropriate FAA-approved Part 141 training syllabus, and satisfactorily completing all academic requirements.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) student; AMT 150 with C or better
AMT	210	Flight Operations and Safety V	Covers instrument pilot flight operations. Flight instruction, lecture, quizzes and discussion of the current flight topics, student handbooks, operations manual, monthly safety meetings, informational briefings. Students must maintain enrollment in the appropriate flight operations and safety course while engaging in flight training activities. The flight training is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons within the appropriate training syllabus, and satisfactorily completing all academic requirements.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) student; AMT 205 with C or better
AMT	214	Commercial Pilot Ground School	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 1 of 2). 10 hours ground trainer included.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): Aeronautical Management Technology major; AMT 182 and 220 with C or better
AMT	220	Aviation Meteorology	Evaluation, analysis, and interpretation of atmospheric phenomena. Low- and high-altitude weather from the pilot's viewpoint.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		

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AMT	222	Instrument Pilot Ground School	Ground school leading to FAA Instrument Pilot Rating/Commercial Pilot Certificate (part 2 of 2). 10 hours ground trainer included.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: Pre-requisites: Aeronautical Management Technology (Professional Flight) major; AMT 105 and AMT 182 with C or better, OR nonmajor: AMT 182 with C or better
AMT	250	Flight Operations and Safety VI	Continuing introduction to commercial pilot flight operations and begins to introduce the student to certified flight instructor flight operations. Primary activities include flight instruction, lecture and discussion of the current flight syllabus topics, handbooks and general operations manual as well as monthly safety and other informational briefings. The flight training is considered to be the laboratory for this academic class. Course completion requirements are based upon completion of lessons within the appropriate flight training syllabus.	N	LEL	N	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 210 with C or better
AMT	270	Unmanned Aircraft	Introduces elements comprising the unmanned aircraft system (UAS). Includes review of UAS, Unmanned Aerial Vehicle (UAV); system development and certification, selection and design, aerodynamics and airframe configurations, characteristics of vehicle types, design standards and regulatory aspects, airframe design, payload types, and control and stability. Students apply concepts acquired in classroom sessions and construct various unmanned aircraft, train to operate using existing simulators, and conduct flight-testing. The final course project is the design, development and construction of a group 1 unmanned aircraft, serving as the core unmanned vehicle used in subsequent UAS courses. Incorporates UAS data collection and analysis throughout the course. Course concepts enable UAS student pilots to become knowledgeable of aerodynamic aspects of UAV to ensure safety of flight and improved maneuverability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 170 with C or better
AMT	280	Aerospace Structures, Materials and Systems	Basic aerodynamics, incompressible/compressible airflow, wind tunnel testing, wing theory; analysis of aircraft structures; properties and applications of materials, and aircraft systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	4		Pre- or corequisite(s): PHY 111, 113
AMT	285	Flight Instructor Ground School	Ground school in preparation for the FAA Flight Instructor Certificate.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s) with C or better: AMT 150, 214
AMT	286	Multiengine Pilot Ground School	Ground school preparation for the FAA Multiengine Rating.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	1		Pre- or corequisite(s): AMT 150 with C or better if completed; Aeronautical Management Technology (Professional Flight) major
AMT	287	Aircraft Powerplants	Theory and performance analysis of gas turbine and reciprocating aircraft engines. Engine accessories, systems, and environmental control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	4		Pre/Co-requisite: PHY 111 or PHY 121
AMT	292	Flight Instructor Instrument Ground School	Ground school preparation for the FAA Instrument Flight Instructor Rating.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 205 and 222 with C or better; AMT 285 or 385 with C or better
AMT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		
AMT	305	Flight Operations & Safety VII	Continuation of supervised multiengine commercial pilot operations, introduction of single engine commercial pilot operations, flight instruction, flight safety briefings and recurrent aviation subjects appropriate for commercial pilots. Flight instruction is considered to be the laboratory for this academic class. Course completion requirements are based on completion of lessons within the appropriate FAA-approved Part 141 training syllabus and satisfactorily completing all academic requirements. Flight instruction costs are not included in university tuition and fees. Students earn their Commercial Multiengine and Commercial Single Engine certificates.	N	LEL	Y	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Pre-requisites: Aeronautical Management Technology Professional Flight major; AMT 250 with C or better
AMT	308	Air Transportation	Studies the historical and international development of air transportation and its social, political, and economic impact upon global interrelationships.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3	G	Pre-requisite: Minimum 50 hours
AMT	310	Flight Operations and Safety VIII	Covers certified flight instructor instrument (CFII) and multiengine flight operations. Flight instruction, lecture and discussion of the current flight topics, student information handbooks, general operations manual (GOM), monthly safety, informational briefings. Requires enrollment in appropriate flight operations and safety course while engaging in flight training activities. Flight training is considered to be the laboratory for this academic class. Course completion requirements are based upon completion of lessons within the appropriate flight training syllabus.	N	LEL	Y	GNA	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 286 and 305 with C or better. Pre- or corequisite(s): AMT 292 (or AMT 392) with C or better if completed
AMT	350	Aircraft Design and Logistics Management	Fundamental aircraft design principles, including performance factors associated with mission profiles and the identification of basic logistical support requirements.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: AMT 280 with C or better; Pre/Co-requisite: AMT 287 with C or better if completed

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMT	360	Aircraft Dispatch Ground School	Aeronautical knowledge areas required for Aircraft Dispatch certification, as well as preparation for the Aircraft Dispatch knowledge examination. Regulations, aerodynamics, emergencies, flight physiology, weight and balance, navigation, aircraft performance, meteorology, and flight operations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 214; AMT 220; AMT 222; Credit is allowed for only AMT 360 or AMT 394 (Airline Dispatcher Ground School)
AMT	370	Unmanned Aircraft Systems	Students build upon gained knowledge, skills and experience by exploring unmanned aircraft avionics, autopilot systems, first person video (FPV), on-screen displays (OSD), communication systems, command and control (C2), ground control stations (GCS), flight software, and UAV launch and recovery systems. Students continue flight training and gain proficiency in unmanned aircraft operation using simulators and hands-on flight-testing. Students demonstrate their abilities to upgrade and modify their previously constructed unmanned aircraft in order to operate and conduct actual flight-testing. Incorporates UAS data collection and analysis throughout the course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 270 with C or better
AMT	382	Air Navigation	Theory and application of modern advanced navigation and flight instrument systems. Introduces crew resource management in multiplace cockpits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: Aeronautical Management Technology (Professional Flight) major; AMT 250 with C or better; Minimum 64 hours
AMT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		
AMT	396	Aviation Professional	Career focus for management and flight students, including internships, writing, interviews, and employment search in aviation industry.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): BAS or BS aviation program major; junior standing
AMT	408	National Aviation Policy	Examines aviation and airspace policies and policy process, including agencies involved in formulation, implementation, and evaluation of aviation policy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: AMT 308 with C or better
AMT	410	Aviation Safety and Human Factors	Aviation accident prevention, human factors, life support, fire prevention, accident investigation, and crash survivability. Development and analysis of aviation safety programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 182 with C or better; AMT 308 with C or better
AMT	442	Aviation Law and Regulations	Aviation within context of U.S. Common Law system. Public law, administrative rule making, sovereignty, enforcement, and case law analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 308 with C or better
AMT	444	Airport Management and Planning	Orientation to administration and management of modern public airports, including overview of planning, funding, and development of airport facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: AMT 308 with C or better
AMT	456	Introduction to Organized Labor	Introduces labor relations, unions, federations, collective bargaining, grievances, and labor legislation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): MGT 301 or TMC 330 (TMC 346)
AMT	460	Aircraft Dispatch Capstone	Capstone for aircraft dispatch whereby students are engaged in practical applications of regulations, aerodynamics, emergencies, flight physiology, weight and balance, navigation, aircraft performance, meteorology and flight operations. Uses various scenarios in which students can employ the strategies and procedures necessary for safe flight.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 360
AMT	470	Unmanned Aircraft Payloads, Sensors, and Control Stations	Builds on previously gained knowledge and experience. Student pilots utilize long-range communication and data links, UAS sensors, geospatial data collection, and still-imaging mosaicking. Students continue flight training using existing simulators and flight-tests during the course. Students apply concepts acquired during classroom sessions and construct a ground control station, modify and upgrade existing unmanned aircraft with payloads/sensors, train to operate sensors using existing simulators, and conduct flight-testing. Incorporates UAS data collection and analysis throughout the course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 370 with C or better
AMT	482	Airline Instrument Procedures	Advanced instrument flight using airline instrument procedures and airline crew and cockpit resource management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: Aeronautical Management Technology (Professional Flight) major; AMT 382 with C or better
AMT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): AMT 308 with C or better; junior standing
AMT	486	Regional Jet Aircraft Systems	Regional jet airline aircraft systems and flight procedures. Includes theoretical education for regional jet commercial passenger aircraft.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 382 with C or better; Aeronautical Management Technology (Professional Flight) student
AMT	488	Regional Jet Aircraft Systems II	Regional jet systems, with emphasis on air navigation systems, including Flight Management System (FMS), Selective Calling (SELCAL), and flight profiles.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: Aeronautical Management Technology (Professional Flight) student; AMT 382 with C or better
AMT	489	Airline Administration	Administrative organizations, economics of airline administration, operational structure, and relationship with federal government agencies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: Minimum Junior status; AMT 308 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMT	490	Regional Jet Operations Capstone	Regional jet aircraft operations and flight procedures. Includes theoretical education for RJ aircraft, FTD and full-motion simulator time.	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): Aeronautical Management Technology (Professional Flight) major; AMT 205 and 482 and 486 with C or better
AMT	491	Aviation Management Capstone	Integrated group project with industry partner to address current problems in either air carrier or airport management focus area.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): minimum junior standing; Pre- or corequisite(s): AMT 489 with C or better if completed or Aeronautical Management Technology BS major
AMT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-6		Prerequisite(s): Barrett Honors student
AMT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Aviation Programs	1-6	L	Prerequisite(s): Barrett Honors student
AMT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		Pre-requisite: Minimum 2.25 GPA
AMT	495	Unmanned Aircraft Systems Operations	Capstone course applies student pilots' knowledge and skills gained in previous UAS courses to safely deploy a UAS in response to real-world situation or research. Students collaborate with other university departments, state or federal agencies, and other organizations and conduct actual or simulated missions in geospatial data collection, search and rescue, and near-space operations. Course blocks include flight planning and preparation, aircraft preflight and maintenance, launch and recovery operations, payload operations, normal and emergency procedures, and mission planning and execution. Students continue flight training using existing simulators and flight-tests. Students use real-world situations which require deployment of equipment and systems developed during previous course. Places specific emphasis on aircraft and payload selection based upon proposed mission analysis. Incorporates UAS data collection and analysis throughout the course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 470
AMT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-7	L	
AMT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-3		
AMT	522	Aviation Law	Examines the U.S. legal system with a focus on the aviation perspective, administrative agencies, FAA enforcement, and case law.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	523	Intermodal Transportation Management	Systems theory applied to intermodal transportation networks. Surveys air and ground transportation infrastructure, institutional frameworks, and intermediaries promoting connections between modes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Senior in Fulton Schools of Engineering with a University Cum GPA 3.0 or greater
AMT	525	Airport Planning and Design	Completion of various phases of airport master planning process. Provides guidance for logical and timely development of airports. Project work groups assigned.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	526	Aviation Labor Relations	Investigates labor-management relations in the aviation industry, including laws, unionism, collective bargaining, public sector relationships, grievance procedures, and conflict.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	527	Airline Management Strategies	Since deregulation, airlines have undergone profound changes through mergers, consolidation, and acquisition. In-depth look at airline management strategies for the 21st century.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	533	Training Systems & Simulation	Provides an overview of simulation and its various uses in aviation instruction. Three main focus areas: simulation, learning and human performance, instruction and evaluation of instructional effectiveness. Focuses on research findings in these areas and practical application and implementation of simulation to improve learning and performance.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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AMT	534	Airline Pricing and Yield Management	Focuses on the fundamentals of airline economics and the volatility of industry performance at the operating level. Topics include the structure of the airline industry and the various historical and current operational strategies; demand, traffic, price and yield; operating revenues and operating costs. The airline industry is affected by various economic, environmental, political and regulatory conditions. Reviews the implications of these conditions on airline pricing, capacity, fleet selection and scheduling. Analyzes current and predicted future conditions to develop potential strategies for successful revenue management within the industry.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: degree- or nondegree-seeking graduate student. Credit is allowed for only AMT 534 or AMT 598 (Airline Pricing and Yield Management)
AMT	541	Aviation Physiology	Surveys human physiology and human performance principles related to modern aircraft and aircraft systems operating in multiple environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	546	Crew Resource Management/Line-Oriented Flight Training	Evaluates in-depth, multicrew coordination issues for commercial aviation pilots. Stresses importance of critical thinking, decision making, integrated resource utilization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	565	Safety in Complex Systems	Evaluates human error in aerospace systems. Discusses different theories of error and taxonomies as well as safety management systems to help identify hazards and risks and then help mitigate and/or eliminate them. Extensively uses case studies to highlight human failures as well as demonstrate organizational changes that resulted in safe and successful operations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	570	Unmanned Aerial Systems	Examines the system design, operations and employment of unmanned aerial systems (UAS), beginning with an overview of the system and human factors and specific issues involved with UAS design and operations. Communication, remote operations, operator display interface, and situational awareness and teamwork required for successful employment. Evaluates accident data to understand technology and human error concerns.	N	LEC	N	GNA	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AMT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Aviation Programs	1		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
AMT	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Aviation Programs	1-4		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AMT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) OR Fulton Polytechnic School student
ANB	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	600	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	601	Research Strategies in Animal Behavior	Using hands-on experiences, teaches key concepts underlying the control and function of animal behaviors and contemporary methods for measuring, analyzing, and reporting animal behaviors. Combines introductory classroom lectures on concepts and methods with direct application in observations and experiments on animal behavior in the field and the lab. Topics include communication, mating behavior and systems, parental care, kin selection, cooperation and competition, migration and dispersal, foraging, and anti-predator strategies.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: Animal Behavior PhD student
ANB	602	Current Issues In Animal Behavior	Student-led seminar course centers on discussions of contemporary literature in the field of animal behavior. Takes a student-driven approach, with course participants selecting a target theme for the semester, selecting individual papers to discuss each week, and leading discussions about relevant merits and shortcomings of each article. Additional topics may include: conceptual frameworks and results from the dissertation projects of participating students, career options and strategies in the behavioral sciences, responsible research conduct in the field, and tactics in manuscript publication and grantsmanship.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Pre-requisites: Animal Behavior PhD student
ANB	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ANB	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ANB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
ANP	194	Special Topics		Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ANP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ANP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ANP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
ANP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ANP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
ANP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ANP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
ANP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
ANP	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Building Design (Energy Perform/Bldgs) MS, Building Design (Facilities Dev/Mgt) MS or Building Design (Knowledge/Compng) MS student
ANP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ANP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ANP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ANP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student
ANP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Building Design (Knowledge/Compng) MS student
ANP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ANP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Building Design Knowledge and Computing MS student; ANP 592 with a grade of Y
ANP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Building Design Knowledge and Computing MS student
APA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisite: Freshman status
APA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	200	Introduction to Asian Pacific American Studies	Examines historical and contemporary issues facing Asian Americans and Pacific Islanders in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(HU or SB) & C	
APA	210	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only AFR 212 (or AFS 210) or APA 210 or JUS 210 or TCL 210

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APA	220	Introduction to Social Transformation	Introduces key concepts in the study of social change, social innovation, and social transformation. Studies examples of social movements, social activism, community organizing, and coalition building and how such efforts have transformed society and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only APA 220 or JUS 220 or SST 220
APA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
APA	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
APA	310	Asian Pacific American Arts and Cultures	In-depth exploration of Asian Pacific American cultural expression in art, literature, film, theatre, dance, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisite: APA 200 or APA 210 or minimum 30 hours. Credit is allowed for only APA 310 or FMS 310
APA	315	Asian Pacific American Literature	In-depth exploration of the literary history, critical reception, and major theories in Asian Pacific American poetry, fiction, and prose.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisite: APA 200 or 210 or 30 minimum hours
APA	330	Asian Pacific American Genders and Sexualities	In-depth exploration of gender and sexuality issues as they relate to Asian Pacific American experiences, including interracial relationships, stereotypes, feminism, queer theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites:APA 200 or 210 or 30 minimum hours. Credit is allowed for only APA 330 or WST 331
APA	340	Asian Pacific Americans and Media	Advanced study of the social construction of Asian Pacific American media images and resistance to those images in various historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisite: APA 200 or APA 210 or 30 hours
APA	345	Asian Pacific Americans and Film	In-depth examination of the representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C & H	Pre-requisite: APA 200, APA 210, or FMS 100, or minimum 30 hours. Credit is allowed for only APA 345 or FMS 345
APA	347	Immigration, Education and the Family	Cultural processes related to immigration and their impact on the social construction of the immigrant family and the education of other children. Immigration theories, immigration debates and discourses, the immigration landscape of the 21st century, conceptualizations of the family, and the methodological challenges family researchers face. Topics include issues pertaining to education and the family and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only APA 347, JUS 347, APA 394 (Immigration, Education & Family) or JUS 394 (Immigration, Edu. & Family)
APA	350	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
APA	352	Race, Space and the Production of Inequality	Explores how the relationship between race and space has been important to the development of broad patterns of social inequality in the United States. Through a variety of readings, films and other material, examines how ideas of race and space have been important to the making and maintenance of national boundaries, citizenship, regional histories and spatial typologies such as border, ghetto, suburb and prison.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): APA 200 or 210; minimum 45 hours; Credit is allowed for only AFR 352 (or AFS 352) or APA 352 or JUS 353 or TCL 353 or APA 394 (Race, Space and the Production of Inequality)
APA	356	Race and Child Development	Reviews the current research and literature about the particular role of race in child development. Even though race is not a valid biological construct, it has significant social implications as it shapes how children interact and are treated by others. Through primarily class discussions/activities, presentations and papers, addresses: (1) What are the research and theoretical issues in studying race? (2) What does race and racism mean? (3) How does race influence developmental processes?	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): APA 200 or APA 210 or 30 hours. Credit is allowed for only APA 356 or CDE 356 or APA 394 (Race and Child Development)
APA	360	Asian Pacific American Experience	Advanced study of the historical and contemporary experiences of Asian Pacific American racial/ethnic groups in the United States.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(HU or SB) & C	Pre-requisite: APA 200 or APA 210 or 30 hours
APA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisite: APA 200 or APA 210 or 30 hours
APA	428	Critical Race Theory	In-depth analysis of the ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only AFR, APA, JUS or SST 428
APA	450	Asian Pacific American Contemporary Issues	Advanced study of the issues shaping Asian Pacific American communities, including immigration, politics, education, health, family, gender, youth, interracial relations, and other contemporary topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisite: APA 200 or APA 210 or minimum 45 hours
APA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
APA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
APA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisite: APA 200 or APA 210 or minimum 45 hours
APA	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
APA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7	L	
APA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
APA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
APA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APH	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
APH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
APH	212	Culture of Place	Explores contemporary conditions in the built environment as they are shaped by cultural phenomena.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	
APH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
APH	300	World Architecture I/Western Cultures	Historical and contemporary built environments of Western civilizations: Mediterranean, Europe, and the Americas as manifestations of cultural history and responses to environmental determinants.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	2-3	HU & H & G	Pre-requisite: May not be Pre-Architectural Studies or Architectural Studies BSD student
APH	313	History of Architecture I	Intensive study of history of architecture from earliest traces to 1300. Examines cultures from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	(L or HU) & G & H	Pre-requisites: Architectural Studies major with ALA 100 or ALA 102 and passed degree milestone review or non-majors with junior standing
APH	314	History of Architecture II	Intensive introduction to history of architecture from roughly 1300 to present day. Examines cultures from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	(L or HU) & G & H	Pre-requisites: APH 313 with C or better
APH	336	20th-Century Architecture I	Architecture in Europe and America from the foundations of the modern movement to the culmination of the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	Pre-requisites: Minimum Junior standing or Digital Culture: Design major
APH	337	20th-Century Architecture II	Developments in architecture since the international style.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	Pre-requisite: APH 336
APH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
APH	405	Contemporary Architecture and Urbanism 1970 to the Present	Addresses issues of global architecture and urbanism in the late 20th and early 21st centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Prerequisite(s): APH 313 and APH 314, or graduate standing
APH	414	Great Cities	Historical survey of great cities from antiquity to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	(L or HU) & H	Prerequisite(s): minimum ASU cumulative 3.00 GPA; minimum 60 hours; Credit is allowed for only APH 414 or MUD 598 (Great Cities)
APH	421	First Concepts: What is... The Writing, Philosophy, and Culture of Architecture	Examines the major writings and concepts that surround the history of architecture. Focuses on (but not exclusively) work in the 20th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	L or HU	Pre-requisites: APH 313 & APH 314 with C or better; Architecture or Digital Culture Design student
APH	441	Ancient Arch	Architecture of the ancient Mediterranean world with selective emphasis on major historical complexes and monumental sites.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		

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APH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
APH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
APH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
APH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
APH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
APH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
APH	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APH	505	Foundation Theory Seminar	Foundation of conceptual architectural inquiry, stressing the reciprocal and interdependent relationship between design and theory.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Master of Architecture student; Co-requisites: ADE 522; ATE 556
APH	509	Foundation Seminar	Historical, technical, theoretical, environmental, and professional issues in architecture.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Master of Architecture; Co-requisite: ADE 510
APH	515	Current Issues and Topics	Critical examination of current architectural issues, topics, and discourse.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: APH 505 with a C or better; Co-requisite: ADE 621
APH	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	581	Contemporary Urban Design	Explores contemporary city and urban design issues related to contemporary cities.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Herberger Institute of Design and the Arts Graduate student
APH	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Herberger Institute of Design and the Arts Graduate student
APH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
APH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
APH	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APL	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	518	World Englishes	Examines the implications of the global spread of English, including its diverse forms and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only APL 518 or APL 591 (World Englishes) or APL 691 (World Englishes)
APL	555	Disciplinary Discourses	Professional and disciplinary issues in linguistics and applied linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	557	Computer-Assisted Language Learning	Explores the field of computer-assisted language learning. Traces the development of computer-assisted language learning (CALL) over the last three decades. Focuses on research that explores how computer technology can help facilitate second language development; relies primarily on empirical data to do so. Examine established as well as new research methods in CALL. Participants participate in one research study and apply theoretical and practical aspects of CALL in these projects.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only APL 557, ENG 557 or LIN 591 (Intro to Computer Assisted Language Learning)
APL	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	588	Spanish Language Acquisition	Examines Spanish language acquisition in children and adults in the context of monolingual and bilingual language acquisition.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only SHS 588 or APL 588
APL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Pre-requisite: Applied Linguistics Ph.D. student
APL	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	601	Introduction to Applied Linguistics	Overview of the field of applied linguistics. Applies linguistic knowledge to the resolution of language-related issues facing multilingual societies (e.g., second language acquisition and ultimate attainment, literacy, language assessment, bilingualism, heritage and indigenous languages, language attitudes, language planning and policy, language and politics, world Englishes).	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APL	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
APL	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	501	Differential Equations I	Linear and nonlinear ordinary differential equations. Existence and uniqueness of solutions, limit sets, stability. Lyapunov functions, linear systems with constant coefficients. Geometry of behavior in two and three dimensions, including Poincare-Bendixson theorem, Lorenz equations, linearization, sensitive dependence on initial conditions, bifurcations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	502	Differential Equations II	Partial differential equations, including classification, method of characteristics, separation of variables, boundary value and initial value problems, Green's functions, maximum principle, distributions, and weak solutions. Students must have already taken or be concurrently enrolled in Differential Equations I.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
APM	503	Applied Analysis	Convergence sequences and series of functions; metric space topology, compactness, completeness and the Ascoli-Arzelà Theorem; Contraction Mapping Principle, Implicit Function Theorem; intro to Lebesgue integration leading to L^p -spaces; properties of Hilbert spaces, Fourier transform. Students should have knowledge of linear algebra, multivariable calculus, and analysis at the undergraduate level.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	504	Applied Probability and Stochastic Processes	Markov chains, Martingales, probability measures, SDE, Brownian motion, Monte Carlo methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	505	Applied Linear Algebra	Fundamentals of linear algebra and numerical linear algebra, including decompositions (LU, QR, SVD), Eigen values, spectral theory, least squares problems. Programming with MATLAB.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	506	Computational Methods	Covers interpolation, solution of nonlinear equations and systems, numerical differentiation, numerical integration, numerical solution of ordinary and partial differential equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	520	Advanced Numerical Linear Algebra	Extends topics of APM 505. Introduces essential iterative methods, Gauss-Seidel, conjugate gradients. Methods for SVD, total least squares and root-finding applications in image analysis. Students should have basic knowledge of numerical linear algebra and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	522	Numerical Methods for Partial Differential Equations	Numerical methods for parabolic, elliptic, and hyperbolic partial differential equations, including finite difference/volume, finite element, and spectral methods. Mathematical concepts of stability, consistency, and convergence. Applications to scientific, biomedical, and industrial problems. Students should have a basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	523	Optimization	Building on a fundamental undergraduate background in linear algebra and calculus, covers continuous optimization, constrained/unconstrained and linear/nonlinear, as well as selected topics in discrete optimization. Some programming experience is needed for course projects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	524	Spectral Methods	Extends approximation theory to global methods, including Fourier and orthogonal polynomial expansions. Applications to imaging and hyperbolic, parabolic, and elliptic partial differential equations. Students should have previous graduate courses in ordinary and partial differential equations, basic programming skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	525	High-Performance Computing	Supercomputer architectures, parallel programming environments, languages, libraries, and algorithms for high-performance numerical simulations. Instructor/Department approval is required for this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only APM 525, MAE 494 (High-Performance Computing) or MAE 598 (High-Performance Computing)
APM	526	Advanced Numerical Methods for Partial Differential Equations	Partial content will vary from semester to semester, but may include hyperbolic conservation laws, finite element methods, multigrid methods, and parallel algorithms for partial differential equations. Applications to scientific, biomedical, and industrial problems. Students should have basic knowledge of PDE's and a programming language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	530	Mathematical Cell Physiology.	Mathematical modeling of dynamical aspects of cell physiology. Diffusion, membrane transport, intracellular calcium channel kinetics, calcium oscillations and waves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	531	Mathematical Neuroscience I	Mathematical modeling of electrochemical processes in nerve cells. Dendritic modeling, dendritic spines and synaptic plasticity, bifurcation analysis of excitable membrane models, deterministic and stochastic methods for threshold dynamics and bursting, relaxation oscillations. Students should have had a previous graduate-level PDE course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	533	Mathematical Population Biology I	Selectively covers population biology models in the forms of systems of difference equations or ordinary differential equations. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous graduate-level course in ODE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	534	Mathematical Population Biology II	Selectively covers population biology models in the form of partial differential equations and systems. Focuses on mathematical analysis of population models as well as model formulation and simulation. Students should have a previous basic graduate-level course in ODE and PDE.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	535	Mathematical Models in Medicine	Mathematical models for the etiology, epidemiology, pathogenesis, morphology and treatment of disease. Covers dynamical models of cancer and viral infections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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APM	541	Stochastic Modeling in Biology	Markov processes, random walks, martingales, branching processes, logistic growth model, Wright-Fisher model, Kingman's coalescent, bound and site percolations, contact processes, voter models. Students should have previously taken course work in probability and/or stochastic processes (or have a recommendation from their advisor). Recommendation from advisor is typically for students in biology or physics that have not taken statistics courses but have a good background in mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	553	Dynamical Systems	Center manifolds, structural stability, normal forms, averaging, chaos, control and synchronization. Students should have a previous graduate course in ODE or applied analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	560	Applied Dynamical Systems	Bifurcations, normal forms, pattern formations, mixing, Lagrangian chaos, and applications to fluid dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	570	Applied Linear Operators	Bounded linear and compact operators on Hilbert spaces. Linear integral equations, Fredholm and Hilbert-Schmidt theory, and approximate methods. Distributions. Completion of a course in Applied Analysis is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	575	Perturbation Methods in Applied Mathematics	Regular and singular perturbation methods for ordinary and partial differential equations, Boundary layer theory, matched asymptotic expansions, multiple-scale, homogenization, and WKB methods. Application to nonlinear oscillations, bifurcation and stability problems. Completion of a course in Differential Equations II or Partial Differential Equations in Engineering is strongly recommended prior to enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: APM 502 or MAE 502; Credit is allowed for only APM 575 or MAE 505
APM	576	Theory of Partial Differential Equations I	Existence and uniqueness theorems, boundary value and initial value problems, characteristics, Green's functions, maximum principle, distributions, and weak solutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	577	Theory of Partial Differential Equations II	Continuation of existence and uniqueness theorems, boundary value and initial value problems, characteristics, Green's functions, maximum principle, distributions, and weak solutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): APM 576
APM	581	Geometry and Control of Dynamical Systems I	Manifolds, tangent and cotangent bundle, Lie theory, integrability and controllability, and feedback control. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	582	Geometry and Control of Dynamical Systems II	Variational principles, Euler-Lagrange equations, Hamiltonian systems, optimal control, connections and curvature. Students should have previously taken coursework in differential equations, applied analysis, applied probability, and stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP4	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
APM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ARA	101	ASU: The Art Experience	Introduces the culture, challenges and opportunities of the School of Art. Addresses essentials for academic and personal success within the university.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	1		Credit is allowed for only ARA 101, 194 (ASU Art Experience) or HDA 194 (ASU Herberger Inst Experience)
ARA	110	Sculpture Safety	Introduces safety and environmental health in the sculpture studios. Pre- or corequisite for all sculpture classes.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	1		

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ARA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	195	Art in My World	Basic concepts and fundamental questions that provide insights into art making and that affect one's understanding and appreciation of art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	
ARA	202	Understanding Photographs	Slide lecture course in understanding photography as a fine art form.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ARA	218	Art and Visual Learning	Broad-ranging introduction to art and the visual world, focusing on art and artifacts from diverse cultures and eras, various two- and three-dimensional media, meaning and purpose in art, as well as community and internet art resources.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3	HU	Credit is allowed for only ARA 218 or 294 (Art and Visual Learning)
ARA	240	Encounters with Contemporary Art	Each year a committee of School of Art faculty and graduate students works together to bring important international artists to ASU to give lectures and meet with graduate students. Undergraduate students have the opportunity to attend those lectures, which are free and open to the public. The goal of this required class is to make sure that students get in the habit of taking advantage of this opportunity to hear first-hand from some of the world's most important and visionary artists and learn to write think and write about the work of other artists.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	1		
ARA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	309	Photography Now	Explores contemporary practice through lectures, readings, exhibition visits, screenings and discussions. Explores work created within the past thirty years up to the present. Students act as a collective "ear to the ground" for the medium, engaging in first-hand experiences and research and being responsible to share those experiences with the class as active agents of discovery. Requires reading current periodicals, attending and discussing photographic lectures and exhibitions both in-class and beyond within the local community.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): minimum 2.00 GPA; minimum 45 hours. Credit is allowed for only ARA 309 or 394 (Photography Now)
ARA	311	Art Appreciation and Human Development	Foundations of art for children and young adults. Emphasizes learning, development, and understanding art in historical and cultural contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Prerequisite(s): non-ART student; ENG 101; ENG 102; minimum junior standing
ARA	330	Issues in Intermedia	Critical survey of recent theory and practice in "intermedia" art. Created specifically to provide a common historical and theoretical framework for students majoring in the intermedia area, as well as to anyone seeking to broaden his or her understanding of non-traditional media, performance, installation, computer art, video, social practice, Webart and interactivity and their relationship to contemporary society and discourse.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 216 or minimum 45 hours; Credit is allowed for only ARA 330 or ARA 494 (Issues in Intermedia)
ARA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ARA	396	Professional Practices for Design and the Arts	Prepares young artists, designers and individuals in other creative fields to successfully enter the professional world of art and culture beyond the support system of the university. Through examining contemporary artists' models of practice and creative entrepreneurship; developing real life materials to promote their practice; engaging with guest artists, designers and other creative professionals; exploring best practices for arts-based businesses; and the array of continuing opportunities, student artists learn how they can shape their lives to sustain their artistic practice once they graduate. Best suited for students who are prepared to seriously contemplate the continuation of their specific practice beyond graduation. Students should enter this course with a collection of work samples that demonstrate their experience in their chosen discipline.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): minimum 56 hours; Credit is allowed for only ARA 394 (Professional Practices for Artist) or ARA 396
ARA	460	Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Credit is allowed for only ARA 460 or 560
ARA	460	Gallery Exhibitions	Practical experience in all phases of department gallery operations and preparation of gallery publications.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ARA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARA	489	Writing Art and Design Criticism	Arts writing workshop designed to help develop critical voice in written form. During the course of the semester, students learn about art and design criticism by reading work in a variety of contexts, looking at examples of art and design in person and discussing them, and writing and revising their own pieces of criticism.	N	SEM	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Minimum 2.00 GPA; Minimum 45 hours; Credit is allowed for only ARA 489 or 494 (Writing Art and Design Criticism)
ARA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		

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ARA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7	L	
ARA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		
ARA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
ARA	560	Gallery Exhibitions	Provides practical experience in all phases of art gallery operations. Students learn professional art gallery practices through hands-on experience in the School of Art Student Galleries including Harry Wood, Step, and Gallery 100. Class members assist BFA and MFA candidate students in many phases of exhibition preparation and execution as well as assist with the curation and design of group exhibitions.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARA 460, 560 or 598 (Gallery Exhibitions)
ARA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	589	Writing Art and Design Criticism	Arts writing workshop designed to help develop critical voice in written form. During the course of the semester, students learn about art and design criticism by reading work in a variety of contexts, looking at examples of art and design in person, analyzing and discussing them, and writing and revising their own pieces of criticism.	N	SEM	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Graduate student (degree seeking or non-degree seeking). Credit is allowed for only ARA 489 or ARA 589 or ARA 598 (Writing Art & Design Criticism)
ARA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ARA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ARB	101	Elementary Arabic I	Reading, writing, speaking, and understanding basic Arabic.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Credit is allowed for only ARB 101 or MSA 101
ARB	102	Elementary Arabic II	Reading, writing, speaking, and understanding basic Arabic.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Credit is allowed for only ARB 102 or MSA 102

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARB	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Maximum 24 earned hours
ARB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	201	Intermediate Arabic I	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Credit is allowed for only ARB 201 or MSA 201
ARB	202	Intermediate Arabic II	Review of Arabic grammar with emphasis on the development of the skills of listening comprehension, reading, speaking, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Credit is allowed for only ARB 202 or MSA 202
ARB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	311	Advanced Arabic Skills I	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	321	Arabic Conversation I	Emphasizes spoken Arabic and conversation skills. Simultaneously develops communicative skills, vocabulary, and cultural awareness.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	331	Arabic/Islamic Culture and Literature	General introduction to the Middle East that synthesizes cultural, social, and literary information. Focuses on the experiences of ordinary Middle Eastern people to convey a grassroots sense of the Middle East.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101, 105, or 107 with C or better; Credit is allowed for only ARB 331 or SLC 331
ARB	335	Arabic Culture and Islam	Develops awareness of Arabic culture and Islam. Covers a variety of cultural topics, including family, status of women, food, music, and Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	
ARB	336	Introduction to the Qur'an	Introduces the Qur'an and examines the historical, contextual, religious and interpretive dimensions wherein the Qur'an developed. Deals with the structure of the Qur'an, the different sections, suras (Qur'anic chapters), and some of the verses. Also includes an introduction to the idea of revelation, its history, the content and some of the different themes of the Qur'an, and discusses aspects of the Qur'an as a source of law. Taught in English; requires no knowledge of Arabic or Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ENG 101, ENG 105, or ENG 107 with C or better; Credit is allowed for only ARB 336 or 394 (Introduction to the Qur'an)
ARB	337	Hadith and Prophetic Tradition	Considers the Hadith as a literary text and as the prophetic tradition in Islam. Focuses on the development of the Hadith as a vast subject in Arabic literature, its collection methodology, Hadith science, and its contents. Gives special attention to the relationship of the Hadith as the second source, after the Qur'an, of Islamic knowledge, Islamic theology, Islamic philosophy and Islamic law. Explores the various ways and approaches in which Muslims employ the Hadith along with the Qur'an in their search for meaning, identity and knowledge. All readings are in English; requires no prior knowledge of Arabic language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ENG 101, ENG 105, or ENG 107 with C or better; Credit is allowed for only ARB 337 or 394 (Arabic Hadith and Prophetic Tradition)
ARB	341	Quran Text and Women	Addresses Muslim women scholars' argument that it is not the religion but the patriarchal interpretation of the Quran that have kept Muslim women oppressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H	
ARB	351	Classical Arabic Literature	Provides a survey in classical Arabic literature. Focuses on the development of classical Arabic poetry and prose since their interceptions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	352	Modern Arabic Literature in Translation	Surveys the major trends, themes and genres of modern Arabic literature in translation. Provides a foundational knowledge of modern literature in the Arabic language. Focuses on continuity and change, cultural diversity and multiplicity in the Middle East, and the social, religious and historical aspects of modern Arab culture. No knowledge of Arabic language is required for this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only ARB 352 or 394 (Introduction to Modern Arabic Literature)
ARB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	411	Advanced Arabic Skills II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	421	Arabic Conversation II	Focuses on developing all four skills of the Arabic language acquisition: reading, writing, listening, and speaking. Aims to help students acquire an advanced proficiency in Arabic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ARB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ARB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
ARB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
ARB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ARB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARB	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARE	250	Teaching Inquiry in Art	Issues in teaching and learning through directed, guided, and independent inquiry about artworks and through art making.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ARS 101 or 102; 6 hours (2 classes) from ART 111, 112, 113, or 115 with C or better
ARE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	301	Studio Art and Human Development	Study of human development in studio art from early childhood to adult years.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ARE	370	Teaching Visual Culture	Explores issues and applications of everyday aesthetics that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: BA or BFA Art major; ARE 250 OR BIS Interdisciplinary Studies (Studio Art concentration) or Studio Art minor; ARS 101 or ARS 102; ART 110; ART 112 (or ART 113, 115 or 116)
ARE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	440	Interdisciplinary Art Education	Explorations in art education's disciplines, history, and people's artmaking development at diverse age levels and abilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): BIS Interdisciplinary Studies (Studio Art concentration) or Herberger Institute major or Studio Art minor; minimum 2.00 GPA; minimum 55 hours
ARE	446	Multicultural Issues in Art Education	Explores multicultural issues, ethnicity and cultures related to art and education. Discussion course on facts and sometimes controversial interdisciplinary materials draws upon knowledge from various disciplines. Emphasizes art educational issues and teaching. Also explores international and global issues concerning multiculturalism.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Minimum 45 hours; Credit is allowed for only ARE 446, 494 (Multicultural Issues in Art Education), 546 or 598 (Multicultural Art Education)
ARE	482	Teaching Art Processes	Art traditions of the 20th century as a basis for studio and art history instruction. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Fine Arts Art student
ARE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARE	486	Art Education: Strategies and Applications	Implementation and evaluation of art instruction for K-12 population. Includes teaching of Saturday classes in the Children's Art Workshop. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Art student; ARE 482 with C or better
ARE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		Prerequisite(s): Barrett Honors student
ARE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequisite(s): Barrett Honors student
ARE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARE	496	Methods and Assessment of Learning in Art	Individual or group research on the assessment of art learning incorporating theory and practice. Meets art postbaccalaureate certification requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Art student; ARE 250 with B- or better
ARE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7	L	
ARE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisites: Minimum 90 hours

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ARE	510	Visual Culture Research	Research on instruction of everyday aesthetics and related issues that contain powerful technological, social, and economic factors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	520	Issues in Teaching Inquiry in Art	Issues in teaching and learning focused both on inquiry about artworks and on inquiry through art making.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	525	Research on Art Instruction	Research methods and assessment of learning in art. Pilot studies on the effects of instruction on learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	530	Issues in Teaching Studio Art	Critical examination of issues concerning teaching multicultural art to different populations of students. Historical and philosophical foundations reviewed. Recommended to be taken before ARE 535.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	535	Research on Teaching Studio Art	Review of empirical and historical research methods, learning theory, and assessment of learning in studio art, including developmental studies and their limitations. Pilot studies on the effects of instruction upon learning. Recommended to be taken after ARE 530.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	540	Teaching Art in Cultural Contexts	Relationship of multicultural perspectives to teaching/learning art criticism, aesthetics, studio art, and art history.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	546	Multicultural Issues in Art Education	Explores multicultural issues, ethnicity and cultures related to art and education. Discussion course on facts and sometimes controversial interdisciplinary materials draws upon knowledge from various disciplines. Emphasizes art educational issues and teaching. Also explores and analyzes international and global issues concerning multiculturalism.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only ARE 446, 494 (Multicultural Issues in Art Education), 546 or 598 (Multicultural Art Education)
ARE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
ARP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ARP	451	Architecture Field Studies	Organized field study of architecture in specified national and international locations. Credit/no credit. May be repeated for credit with director approval.	N	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-6		
ARP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: ADE 322 with a C or better; Co-requisite: ADE 421; ATE 451
ARP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ARP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
ARP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
ARP	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Master of Architecture student; ADE 522 with a C or better
ARP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Herberger Institute of Design and the Arts Graduate student
ARP	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
ARP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ARP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Master of Architecture student
ARS	100	Introduction to Art	Provides an introduction to the understanding and enjoyment of art through the study of painting, sculpture, design, photography, and the decorative arts. Students gain an awareness of meaning, functions, and significance of art, while learning an art-related vocabulary and a set of analytical tools for discussing and understanding art from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: Non-Art majors; Credit is allowed for only ARS 100, 101, 102, or 300
ARS	101	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	
ARS	101	Art from Prehistory Through Middle Ages	History of Western art from the Paleolithic period through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	
ARS	102	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	
ARS	102	Art from Renaissance to Present	History of Western art from the Renaissance to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	
ARS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ARS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	201	Art of Asia	History of the art of the Asian cultures, with emphasis on China, Japan, and India. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H & G	
ARS	202	Art of Africa, Oceania, and the Americas	History of art of Africa, Oceania, and the New World. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H & G	
ARS	250	History of Photography	History of photography from the 19th century to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	
ARS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	300	Introduction to Art	Parallels ARS 100 course content but requires a higher level of accomplishment and comprehension. Introduces visual culture, the purpose of art, and the relationship between art and visual culture. Students learn how visual culture pervades our everyday lives and how understanding visual literacy can help us participate more fully in the world around us.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: Non-Art major; Minimum 55 hours; Minimum 2.00 GPA; Credit is allowed for only ARS 100, 101, 102 or 300; Graphic Design majors: Minimum 2.00 GPA; Minimum 55 hours; Graphic Design majors with credit for ARS 100 may not enroll in ARS 300
ARS	302	Art/ Africa, Oceania & Americas	Issues in the art of Africa, Oceania, and the Americas related to ritual, gender, transformation of tradition, and encounters with Europeans.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H & G	Pre-requisite: ENG 102, 105, or 108
ARS	310	The Renaissance in Tuscany	Course taught in Florence, Italy. History of arts in Tuscany with focus on city of Florence from 14th through 16th centuries. Completion of ARS 101 and 102 suggested.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ARS	330	The Portrait	Examines the history and production of portraits in contexts of social hierarchies, historical events, gender, politics, class, morality and aesthetics with a focus on the 15th to the 21st centuries in painting, sculpture and photography.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3	HU	Prerequisite(s): one 100-level course in APH, ARS, ASB, ENG, FMS, HST, MHL, MUS or SLC with B- or better; Credit is allowed for only ARS 330 or ARS 394 (Genre: Portraits)
ARS	340	Art in America	American art from colonial times through the Second World War. Not available to students who have completed ARS 542.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: BA or BFA Art major: ARS101; ARS 102 with C or better OR BIS Interdisciplinary Studies (Studio Art concentration) or Studio Art minor: ARS 101. Credit is allowed for only ARS 340 or 542

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ARS	345	Art and Television	Critical introduction to the interrelation of technology and visual art using the tools of art history and media/cultural studies. Students read theorists of the relation between visual art and the mass media, and use them to analyze early presentations of visual art and art history on television of the 1960s and 1970s. Examines the contemporaneous and parallel development of video art--an artistic medium appropriated from television technology--through the study of key video artworks.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: minimum 2.00 GPA; minimum 45 earned hours; Credit is allowed for only ARS 345 or ARS 394 (Art & Television)
ARS	362	Pre-Columbian Art I	Art history of the Aztecs, Maya, Inka and their ancestors before the arrival of Europeans. Covers their prolific artistic production starting with their earthworks in the deserts of Peru and ending with their stone pyramids and painted codices of Guatemala and Mexico. Meets non-Western Art History Requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Prerequisite(s): minimum 45 hours
ARS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ARS	402	Art of Ancient Egypt	Aesthetic, philosophical, and cultural basis of Egyptian art from pre-Dynastic period through New Kingdom. Emphasis on sculpture and architectural monuments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: ARS 101 or ARS 102 with C or better; Credit is allowed for only ARS 402 or 502
ARS	404	Greek Art	History of art, architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Prerequisite(s): ARS 101 with C or better; Credit is allowed for only ARS 404 or 504
ARS	406	Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: BA or BFA Art major: ARS101; ARS 102 with C or better OR BIS Interdisciplinary Studies (Studio Art concentration) or Studio Art minor: ARS 101
ARS	410	Early Christian and Byzantine Art	Art and architecture of the early church and the Byzantine Empire from the 4th to the 15th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	412	Early Medieval Art	Painting, sculpture, architecture, and the minor arts from Migration, Carolingian, and Ottonian periods considered within religious, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Prerequisite(s): ARS 101 (or ARS 102) OR any 200-level or higher course in ASB, ENG, FRE, GER, HST, ITA or REL with B- or better
ARS	414	Romanesque Art	Sculpture, painting, architecture, and minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Prerequisite(s): ARS 101 (or ARS 102) OR any 200-level or higher course in ASB, ENG, FRE, GER, HST, ITA or REL with B- or better. Credit is allowed for only ARS 414 or ARS 514
ARS	416	Gothic Art	Painting, sculpture, and architecture in western Europe during the Gothic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	417	Late Gothic Art in Central Europe	Sculpture, painting, and architecture of the late-Gothic style, ca. 1350-1525, considered within religious, social, economic, and political contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ARS 101 (or ARS 102) OR any 200-level or higher course in ASB, ENG, FRE, GER, HST, ITA or REL with B- or better. Credit is allowed for only ARS 417 or ARS 517
ARS	418	German Renaissance and Reformation Art	Graphics, painting, sculpture, and architecture, ca. 1450-1550. Reformation themes and Renaissance style considered within religious, political, social, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	ARS 101 (or ARS 102) OR any 200-level or higher course in ASB, ENG, FRE, GER, HST, ITA or REL with B- or better. Credit is allowed for only ARS 418 or ARS 598 (German Renaissance and Reformation Art)
ARS	422	Italian High Renaissance Art and Mannerism	History of Italian art during the 16th century, including the achievements and influence of Leonardo da Vinci, Raphael, and Michelangelo.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 422 or 522
ARS	424	Italian Baroque Art	Italian painting, sculpture, and architecture of the 17th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: ARS 101; ARS 102
ARS	426	Art of the 17th Century in Northern Europe	Baroque painting, sculpture, and architecture in Flanders, the Netherlands, France, and England.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102

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ARS	434	Revolution to Realism in 19th-Century Art	Between 1770 and 1900, a period called the long 19th century, Europeans experienced rapid and extensive changes in politics, culture, social and economic structures, scientific methods, and technology. The Industrial and French Revolutions reflected rapid developments rooted in the 16th-17th century Scientific Revolution and rising nationhood. Considers how in this period European art reflected and shaped historical events in content, style, representational strategies and new roles for art and artists.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Prerequisite(s): at least one course in APH, ARS, ENG, FMS, HST, or MHL with B or better; Credit is allowed for only ARS 434 or ARS 534
ARS	435	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): one course in ARS, ENG, or HST at 200 level or higher with B or better; Credit is allowed for only ARS 435 or ARS 533 or ENG 428
ARS	436	The Artist, War, and Revolution (Versailles to Vietnam)	Critical study of artistic responses to war and revolution in Europe and United States from French Revolution to Vietnam conflict.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	438	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisite: ARS 102 with B- or better or one course in ARS, ENG or HST at 200 level or higher with B or better
ARS	438	Art of the 20th Century I	Developments and directions in art between 1900 and World War II.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Pre-requisite: ARS 102 with B- or better or one course in ARS, ENG or HST at 200 level or higher with B or better
ARS	439	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & H	Pre-requisites: ARS 102 or ARS 438 with B- or better; Credit is allowed for only ARS 439 or ARS 539
ARS	439	Art of the 20th Century II	Art since World War II, with consideration of new concepts and experimentation with media and modes of presentation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Pre-requisites: ARS 102 or ARS 438 with B- or better; Credit is allowed for only ARS 439 or ARS 539
ARS	440	Identity and World Film	Examines how films around the world represent gender, race, ethnicity, and sexual orientation through the lens of genres and their variations and how genres reinforce or critique stereotypes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: minimum 50 hours; At least one 200-level course in literature, art history, history, OR film and media studies with a grade of B- or better; Credit allowed for only ARS 440, FMS 427, ENG 465, ARS, ENG or FMS 494 (Identity and World Film)
ARS	441	Public Art	Explores the lively field of contemporary public art, particularly as defined by percent-for-art programs established through city ordinances during the last forty years. Also considers historical precedents, including Civil War monuments and the City Beautiful Movement.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite(s): minimum 50 hours; Minimum 2.00 GPA; Credit is allowed for only ARS 441, 498 (Public Art), 541 or 591 (Public Art)
ARS	442	Critical Issues in American Painting	Explores issues of national identity and western expansion, Manifest Destiny, through images of race and violence in western American painting from 1800 to the early 20th century. Includes "claiming and settling the wilderness," cultures in conflict, the cowboy, and visions of an enchanted land.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 442 or 542
ARS	443	Artists in Film: Artists' Biopics	Examines artists' "biopics," biographical films about artists, chronologically from the subgenre's first appearance in 1936 to recent films. Explores relationships between film and history and between film and myths of creativity; major directors' attraction to artists' biopics; stereotypes of artists (e.g., genius, deviant); and how notions of creativity are inflected by gender, race and national identity. Assignments include weekly readings and film viewings and one short paper; optional documentaries and films are also available.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): a least one course at the 200 level or above in ARS, ENG, FMS, HST with B or better; Credit is allowed for only ARS 443, 494 (Artists Biopics) or FMS 430
ARS	444	Films of India	Examines classic, Bollywood and diasporic films of India from 1950 to the present.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ARS 444, ARS 544, FMS 426, ARS 494 (South Asian Cinema) or ARS 494 (Films of India)
ARS	451	20th Century Photography	Personalities, processes, images, and ideas in photography from 1914 to present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		

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ARS	456	Introduction to Museums	Broad scope of what museums do by exploring their history and the critical issues they face. Acquaints students with the basic functions of specific museum departments and staff, including the role of director, curator, registrar, preparator, as well as fund raising, marketing, audience development, education, exhibitions, conservation, ethics, cultural/heritage tourism and public art. Guest speakers and field trips enhance classroom material.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ARS 101 or ARS 102 OR any 200-, 300- or 400-level course in ASB, ENG or HST with B- or better
ARS	458	Critical Theories in the Visual Arts	Examines current critical theories through their application to all visual arts. May include new historicism, Marxism, deconstruction, post-structuralism, semiotics, Lacanian psychoanalysis, feminism, postmodernism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	459	Writing Art Criticism	Traditional and contemporary approaches to the criticism of art. Students write critical essays. Latter half of the semester stresses the criticism of contemporary art in various media.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: ARS 458
ARS	460	Art Now	Critical overview of major issues and controversies of the last 10 years within the global, national, and local art scene.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ARS 101 or 102 with B- or better or one course in ARS, ENG, or HST at the 200 level or higher with B or better, OR Digital Culture major
ARS	465	Native Art of North America	Native American art forms of the United States and Canada from prehistoric times to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & C & H	Pre-requisites: Minimum 45 hours; Minimum 2.00 GPA; Credit is allowed for only ARS 465 or 565
ARS	466	Native American Art of the Southwest	American Indian art in the southwestern states from its origins to the present day. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & C & H	Pre-requisites: Minimum 45 hours; Minimum 2.0 GPA
ARS	468	Art of the Arctic and Northwest Coast	Art associated with ceremony, shamanism, and daily life in the Arctic and on the Northwest Coast. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU & C & H	Pre-requisites: Minimum 45 hours; Minimum 2.0 GPA
ARS	469	Mexican Art	Art of Mexico and related Central American cultures from the prehistoric to the contemporary schools. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: ARS 101; ARS 102
ARS	472	Art of China	Study of major forms in Chinese art: ritual bronze, sculpture, ceramic, calligraphy, painting, and architecture. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: Minimum 50 hours; Minimum 2.00 GPA
ARS	473	Art of Japan	Japanese art from the Joman period to the present. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisite: Minimum 55 hours; Credit is allowed for only ARS 574 or ARS 473
ARS	475	Chinese Painting	From Ku K'ai-chin to Ch'i Pai-shih. Major artists, styles, and movements in Chinese painting. Meets non-Western art history requirement.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Pre-requisites: Minimum 50 hours; Minimum 2.00 GPA; Credit is allowed for only ARS 475 or 575
ARS	480	Research Methods	Methodology and resource material for art historical research. Techniques of scholarly and critical writing and evaluation of bibliographic sources.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3	L	Pre-requisites: Museum Studies or Art History student; Junior standing; ARS 101 and ARS 102 with B- or better
ARS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		
ARS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
ARS	485	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	L	Pre-requisites: ARS 101; ARS 102; Credit is allowed for only ARS 485 or 585
ARS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		Prerequisite(s): Barrett Honors student
ARS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequisite(s): Barrett Honors student
ARS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ARS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ARS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7	L	
ARS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
ARS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Art	1-3		Pre-requisite: Minimum 90 hours

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ARS	501	Methodologies and Art History	History of the discipline and an exploration of various methodologies, critical theory, and bibliographies used by art historians.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	502	Critical Studies in Egyptian Art	Egyptian art from pre-Dynastic to New Kingdom periods. Focus on aesthetic, philosophical, and cultural contexts. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 402 or 502
ARS	504	Critical Approaches to Greek Art	Art and architecture of Aegean civilizations (Cycladic, Minoan, Mycenaean) and of Greece to end of Hellenistic period. Research paper and readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 404 or 504
ARS	506	Critical Studies in Roman Art	Art and architecture of Etruria, the Roman Republic, and the Roman Empire. Research paper and/or supplemental readings required.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	514	Critical Approaches to Romanesque Art	Sculpture, painting, architecture, and the minor arts in western Europe, ca. 1030-1200, considered within religious, economic, and social contexts. Requires research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 414 or 514
ARS	533	The Pre-Raphaelites	Explores Pre-Raphaelite culture, both literature and art, and relevant social history, from the Pre-Raphaelite Brotherhood through Aestheticism and early twentieth century, focusing on interactions between images and texts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ARS 435 or ARS 533 or ENG 428
ARS	534	Art and Visual Culture of the 19th Century	Critical study of visual arts using primary source material from mid-19th century to WWI within philosophical, socioeconomic, and economic contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 434 or 534
ARS	538	Art of the 20th Century I	Charts how the avant-garde in the early 20th century developed different strands of modern art as it sometimes grew closer to, and at other times veered away from, radical politics.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 438, 538 or 598 (Art of 20th Century I)
ARS	539	Art of the 20th Century II	General introduction to major trends and issues of Euro-American art created between 1955 to around the turn of the 21st century.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking). Credit is allowed for either ARS 439 or ARS 539 or ARS 598, Art of 20th C
ARS	540	Identity and World Film	Examines how films around the world represent gender, race, ethnicity, and sexual orientation through the lens of genres and their variations and how genres reinforce or critiques stereotypes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 540, FMS 527 or (ARS 494, ENG 465, FMS 494 or ARS 598 Identity and World Film)
ARS	541	Public Art	Explores the lively field of contemporary public art, particularly as defined by percent-for-art programs established through city ordinances during the last forty years. Considers historical precedents including Civil War monuments and the City Beautiful Movement.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 441, 498 (Public Art), 541 or 591 (Public Art)
ARS	542	Critical Issues in American Painting	Explores themes and social issues in American art with a critical study of American painting from the 18th century to 1850.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 340, 442 or 542

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ARS	543	Artists in Film: Artists' Biopics	Examines artists' "biopics," biographical films about artists, chronologically from the subgenre's first appearance in 1936 to recent films. Explores relationships between film and history and between film and myths of creativity; major directors' attraction to artists' biopics; stereotypes of artists (genius, deviant, etc.); and how notions of creativity are inflected by gender, race and national identity. Assignments include weekly readings and film viewings and one short paper; optional documentaries and films are also available.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ARS 443 or ARS 543 or FMS 430 or FMS 543 or ARS 598 (Artists in Film: Biopics)
ARS	544	Films of India	Examines classic, Bollywood and diasporic films of India from 1950 to the present.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking). Credit is allowed for only ARS 444, ARS 544, ARS 598 (Films of India) or FMS 426
ARS	565	Native Art of North America	Critical examination of Native American art within culture, prehistory to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 465 or 565
ARS	574	Studies in Japanese Art	Critical examination of the nature and history of Japanese art, its rich heritage and its indebtedness to foreign sources.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 473 or 574
ARS	575	Approaches to Chinese Painting	Critical history of Chinese painting from Eastern Chou to 1911. Emphasis on masters, regional developments, and conceptual underpinnings.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Minimum 108 hours; Senior or Postbaccalaureate Undergraduate or Graduate; Credit is allowed for only ARS 475 or 575
ARS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	585	Women in the Visual Arts	Historical study of art by women in various media; related social, political, educational issues; representation of women in art.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 485 or 585
ARS	586	Theories of Contemporary Art	Upper-level introduction to a variety of issues in contemporary art theory. Over the course of the semester, students travel through a different thematic segment each week. Topics covered include globalization, activism, relational aesthetics, art and ecology, as well as other themes that have found increased relevance as new art forms, media and theory proliferate in the 21st century.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ARS 586 or ARS 591 (Theories of Contemporary Art)
ARS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours

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ARS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Seniors or Post Bacc undergraduates with minimum of 108 earned hours
ARS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ARS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Art	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ART	110	Drawing as Seeing and Thinking	Immerses students from a broad range of non-art disciplines in the practice of drawing. Considers and reflects on drawing in its most expanded form: as a primary tool of communication and creative problem solving, as movement, as sensory experience and as its own unique method of cognition. Divides class meetings among lectures, exercises, field excursions and opportunities for critical dialogue. Students leave with an appreciation of the unique power of mark-making and an improved understanding of its application in their lives.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3	HU	Credit is allowed for only ART 110 or 194 (Drawing as Seeing and Thinking)
ART	111	Drawing I	Fundamental, technical, and perceptual skills using common drawing media and their application to pictorial organization. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	112	2-D Design	Fundamentals of pictorial design. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art, Art-Exploratory, Minor in Studio Art, or BIS concentration in Studio Art student
ART	113	Color	Principles of color theory as related to the visual arts. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	115	3-D Design	Fundamentals of 3-D form. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		

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ART	116	Introduction to Digital Media	Concentrates on the fundamentals of digital media, including imagery, sound, video, animation, and the Web. Assignments are given to engage students in the technical, conceptual, and aesthetic aspects of digital media. Students employ a diverse range of techniques and software as they become familiar with contemporary artistic processes involving the use of the computer and/or other technologies. Consists of hands-on experimentation and production supplemented by slide lectures, videos, visiting artists, and academic research.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Credit is allowed for only ART 116 or 194 (Introduction to Digital Media)
ART	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		
ART	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	201	Photography I	Development of skills and techniques of black and white photography. Emphasis on camera work and darkroom procedures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3	HU	Corequisite(s): ART 202
ART	202	Photography I Lab		N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	0		Corequisite(s): ART 201
ART	204	Photography II: Black and White	Photography as an art medium with additional exploration into personal photographic aesthetics. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: ART 201, 202
ART	205	Photography II: Color	Uses both film and digital capture to explore color photography in depth. Emphasizes computer editing and printing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: ART 201, 202
ART	206	Digital Photography I: The Still Image in Digital Culture	Through readings, lectures, discussion and studio assignments, explores the ways in which digital technology affects how we read and use still photographic imagery. Asks how digital technology has changed the functions and meanings of the photograph. Explores the new options but also ponders the new responsibilities and complexities that accompany electronic imagery. Works toward an integrated understanding of what the translation to digital means for still photography. Beginning with an introduction to using digital cameras, sorting, storing and developing a work flow, exposes students to a variety of digital applications to create, disseminate and reflect on images through a variety of formats including social media, personal Web pages and one-to-one electronic conversation. Addresses other non-Web-based presentations such as print-to-order books, CD/DVDs, projections and large format prints.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Credit is allowed for only ART 206 or ART 294 (The Still Image in Digital Culture)
ART	207	Digital Photography II: The Photograph in the Age of Information	Considers social, historical and political context of images, image-to-image relationship and media theory as applied to creating and understanding images.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206
ART	211	Drawing II	Continued development of technical and perceptual skills. Emphasizes materials and pictorial content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 111 and ART 112 with C or better
ART	214	Life Drawing I	Development of skill and expressiveness in drawing the basic form, construction, and gesture from the human figure. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 111 and ART 112 with C or better
ART	216	Intermedia Practices	Investigates the multidisciplinary practice of Intermedia within a fine art context and functions as a bridge between foundation courses and the Intermedia degree area specialty. Relying on principles and techniques from foundation level classes, students learn to choose appropriate media for a particular idea and construct work that is concept-driven and incorporates cross-disciplinary approaches. Students develop individual and diverse approaches to fusing traditional art disciplines with experimental, performative, spatial, and digital technologies. Students explore the full range of options available to contemporary artists and discuss the ever-shifting definition of intermedia and new media. Students may work in media including drawing, photography, mixed media, video, sculpture, networked, multimedia, electronic arts, digital sound manipulation, image processing, performance, and installation.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre/corequisite(s): ART 113, 116 or 194 (Intro to Intermedia) with C or better; 2 from ART 111, 112 or 115 with C or better OR Art Digital Culture major; ART 111, 112 or 113 with C or better; credit for only ART 216 or 294 (Intermedia Practices)
ART	217	Introduction to Computer Animation	Prepares students for the exciting world of digital animation. Looks back at animation through history and how it has developed into what we understand today. Looks at history, theory, principles, practices and animation techniques. Expands the student's current knowledge of 3D digital animation and how it has changed and affected society through time. Students use learned techniques to create art in animation.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Credit is allowed for only ART 217 or ART 294 (Introduction to Animation)
ART	218	3D Tools	Introduces 3D data capture, 3D modeling and rendering, and 3D prototyping and fabrication through creative/research activities using CNC and rapid prototyping tools. Projects are given to engage students in the technical, conceptual, and aesthetic aspects of digital media. Students employ a diverse range of techniques, software tools, and hardware in the course of making their creative/research projects, becoming familiar with contemporary artistic and engineering processes involving the use of the computer and/or other technologies. Consists of hands-on experimentation and production supplemented by slide lectures, videos, visiting artists, and academic research.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Art	3		Credit is allowed for only ART 218 or 294 (3D Tools)

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ART	223	Painting I	Fundamental concepts and materials of traditional and experimental painting media. Emphasizes preparation of painting supports, composition, and color. Lab. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 111 and ART 113 with C or better
ART	227	Watercolor I	Fundamental concepts, materials, and techniques of watercolor. Emphasizes problem solving, basic skills, composition, and color. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 111 with C or better; ART 113 with C or better, OR Studio Art minor or BIS Studio Art emphasis: ART 110 with C or better
ART	231	Sculpture I	Explores sculptural forms through concepts related to basic materials. Students learn how to create original sculptures using mold-making, wood-working and sheet metal construction. Focuses on studio production, safety, aesthetic criticism and history of sculpture. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	253	Introduction to Printmaking	Introduces basic monotype, intaglio, relief, and related techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 113 with C or better
ART	261	Ceramic Survey	Handforming methods, throwing on the wheel, decorative processes, and glaze application. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; ART 112 and ART 115 with C or better
ART	272	Introduction to Metals and Jewelry	Emphasizes metal fabrication. Basic techniques of cutting, piercing, forging, soldering, and forming of non-ferrous metals.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art undergraduate student; maximum junior standing; ART 112 and ART 115 with C or better
ART	274	Wood I	Fundamental woodworking techniques to produce creative functional 3-D objects. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	276	Fibers I	Explores traditional and contemporary materials and basic techniques related to fibers. Embroidery, felting, dyeing, block printing, plaiting, 3-D structures.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: ART 112, 115; undergraduate Art major; maximum junior standing OR The Arts (Fashion Design) major with ART 110 with C or better
ART	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	300	Photo Editing: Narrative/Non-Narrative	Explores how structure in images can be created both within the image (by setting up a picture) and by sequencing images that may or may not have had any relation when they were created. By exploring two prevalent ways in which images function in the art world--the directoral mode and sequencing mode--students gain valuable tools in terms of understanding how to construct meaning with their images. Emphasizes creating cohesive and complete sequences both narrative and non-narrative.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207
ART	301	Alternative Processes	Recognition Alternative Processes of the inherent characteristics of nonsilver processes and their use in communicating ideas. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major with completed portfolio; ART 204 with C or better
ART	302	The Still and Moving Image: Digital Photography and Video	Through screenings, readings, discussion and practical assignments, explores the differences between the still and the moving image coming from the perspective of a still photographer. How does the addition of time, sound and movement affect the way we experience images? How have the histories of photography and cinema overlapped and how are they different? How does the fact that video and film are no longer prohibitively expensive for most people affect the approach that people take to creating videos? How can photographers make engaging video using their photo skills? Looking at practitioners and learning basic video editing tools--as well as various methods for output--students create video and still images with an understanding of the intersections, variations and potential of the similar yet markedly different languages of film, video and still photography.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207
ART	304	Junior Photographic Projects	Interpretation and manipulation of light as a tool in the performance of expressive photography. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; completed portfolio milestone (if required); ART 204 (and ART 101, ART 201) with C or better
ART	307	View Camera	View camera and darkroom techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART204 (and ART101, ART201) with C or better
ART	311	Drawing III	Emphasizes composition and exploration of drawing media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major or completed studio milestone; ART 211 with C or better or Studio Art Minor or BIS (Studio Art); ART 110 with C or better; ART 112 with C or better

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ART	314	Life Drawing II	Drawing from the model with greater reference to structural, graphic, and compositional concerns. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s) with C or better: ART 110, 112, 214 (or Studio Art concentration or minor); Art student or completed portfolio milestone
ART	317	Advanced Digital Photography: The Virtual and the Physical Image	Thoroughly examines the distribution, interaction of physical and virtual aspects of the photograph. Emphasizes creating work and interacting with an audience--examining the relationship between the physical and the virtual in terms of photographic imagery.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206
ART	323	Painting II	Development of competency in skills and expression. Assigned problems involve light, space, color, form, and content. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student with portfolio; ART 223 with C or better OR Studio Art minor: ART 110 with C or better; ART 113 with C or better
ART	325	Figure Painting	The human figure clothed and nude as the subject for painting in selected media.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 214 and ART 323 with C or better
ART	327	Watercolor II	Explorations of personal expression in watercolor. Continued development of watercolor skills using traditional and experimental materials and techniques. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 227 with C or better
ART	331	Sculpture II	Emphasizes metal fabrication as an expressive sculptural process. Techniques in welding, cutting and bending of metals and their aesthetics. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major or completed studio milestone: ART 231 with C or better OR BIS (Studio Art) or Studio Art minor: ART 110, 115 with C or better
ART	332	Sculpture III	Explores diverse media with a focus on mold-making processes. Development of the sculpture portfolio. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 331 with C or better
ART	333	Foundry Casting Methods	Fine art and techniques of metal casting: mold making, foundry safety, finishing techniques, application of patinas, and history of casting. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art Majors: ART 331 with C or better, or Non-art majors: ART 231 with C or better
ART	345	Visualization and Prototyping	Studio/seminar introduces concepts of computer visualization, modeling, and rapid prototyping in an interdisciplinary manner.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Digital Art OR Intermedia student
ART	346	3-D Computer Imaging and Animation	3-D modeling and animation. Emphasizes concepts and fine arts applications.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3	CS	Prerequisite(s): ART major or Digital Culture (Art) major: ART 111, ART 112 or ART 113 with a 'C' or better OR Minor in Studio Art (HISTARTMIN); ART 110 with a 'C' or better, and ART 112 or ART 113 or ART 115 or ART 116 with a 'C' or better.
ART	348	Animation Motion Studies	Principles and applications of 3-D animation for fine arts. Emphasizes animation techniques for expressive effects.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 346 with C or better
ART	351	Intaglio I	Introduces concepts and techniques of intaglio processes, including non-acid and acid techniques such as drypoint, line etch, aquatint, photo etching; introduces multiple plate printing ala poupee wiping, chine colle, and basic color. Idea-generating exercises include visual signifiers of identity, democratic multiple, time and space, the disembodied gaze, and reconsidering beauty. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 253 with C or better OR Studio Art minor; ART 110 with C or better; ART 112 or 113 with C or better
ART	352	Lithography I	Monochromatic and color planographic printmaking utilizing stone and aluminum plate processes. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 253 with C or better, or Studio Art Minor: ART 110 with C or better; ART 112 or 113 with C or better
ART	354	Screen Printing I	Introduces paper, direct, and photographic stencil techniques. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; two from ART 111, 112, 113 with C or better OR Studio Art minor; ART 110 with C or better; ART 112 or 113 with C or better
ART	360	Ceramic Throwing	Design analysis and production of functional pottery. Emphasis on throwing techniques, surface enrichment, and glaze application.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): minimum 42 hours
ART	364	Ceramic Handbuilding I	Search for form using handbuilding techniques. Kiln firing and related problems.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): minimum 42 hours
ART	365	Ceramic Handbuilding II	Continuation of ART 364 with an additional focus on large-scale works, surface treatments, and glaze decoration with related kiln firing applications.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 261 and 364 with C or better or BIS Studio Art emphasis or Studio Art minor; ART 364 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	372	Casting and Jewelry Techniques	Covers lost wax casting for jewelry scale work and alternative casting methods and mold making as well as other techniques such as chain making and marriage of metals.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 272 with C or better
ART	373	Form Emphasis in Metals	Covers forming non-ferrous metals using techniques such as anticlastic and sinclastic forming, raising, fold forming. Projects focus on hollow forms using these various techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 272 with C or better
ART	374	Wood II	Individual and directed problems in wood related to the production of unique functional art objects. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 274 with C or better
ART	376	Woven Structures I	Explores weaver- and loom-controlled structures with an emphasis on formal issues, historic precedence, and contemporary investigations.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 276 with C or better OR Studio Art minor; ART 110 with C or better; ART 112, 113, 115 or 116 with C or better
ART	377	Surface Design	Application of dyes and pigments on cloth exploring techniques, formal issues, and content. Cyanotype, monoprinting, painting on silk, resists, stenciling.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major or The Arts (Fashion Design) student with ART 276 with C or better OR Studio Art minor with ART 110 with C or better and ART 112, 113, 115, or 116 with C or better
ART	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ART	400	The Photobook	Photographers have long seen the photobook as an excellent way to showcase their work. From the mid 1960s art photographers have used self-publishing through methods as simple as a photocopier to disseminate their work. Recent advances in the accessibility of high-quality reproduction capacities have resulted in an explosion of flexible and creative ways for photographers to execute their ideas and contribute to a wide range of conversations. Practical and theoretical course on the photobook. Students learn about the history of the photobook and the multitude of contemporary applications from the major photography publishers such as Aperture, through to the small press and self-publishing and the exciting world of art book fairs. Students also create a handmade photobook and create and order a print-to-order book of their own work.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207; ART 300
ART	402	Traditional Genres in Photography	Through practical assignments, lectures, readings, discussion and critique, investigates traditional photographic genres such as portrait and landscape. Students create works in the genre in question and contextualize these images in historical and contemporary art. Addresses such questions as what defines a genre and the social, political and cultural impacts these genres have had on photography and art. Also addresses how genres have been transformed with the advent of digital technology explores how this affects images in a broader cultural and social history. Emphasizes the students' work and a final portfolio of portraits.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207; ART 300
ART	403	Senior Photographic Projects	Technical and philosophical refinement of personal aesthetic with various photographic media. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 204 (and ART 101, ART 201) with C or better
ART	404	Portraiture Photography	Photographing people. Critical discussions and slide lectures on issues in portraiture. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 204 (and ART 101, ART 201) with C or better
ART	406	New Genres in Digital Photography	Explores the ways in which contemporary technology and the key changes--ubiquity, speed and reproducibility--have spawned new genres in photo-based art. Explores these emerging and changeable genres and examines the potential they present for creative expression and in-depth conversation about new ideas. Defines these new genres: selfie sticks, Instagram, screenshots from Google Streetview or remote cameras that we control from our home computer. Students are given weekly assignments and at the end of the course create a project within one of the new genres.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207; ART 300
ART	407	Digital Photography Capstone	Culminating class of the online Digital Photography degree. It is organized around a single, major self-directed project. Students will submit work once a week for critiques and will participate in their classmates' critiques as well. Classmates and instructor will guide each student towards the best execution of their vision. Students will complete course with a portfolio of images that may be realized in a variety of forms including but not limited to: an online gallery, a website, or a printed portfolio or a photobook. Students will also write an artist statement to accompany the work and conduct research where there is an audience for their work.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207; ART 307

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	408	Experimental Film	Facilitates the exploration of 16 mm motion picture film as material and methodological fodder for artists. Students use original, found, and hand-altered footage to create projects of their own design. Covers basic techniques including camera operation, film exposure, and analog editing practices. Explorations also include in-class experiments, readings, discussions and screenings. For upper-division undergraduate and graduate art students attracted to the material and theoretical issues embodied in film and who are curious about how film might inform their own ongoing advanced artistic pursuits.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): minimum 3.00 GPA; minimum 45 hours. Credit is allowed for only ART 408 or ART 508
ART	409	Photographic Exhibition	Care of photographic prints, print presentation, and exhibition. Practical experience in gallery operations. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	410	Landscape Photography	Photographing landscapes. Critical discussion and presentations on issues in landscape photography. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		
ART	411	Drawing IV	Visual and intellectual concepts through problem solving and independent study. Emphasis on the individual creative statement. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 211 and ART 311 with C or better
ART	412	Advanced Techniques in Digital Photography	Highly technical course consists mainly of technical applications, readings, quizzes and discussion. Focuses on learning advanced image-editing software such as Photoshop, and photo management and manipulation software. Covers montage and color management systems including profiling for color printing and monitors. Students also learn about using digital backs on medium format and view cameras.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 206; ART 207; ART 317
ART	414	Life Drawing III	Various media and techniques on an advanced level. The human figure as an expressive vehicle in various contexts. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 314; credit is allowed for only ART 414 or ART 514
ART	423	Painting III	Further exploration of techniques and concepts of painting.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 223 with C or better; ART 323 with C or better; Art major; credit is allowed for only ART 423 or 523
ART	425	Advanced Figure Painting	The human figure clothed and nude as the subject for painting in selected media. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 223, 323 and 314 with C or better; credit is allowed for only ART 425 or 525
ART	427	Art on Paper	Advanced techniques, concepts, and processes with water media and mixed painting and drawing media on paper.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Herberger Institute student: min 55 hours; min 2.00 GPA or BIS Studio Art emphasis or Studio Art minor: ART 110 and ART 112 (or ART 113, 115, 116) with C or better; min 2.00 GPA; min 45 hours. Credit is allowed for only ART 427 or 527
ART	428	Video and Sound as Sculptural Materials	Students learn to incorporate video and sound into sculptures and installations. Covers basic video and sound capturing and editing, but emphasizes new techniques for controlling and presenting video and sound: Max/MSP programming language, Arduino microcontrollers and Raspberry Pi. The latest developments in video and sound for sculpture and sculpture for video and sound.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art BA or BFA major; ART 231 with C or better; Credit is allowed for only ART 428 or ART 494 (New Systems-Sculpture) or ART 528
ART	430	Advanced Sculpture: Materials and Techniques	Encourages individual investigation in sculpture with an emphasis on the development of a personal approach to materials and techniques. Students have acquired a strong background in the basic techniques and materials in sculpture in previous classes and now are working toward the development of a portfolio or body of work.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 331
ART	431	Special Problems in Sculpture	Development of a personal approach to sculpture. Emphasis on form, individual problems, and related color technology. Professional practices and presentation. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 231, ART 331 and 332 with C or better
ART	432	Neon Sculpture	Techniques for creating neon in an art context. Glass tube bending and fabrication. Construction of artworks utilizing light-generating gasses. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 231 with C or better or BIS Studio Art emphasis or Studio Art minor; ART 110 and 115 with C or better
ART	433	Foundry Casting Methods	Thorough and directed course for the professional preparation of sculptors. Requires participation in all aspects of the foundry process, including serving on both a casting and foundry process maintenance team. Provides a history of the use of cast metal in the visual arts and an understanding of how casting processes can be applied to contemporary sculptural concepts. Requires participation in special projects such as exhibitions, iron casting, and field trips to local foundries as the semester course schedule dictates.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art Majors: ART 331 with C or better, or Non-art majors: ART 231 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	434	Advanced Sculpture: Context and Content	Studio-based class offers an opportunity for guided individual study with an emphasis on content, context and professional practices. Students work on developing a series of related works on a theme of their choosing. Assignments help students gain a greater understanding of the themes and ideas that are important in their art and expand their awareness of historical and contemporary artist working along similar lines. Requires students to develop a packet for self-promotion including a resume, portfolio and artist statement and to submit these materials to a competitive exhibition, commission, residency, scholarship or similar opportunity.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 331
ART	435	Foundry Research Methods	Research in foundry techniques.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Prerequisite(s): minimum 45 hours
ART	436	Architectural Sculpture	Sculptural concepts as related to architecture and other man-made environments. Scale drawing, models and relief sculpture. Students learn to produce proposals for large-scale and public commissions.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art Majors: ART 331 with C or better, or Non-art majors: ART 231 with C or better
ART	437	Film Animation	Production of short 16mm films that feature articulated sculptural objects, models, dolls, puppets, and graphics through the use of single-frame filming techniques. 6 hours a week. May be repeated for credit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 231 with C or better
ART	438	Moving and Interactive Systems in Sculpture	Explores the use of Arduino microcontrollers to control light, sound, interactivity and movement in sculptures and installations. Covers basics of electronic circuits, mechanics and audio electronics. Also covers historical and contemporary artists who incorporate technology into their work.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 231 with C or better; Credit is allowed for only ART 438 or ART 538
ART	439	Intermedia Studio	Exploring visual effects by combining traditional and nontraditional methods, techniques, and concepts. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student or Digital Culture (Art) student; ART 111, ART 112 or ART 113 with C or better or Studio Art minor (or BIS Studio Art emphasis), ART 110 and 116; credit is allowed for only ART 439 or 539
ART	440	Experimental Video Art	Explores creative possibilities through the production of experimental video art works referencing new approaches to concept, theory and art practice. The Experimental Video Art curriculum emphasizes the use of metaphor and simulation to depict reality and linear story telling. Students study relational aesthetics, content, stylistic formats and presentation issues as they reference time-based media. The textbook entitled, "Video Art" by Michael Rush serves as a research tool for experimentation. The technical component concentrates on the use and operation of equipment for video recording, audio mixing, lighting, video editing and computer graphics. Students create stand-alone video works, video installations, multimedia time-based performances, through individual and group projects.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major: ART 116 with C or better, or Art minor or non-art major: minimum 45 hours
ART	441	Video Art	Utilizing video and audio equipment essential to the production of broadcast quality video art. 2 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): Art portfolio completed; corequisite ART 440
ART	442	Art and Community	Explores through studio practice, research and presentations intermedia social art practice, public practice, art/life practice, relational aesthetics, community-based projects, and other critical theories and conventions that engage art and community.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Minimum 45 hours or Studio Art minor (or BIS Studio Art emphasis); ART 110 and 116 with C or better; credit is allowed for only ART 442 or 494 (Art and Community)
ART	443	Intermedia Performance	Experimental, conceptual, and interdisciplinary studio art with emphasis on performance and new media practices. May be repeated once for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student or Studio Art minor (or BIS Studio Art emphasis); ART 110 and 116 with C or better; credit allowed for either ART 443, 543 or 598 (Intermedia Performance)
ART	444	Web Art	Explores Web technology as a medium to create interactive art works for the Internet. Concept-driven curriculum wherein the idea for each work and its development is emphasized. The technical aspect of the work supports the concept. Students create storyboards and flowcharts to facilitate the application of the concept to the technology. The technical emphasis is on interactivity and time-based Net art. Students use existing software, learning the interface and programming associated with the software.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Intermedia majors eligible for upper-division credit; credit is allowed for only ART 444 or 494 (Web Art)
ART	445	Digital Processes for Printmaking	Introduces digital applications and processes as they relate to all areas of photo-mechanical printmaking processes. Comprised of three smaller sections to give a broad overview of possibilities and how they relate to analog printmaking techniques, including image capture, film generation and analog processes, and digital and inkjet printing.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): 50 minimum hours; credit is allowed for only ART 445 or 494 (Digital Process for Print)

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ART	449	Computer Animation and Video	Integrates 3-D fine arts animation with video and compositing. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 346 and ART 348 with C or better
ART	451	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 351 with C or better; credit is allowed for only ART 451 or 551
ART	452	Advanced Lithography	Continuation of ART 352. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student or completion of portfolio milestone; ART 253 and ART 352 with C or better
ART	453	Experimental Printmaking: Expanding the Matrix	Alternative methods of working with print techniques, including installations, actions or performances, and other nontraditional formats.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): ART 351, 352, or 354 with a C or better; credit is allowed for only ART 453, 553 or 598 (Experimental Printmaking)
ART	454	Advanced Screen Printing	Continuation of paper, direct, and photographic stencil techniques. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 354 with C or better
ART	456	Letterpress Studio	Equipment, techniques and applications of letterpress printing. Students hand set type and create photopolymer plates and are encouraged to integrate the tactile quality of letterpressed type and image with other media. Discusses conceptual and material aspects of letterpress.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 253 with C or better OR non-art major with 56 hours; minimum 2.50 GPA; Credit is allowed for only ART 456 or ART 556 or ART 598 (Fine Printing and Bookmaking I)
ART	457	Fine Printing and Bookmaking II	Continuation of ART 456. Bookbinding, book design and printing, advanced typography, theory, and presswork. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Art student; ART 253 and ART 456 with C or better; Credit is allowed for only ART 457, 557 or 598 (Fine Printing and Bookmaking II)
ART	458	Paper Studio	The equipment, techniques and applications of papermaking, exploring both traditional sheet forming, paper pulp painting as well as sculptural paper.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student with ART 112 with C or better, OR non-Art majors with 56 minimum credit hours and minimum 2.50 GPA; Credit is allowed for only ART 458 or ART 558
ART	459	Monoprinting	Nonmultiple printed image using a variety of technical approaches. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major, minimum 45 hours; or OR BIS Interdisciplinary Studies (Studio Art concentration) or Studio Art minor; ART 110, ART 112 (or ART 113, 115 or 116) with C or better
ART	460	Ceramic Clay	Research into various clay body formulations, local natural materials, slip glazes, and engobes.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 261 with C or better; Pre- or corequisite(s): ART 360 and ART 364 with C or better
ART	461	Polymer Plate Prints	Explores the creative process of polymer plate printmaking as a fine art medium.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Minimum 50 hours; credit allowed for only ART 461 or 494 (Polymer Plate Prints)
ART	463	Ceramic Glaze	Glaze calculation and formulation using various glaze colors and surfaces.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art major; ART 261 with C or better
ART	466	Special Problems in Ceramics	Emphasis on personal expression within structure of seminars, critiques, and studio work. Professional methods of presentation/documentation of work. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 261 and ART 364 with C or better
ART	472	Advanced Jewelry and Surface Techniques	Covers jewelry forms and techniques including surface embellishment such as granulation, keum-boo and filigree to be used as tools for aesthetic expression and expand student awareness of historical and contemporary jewelry/metalwork.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 272 and ART 372 with C or better
ART	473	Advanced Metals and Mechanisms	Covers new techniques and develops existing skills in non-ferrous metal forming and mechanism fabrication while further refining fitting and finishing techniques, incorporating concept with craft and emphasizing professional practices/portfolio development.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 272 with C or better; ART373 with C or better; credit is allowed for only ART 473 or 598 (Adv. Metals & Mechanisms)

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ART	474	Advanced Wood	Extended experience and advanced techniques in the use of wood to create functional works of art. 6 hours a week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 274 and ART 374 with C or better
ART	476	Woven Structures II	Emphasizes personal expressions and continues technical exploration in woven structures. May be repeated for credit. 6 hours a week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 276 and ART 376 with C or better
ART	477	Printed Textiles	Techniques for screen printing on fabric exploring pattern as a compositional element. Various stencil methods including photographic processes. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student; ART 276 and ART 377 with C or better
ART	478	Advanced Surface Design	Emphasis on personal expression with advanced problems in stitch resist, arashi shibori, transfers, indigo, vat and disperse dyes, and pigments.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Art student with portfolio completed; ART 276, ART 377 and ART 477 with C or better
ART	479	3-D Fibers: Construction and Content	Explores hand-constructed fiber techniques through the context of the history and communities from which they came, as well as contemporary applications. Emphasizes research and the development of one's work through studio and social practice.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Art major or Studio Art minor; ART 276 with C or better; Credit is allowed for only ART 479 or ART 579 or ART 598 (3-D Fibers)
ART	482	Senior Exhibitions/Portfolio	Capstone course required of all BFA studio art majors. Students participate in a group exhibition and focus on professional practices, including exhibition display and advertisement, career planning, and development of a professional packet with artist statement, CV, and digital portfolio.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): BFA student; minimum 100 hours; credit is allowed for only ART 482 or 494 (Senior Exhibition/Portfolio)
ART	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): Art student
ART	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	STO	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		Prerequisite(s): Barrett Honors student
ART	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	STO	N	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequisite(s): Barrett Honors student
ART	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
ART	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ART	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-7	L	
ART	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	STO	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
ART	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-3		Prerequisite(s): Art student
ART	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		Prerequisite(s): Art student
ART	501	Cross-Practice Critique	Engages graduate students in deep, sustained critical discussion about artwork made by students in the class. Students investigate together the process(es) of critiquing artwork and consider and discuss the underlying assumptions and values they bring to this method of communication and pedagogy. Helps students develop and improve their critical voice at whatever level they are at, including the ability to receive and accept critical feedback of their work. Encourages students to hone their sense of personal agency in the context of "the crit."	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate
ART	508	Experimental Film	Facilitates the exploration of 16 mm motion picture film as material and methodological fodder for artists. Students use original, found, and hand-altered footage to create projects of their own design. Covers basic techniques including camera operation, film exposure, and analog editing practices. Explorations also include in-class experiments, readings, discussions and screenings. For upper-division undergraduate and graduate art students attracted to the material and theoretical issues embodied in film and who are curious about how film might inform their own ongoing advanced artistic pursuits. Graduate level focuses on the development of a personal approach.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ART 408, 494 (experimental Film), or ART 508, or ART 598 (Experimental Film)

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ART	514	Graduate Life Drawing	Advanced study of the human figure as an expressive vehicle in various contexts. Graduate level focused on the development of personal approach. Timed poses of short and long duration with emphasis on using the figure to enhance the students individual research. Art historical component will be included to enable the student to fit themselves into the context of the use of the figure as it relates to the study of the history of art.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 414 or 514
ART	523	Graduate Painting	Concentrates on formal and conceptual skills and explores a variety of topics, including historical and contemporary painting issues, visual literacy, critical thinking, and professional practices.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student OR Senior or Postbaccalaureate undergraduate with minimum 108 hours; credit is allowed for only ART 423 or 523
ART	525	Advanced Figure Painting	Advanced study of the human figure clothed and nude as the subject for painting in selected media. Graduate-level study focuses on the development of personal expression.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ART 425 or ART 525
ART	527	Art on Paper	Exploration focused on conceptual and technical approaches combining mixed media painting and drawing on paper and related surfaces.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): Herberger Institute for Design and the Arts graduate student; Credit is allowed for only ART 427 or ART 527
ART	528	Video and Sound as Sculptural Materials	Students learn to incorporate video and sound into sculptures and installations. Covers basic video and sound capturing and editing, but emphasizes new techniques for controlling and presenting video and sound: Max/MSP programming language, Arduino microcontrollers and Raspberry Pi. The latest developments in video and sound for sculpture and sculpture for video and sound.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ART 428 or ART 528 or ART 598 (New Systems Sculpture)
ART	529	Experimental Video Art	Explores creative possibilities through the production of experimental video art works referencing new approaches to concept, theory and art practice. The experimental video art curriculum emphasizes the use of metaphor and simulation to depict reality and linear story telling. Students study relational aesthetics, content, stylistic formats and presentation issues as they reference time-based media. The textbook entitled, "Video Art" by Michael Rush serves as a research tool for experimentation. The technical component concentrates on the use and operation of equipment for video recording, audio mixing, lighting, video editing and computer graphics. Students create stand-alone video works, video installations, multimedia time-based performances, through individual and group projects. Graduate students create a collaborative Video anthology.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ART 529 or ART 598 (Experimental Video Art) or ART 598 (New Media Concepts)
ART	530	Digital Compositing	Fine arts digital compositing of computer animation, video, and video editing of composites with audio.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student OR senior OR postbaccalaureate undergraduate with minimum of 108 earned hours
ART	532	Neon Sculpture	Emphasizes techniques for creating neon in an art context, including glass bending and fabrication.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 532 or ART 598 (Neon Sculpture)
ART	533	Foundry Casting Methods	Thorough and directed course for the professional preparation of sculptors. Students are expected and required to participate in all aspects of the foundry process, including serving on both a casting and foundry process maintenance team. Students deepen their knowledge of the history of the use of cast metal in the visual arts and understanding of how casting processes can be applied to contemporary sculptural concepts, participating in special projects such as exhibitions, iron casting, and field trips to local foundries as the semester course schedule dictates.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 533 or 598 (Foundry Casting Methods)
ART	538	Moving and Interactive Systems in Sculpture	Explores the use of Arduino microcontrollers to control light, sound, interactivity and movement in sculptures and installations. Covers basics of electronic circuits, mechanics and audio electronics. Also covers historical and contemporary artists who incorporate technology into their work.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ART 438 or ART 538 or ART 598 (Experimental Systems in Sculpture)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	539	Intermedia Studio	Investigates how intermedia practice can expand the realm of conversations within contemporary art, life and society. Encourages investigation of social art practice, art/life practices, conceptual art, digital art, emergent media, installation, new genre public art, performance, and visual art with emphasis on research, production and theory. Students expand their ability to assess interdisciplinary strategies. Through reinforcing artistic rigor, students deepen their ability to employ intermedia methods as artistic communication, to express a personalized point of view.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 439, 539 or 598 (Intermedia Studio)
ART	542	Art and Community	Through studio practice, research and presentations, explores intermedia social art practice, public practice, art/life practice, relational aesthetics, community-based projects, and other critical theories and conventions that engage art and community. Graduate students, in conjunction with the instructor, create their own workplan for the course.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 542 or 598 (Art and Community)
ART	543	Intermedia Performance	This concept-driven course explores intermedia as a contemporary art practice from a performance/live art perspective. Students create performance and time-based work connected to their individual artistic interests while making connections among art, life, and society. Students working in a diverse range of disciplines and artistic genres discover new processes of working and negotiate unexpected connections inherent in interdisciplinary production and cross-disciplinary collaboration. Student projects depend on particular specializations and passions brought to the class and may produce a range of multimedia performance work including performing for the camera, interactive networks, analogue/digital sound, video, sculpture, and installation. Semester I addresses the body as material exploring the body, subjectivity, and cultural histories. Semester II focuses on the body in public space exploring intervention and the everyday.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 543 or 598 (Intermedia Performance)
ART	544	Graduate-Level Web Art	Students research Web art and apply this to their own art practice. Concepts and content of the Web art class projects parallel individual aesthetic preferences. Explores Web technology as a new medium to create interactive Internet works. Technical emphasis on interactivity and time-based net art. Utilizes existing software, learning the interface and programming associated with it. Includes articles and essays by professional Web artists and theorists in required reading.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 494 (Web Art), ART 544, or ART 598 (Web Art)
ART	545	Digital Processes for Printmaking	Introduces digital applications and processes as they relate to all areas of photo-mechanical printmaking processes. Course is comprised of three smaller sections to give a broad overview of possibilities and how they relate to analog printmaking techniques: image capture, film generation and analog processes, and digital and inkjet printing.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 545 or 598 (Digital Processes for Printmaking)
ART	551	Advanced Intaglio	Gives students the opportunity to further develop their skills with intaglio printmaking techniques. Primary areas of research include image development, multiple plate and color printing. Additional techniques include lift grounds, spit bite aquatint, white ground, and viscosity printing. Develops sharper critical responses, both aesthetically and conceptually, to their own work, as well as the work of other artists.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or post-baccalaureate undergraduate with minimum of 108 earned hours; credit is allowed for only ART 451 or 551
ART	553	Experimental Printmaking: Beyond the Matrix	Focuses on the development of concepts in printmaking beyond the traditional two-dimensional image on paper that is contained in a portfolio or frame. Explores alternative techniques and materials, methods of extending the print beyond 2 dimensions, and expanding the concept of what is a print. Students are encouraged to understand printmaking within the wider context of contemporary art, especially those directly related to the student's main artistic emphasis (if not printmaking).	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum 108 hours; credit is allowed for only ART 553, 453
ART	554	Graduate Screenprinting	Focuses on the development of screenprinting techniques and the ability to utilize these techniques as an expressive visual method of exploring and developing individual research concepts.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 554 or 598 (Advanced Screen Printing)
ART	556	Fine Printing and Bookmaking I	Offers instruction in the techniques of fine printing--letterpress--and using typography and printing as a fine art medium, as well as evaluating text as image and content in the aesthetics of print. Also considers bookforms, binding techniques and artists' books for the expansion of that aesthetic.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ART 456, ART 556, or ART 598 (Fine Printing and Bookmaking I)
ART	557	Fine Printing and Bookmaking II	Continuing study of letterpress in fine art--the book arts--with emphasis on the book.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only ART 457, 557 or 598 (Fine Printing and Bookmaking II)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ART	558	Paper Studio	The equipment, techniques and applications of papermaking, exploring both traditional sheet forming, paper pulp painting as well as sculptural paper.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ART 458 or ART 558
ART	559	Monoprinting	Investigates monoprint/monotype printmaking and its aesthetic possibilities. Students acquire basic and advanced skills in the medium through demonstrations, problem solving exercises, and experimentation.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum 108 hours; credit is allowed for only ART 559 or 598 (Monoprinting)
ART	561	Polymer Plate Prints	Explores the creative process of polymer plate printmaking as a fine art medium.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum 108 hours; credit is allowed for only ART 561 or 598 (Polymer Plate Prints)
ART	576	Woven Structures	Expanding upon prior woven techniques, develops methods in warp manipulation through material explorations, dye techniques and structure applications. Dye methods include ikat, warp painting and over-dyeing. Complex structural investigations include loom controlled double weave, over-shot, computer-aided design, and the compu-dobby loom. In addition to learning technical skills, also provides theoretical and historical readings with in-class discussions that provide impetus for conceptual developments within the assignments.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Pre-requisite: degree- or nondegree-seeking graduate. Credit is allowed for only ART 476, 576, or ART 598 (Woven Structures)
ART	577	Printed Textiles	Provides advanced instruction in surface design techniques, focusing on screen printing on fabric. Explores a variety of stencil methods. Studio problems explore structured pattern and single edition prints. Emphasizes conceptual development with technical proficiency.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 577 or 598 (Printed Textiles)
ART	578	Advanced Surface Design	Explores advanced surface design methods and the expressive potential of fabric. Critical analysis of the integration of materials, process, and concept. Emphasizes conceptual development with technical proficiency.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student; credit is allowed for only ART 578 or 598 (Advanced Surface Design)
ART	579	3-D Fibers: Construction and Content	Explores hand-constructed fiber techniques through the context of the history and communities from which they came, as well as contemporary applications. Emphasizes research and the development of one's work through studio and social practice.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only ART 479, 579 or 598 (3D Fibers)
ART	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ART	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ART	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ART	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours

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ART	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ART	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ART	621	Studio Problems	Advanced study. 3 hours a week each section.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Art	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ART	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	Z2	Herberger Inst Design & Arts	School of Art	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ART	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Art	1		Prerequisite(s): degree- or nondegree-seeking graduate student or senior or postbaccalaureate undergraduate with minimum of 108 earned hours
ASB	100	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; <u>comparative health systems.</u>	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Credit is allowed for only ASB 100 or SSH 100
ASB	101	Anthropology: Understanding Human Diversity	Provides an integrated understanding of biological, historical, and cultural evolutionary processes that account for human variation. Specifically examines how humans evolved and how they obtained the characteristics that make us a unique species. Considers cultural and biological models of cooperation, resource acquisition and distribution, sex and marriage, parenting, conflict and warfare, political structures, <u>power and status, sex roles, ritual, religion, and language.</u>	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	
ASB	102	Culture in a Globalizing World	Introduces concepts and methods of sociocultural anthropology, with illustrative materials from a variety of communities in a globalizing world. Explores the concept of culture and examines a variety of social, political and <u>economic dimensions of how humans organize their lives.</u>	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
ASB	102	Culture in a Globalizing World	Introduces concepts and methods of sociocultural anthropology, with illustrative materials from a variety of communities in a globalizing world. Explores the concept of culture and examines a variety of social, political and <u>economic dimensions of how humans organize their lives.</u>	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	
ASB	102	Culture in a Globalizing World	Introduces concepts and methods of sociocultural anthropology, with illustrative materials from a variety of communities in a globalizing world. Explores the concept of culture and examines a variety of social, political and <u>economic dimensions of how humans organize their lives.</u>	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
ASB	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Freshman standing, Maximum 25 hours
ASB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	202	Immigration and Ethnic Relations in the U.S.	The ethnic and social consequences of international migration with a focus on the United States. Examines the impact of immigration on both <u>American society and immigrant ethnic minorities over time.</u>	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Credit is allowed for only AFR 202 (or AFS 202) or ASB 202
ASB	202	Immigration and Ethnic Relations in the U.S.	The ethnic and social consequences of international migration with a focus on the United States. Examines the impact of immigration on both <u>American society and immigrant ethnic minorities over time.</u>	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & C	Credit is allowed for only AFR 202 (or AFS 202) or ASB 202
ASB	210	Human Sexuality: Anthropological Perspectives	Examines the sexual nature and behavior of humans from both a biological and an anthropological point of view across various cultures <u>around the globe.</u>	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	
ASB	211	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & G	
ASB	211	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & G	
ASB	211	Women in Other Cultures	Cross-cultural analysis of the economic, social, political, and religious factors that affect women's status in traditional and modern societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(HU or SB) & G	

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ASB	220	The Expressive Culture of Latin America and the Caribbean: A Transborder Perspective	Interdisciplinary social science introduction to various forms of cultural expressions found throughout Latin America and the Caribbean region and in Latina/o communities within the United States. Uses a transborder perspective to examine how migration, race, ethnicity, gender, power, history and identity shape and influence different aspects of Latina/o culture and identity. Focuses on the study of a wide array of expressive practices including music, dance, verbal arts, myths and folktales, festivals, sports and food in Mexico, the Spanish Caribbean and their counterpart Latina/o communities in the United States. Class lectures and readings introduce basic concepts such as ethnography, ethno-musicology, culture, representation and globalization. The Expressive Culture of Latin America and the Caribbean: A Transborder Perspective	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or HU or SB) & C	Credit is allowed for only ASB 220 or TCL 230
ASB	222	Buried Cities and Lost Tribes	Archaeology through its most important discoveries.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & H	
ASB	222	Buried Cities and Lost Tribes	Archaeology through its most important discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & H	
ASB	223	Aztecs, Incas and Mayas	Archaeological and historical study of the three best-known ancient cultures of Mesoamerica and South America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & G & H	
ASB	230	Beginning Social Research	Introduces basics of social research design; fosters independent thinking and critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASB	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
ASB	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
ASB	252	Sports and Culture	Cross-cultural examination of symbolic and social dimensions of sports past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	
ASB	272	Environmental Justice	Surveys key environmental justice issues and movements. Uses interdisciplinary social science perspectives to review and analyze U.S. and international case studies.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Credit is allowed for only ASB 272 or SOS 272
ASB	275	Culture, Language and Learning	Examines the dynamic and complex interplay of language, culture and learning within and across individuals, groups, institutions and cultures in diverse multicultural, multilingual and transborder contexts.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & C	Credit is allowed for only ASB 275 or TCL 275
ASB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASB	300	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & C	Pre-requisites: ENG 101, 105, 107, or ENG 111; Credit is allowed for only ASB or SSH 300
ASB	301	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 301 or HST 301 or SSH 301
ASB	302	Ethnographic Field Study	Fieldwork study of cultural adaptation through ethnographic research methods and local culture. Taught in Latin America or other international locations.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Pre-requisite: ASB 102, 222, 223, or ASM 104
ASB	305	Poverty and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 305 or SSH 305 or WST 305
ASB	310	Precolonial Africa	In-depth course study of contemporary Africa, providing thorough examination of the continent's pre-colonial history, particularly before 1900. The course will study the continent and its people, the way the history of the continent has been interpreted by non-Africans, how the continent's anatomy has affected historical development, and the methodology and interdisciplinary scholarship in the study of Africa	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 300 (or AFH 300) or ASB 310
ASB	311	Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	
ASB	311	Principles of Social Anthropology	Comparative analysis of domestic groups and economic and political organizations in primitive and peasant societies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G & H	
ASB	314	Comparative Religion	In-depth study of origins, elements, forms, and symbolism of religion; an advanced comparative survey of religious beliefs and ceremonies; the place of religion in culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASB 102, ASB 222, or ASB 223

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ASB	316	Money and Culture	Using the fundamentals of economic anthropology, investigates how culture shapes our relationship to money and decision making. Provides a foundation for thinking about how production, exchange and consumption can be explained by looking at human behavior, thought and culture, and encourages students to apply anthropological knowledge to real-world situations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
ASB	319	The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASB 102, ASB 222, or ASB 223
ASB	319	The North American Indian	Archaeology, ethnology, and linguistic relationship of the Indians of North America. Does not include Middle America.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: ASB 102, ASB 222, or ASB 223
ASB	321	Indians of the Southwest	The advanced study of cultures among the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H & C	Pre-requisites: ENG 101 and ASB 102 or ASB 222 or ASB 223
ASB	321	Indians of the Southwest	The advanced study of cultures among the contemporary Indians of the southwestern United States and their historic antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & H & C	Pre-requisites: ENG 101 and ASB 102 or ASB 222 or ASB 223
ASB	322	Peoples of Latin America	Indigenous, mestizo, and national cultures, rural and urban peoples in the region that today we call Latin America. Covers historic and contemporary events and cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Pre-requisites: ASB 102 with C or better or minimum 45 hours
ASB	324	Peoples of the Pacific	Peoples and cultures of Oceania focusing particularly on societies of Melanesia, Micronesia, and Polynesia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	G	
ASB	325	Peoples of Southeast Asia	Cultural-ecological perspective on the peoples of mainland and insular Southeast Asia. Subsistence modes, social organization, and the impact of modernization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	G	
ASB	326	Human Impacts on Ancient Environments	World survey of successful and unsuccessful ancient societies and their impacts on the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & H	
ASB	327	Disaster!	Examines the causes of disasters, such as famines and pandemics, throughout human history. Explores cases in which social responses to disaster have helped people survive or led to their demise. Through hands-on activities, students gain experience with popular tools to understand human responses to disasters.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & C	Prerequisite(s): ASB 102 with C or better or minimum 45 hours
ASB	328	Rules, Games, and Society	Concepts and practical tools to study the relation between groups of people and their common resources and public goods. Methods for identifying the diversity of institutional arrangements and analyzing their effectiveness. Example topics include sports, digital commons, environmental management, and urban environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	Pre-requisites: ENG 101; Minimum 45 hours
ASB	330	Understanding Archaeology	In-depth study and critique of theories and methods for reconstructing the lives of prehistoric peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): minimum 45 hours
ASB	335	Ancient Ruins of the Southwest	Archaeological exploration of the the major cultural developments in the prehispanic Southwest, including Mesa Verde, Chaco Canyon, Mimbres, Hohokam and Rio Grande.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H & C	Prerequisite(s): ASB 102 or 222 or 223 or minimum 45 hours
ASB	335	Ancient Ruins of the Southwest	Archaeological exploration of the the major cultural developments in the prehispanic Southwest, including Mesa Verde, Chaco Canyon, Mimbres, Hohokam and Rio Grande.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & H & C	Prerequisite(s): ASB 102 or 222 or 223 or minimum 45 hours
ASB	336	African Art	Anthropological perspective of ancient visual art traditions of Africa. In-depth studies focus on several important themes and case studies that are pivotal to the understanding of the rich and diverse artistic heritage of the African continent.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	HU & G	Prerequisite(s): ART 1200 (or AFS 200) or ASB 102 or minimum 45 hours; Credit is allowed for only AFR 336 (or AFH 336) or AFS 200
ASB	337	Pyramids and Hieroglyphs: Life in Ancient Mesoamerica	Preconquest cultures and civilizations of Mexico. The Aztecs, Mayas, and their predecessors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(HU or SB) & G & H	Prerequisite(s): minimum 45 hours
ASB	338	Archaeology of North America	In-depth study of the origin, spread, and development of the prehistoric Indians of North America up to historic tribes. Does not include the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Pre-requisites: ASB 102 or ASB 222 or ASB 223
ASB	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
ASB	340	Migration and Culture	Examines migration and culture embedded in a transnational field of social, economic and political processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours. Credit is allowed for only ASB 340 or SOC 328
ASB	342	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB, SBS or SOC 342
ASB	344	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	Pre-requisites: minimum 45 hours; Credit is allowed for only ASB 344 or SOC 344
ASB	346	Marriage and Family Diversity	Social, economic, and cultural factors that shape family diversity in relation to generational and gender dynamics within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	

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ASB	350	Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	HU	
ASB	350	Anthropology and Art	Art forms of people in relationship to their social and cultural setting.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU	
ASB	353	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the perspective of anthropology and allied disciplines. Uses a global, comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3-4	(HU or SB) & G	Pre-requisite: Minimum 45 hours; Credit is allowed for only SOC 353 or ASB 353
ASB	353	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the perspective of anthropology and allied disciplines. Uses a global, comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4	(HU or SB) & G	Pre-requisite: Minimum 45 hours; Credit is allowed for only SOC 353 or ASB 353
ASB	353	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the perspective of anthropology and allied disciplines. Uses a global, comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3-4	(HU or SB) & G	Pre-requisite: Minimum 45 hours; Credit is allowed for only SOC 353 or ASB 353
ASB	355	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	HU or SB	Pre-requisites: ASB 102, ASB 222, ASB 223 or ASM 104 or SSH 100 or ASB 100 with C or better. Credit is allowed for only SSH 355 or ASB 355
ASB	356	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356
ASB	361	Pleistocene Archaeology	Biosocial evolution in the Pleistocene, emphasizing technological achievements and the relationship between technology and environment in western Europe, sub-Saharan Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	H	
ASB	362	People and Plants	Offers a global survey of ethnobotany, the study of the uses of plants by people. Integrating botany, anthropology and archaeology, students learn about the roles plants have played as foods, tools, medicines and foci of religious devotion and ritual experience across human history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): minimum 45 hours
ASB	366	African Archaeology: Precolonial Urban Culture	In-depth analysis of African civilization from the last 10,000 years up to 1850 via archaeological, documentary, and oral data. Special study will be placed on the evidence relating to dynamics of civilizations in ancient Africa, their foundation, growth, and failure, which spans a period of two million years.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours. Credit is allowed for only AFR 366 (or AFS 366) or ASB 366
ASB	368	Hunter-Gatherers	Studies of known hunting and gathering societies with the goal of developing approaches to understanding past and/or present hunting and gathering societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): minimum 45 hours
ASB	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with C or better; ASB 100 (or 102), SOC 101, SOS 110, or SSH 100 with C or better. Credit is allowed for only ASB 370, SOC 370, SOS 370, or SSH 370
ASB	371	Inequality and Sustainability	Efforts to shift societies onto a sustainable trajectory are facing profound challenges from the degree and dynamics of global inequalities of income, wealth, and life chances. Data and ideas from a spectrum of disciplines are employed to examine, analyze, and criticize the prospects for redressing global inequalities in a sustainable manner.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	Pre-requisites: ENG 101, 105 or 107 with C or better; Minimum of 45 hours completed; Credit is allowed for ASB 371, ASB 394 (Inequality and Sustainability), SOS 371 or SOS 394 (Inequality and Sustainability)
ASB	374	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit for only ASB 374, POS 374, SBS 374 or SOC 374
ASB	375	Humans and the Environment: What's the Connection?	How do diverse human groups across global ecosystems (desert, tropics, arctic, alpine, urban) interact with and adapt to their environments and how are these relationships changing in response to globalization, climate change and other social, historical and political-economic drivers? Cultures situated in landscapes are the basis for an incredible global diversity of worldviews and behaviors that in turn affect how humans experience and "use" their environments. This course will provide an introduction to current and benchmark literature and methods in environmental and ecological anthropology that address people-environment interactions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 375 or SOS 375 or ASB 394 (People: Environment Connections in Anthropology) or ASB 494 (Ecological and Environmental Anthropology)

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ASB	378	McGlobalization: Migration, Mass Media and McDonald's	Explores the impact of globalization on local societies and cultures by focusing on the international migration of peoples, the global expansion of capitalism and global mass media and popular culture. Examines both the socioeconomic causes and consequences of globalization, as well as how local peoples around the world have been affected by, participated in and resisted the forces of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 378 or TCL 378
ASB	380	Language, Culture and Gender	Focuses on how language, thought and culture are intertwined in everyday practice. Students learn the central role of language in shaping and reflecting social norms and social actions cross-culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): minimum 42 hours
ASB	389	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 389 or SBS 389 or SOC 389
ASB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
ASB	395	Topics in Comparative Culture	In-depth study of specific topic(s) cross-culturally. Students engage with the subject matter through critical evaluation of literature, hands-on analysis and interpretation of data, and scientific writing.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Prerequisite(s): minimum 42 hours
ASB	402	Visual Anthropology	Explores visual anthropology as a method for social documentation, and as a way to interpret cultural ways of seeing. Brings together anthropology, fine art, and art history students to exchange ideas about how we create, interpret, and communicate visual meanings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASB	412	History of Anthropology	Historical treatment of the development of the culture concept and its expression in the chief theoretical trends in anthropology between 1860 and 1950.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	
ASB	417	Political Anthropology	Comparative examination of the forms and processes of political organization and activity in primitive, peasant, and complex societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	
ASB	421	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	
ASB	430	Social Simulation	Students will apply computer simulation and agent-based modeling techniques to study social systems relating to concrete research questions.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4	CS	Prerequisite(s): AML 100 or MAT 142, 170, 210, 265, or 270 with C or better OR Mathematics Placement Test score of 50% or higher; minimum 56 hours; Credit is allowed for only ASB 430 or CPI 430 or AML 330
ASB	442	Global Cities	This close look at megacities in the global south decisively challenges the outdated impression that the rest of the world's cities still lag way behind the U.S. and Europe. The social sciences' debate over "global cities" anchors our examination of the reorganization of metropolitan social space under impact of neoliberal globalization since the 1970s. Explores urban inequalities of slums and dreamworlds; compares vernacular and transnational styles of urbanism (in architecture, design, markets, consumerism, jobs, ads, ways of living); and asks how transnational flows of people, capital and culture have reconfigured ethnic relations and national identities rooted in global cities. Students become virtual transnational flâneurs, tacking between the slums and skyscrapers of global cities, and conduct guided research on a global megacity to investigate how the production of the global city changes the lived space and urban culture of local residents, and how they respond. We ask <u>whose city is it?</u>	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum junior standing; Credit is allowed for only ASB 442 or SBS 460
ASB	443	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	(L or SB) & G	Pre-requisite: SSH 100 or ASB 100. Credit is allowed for only ASB 443 or SSH 403
ASB	447	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB 447, POS 447, or SBS 447
ASB	452	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites: Minimum 45 credit hours; SSH 100 or ASB 100; Credit is allowed for only SSH 402 or ASB 452
ASB	455	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Global Health major; Minimum 87 hours; SSH 100 or ASB 100 and SSH 403 or ASB 443 with C or better; Credit is allowed for only ASB 455 or SSH 405

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ASB	462	Medical Anthropology: Culture and Health	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & C	Credit is allowed for only ASB 462 or SSH 404
ASB	463	Political Ecology of the Border	Examines the political ecology of the human-environment relationship in Mexico and on the U.S.-Mexican border. Through case studies, students learn about the most pressing environmental issues facing human populations and their communities on both sides of the U.S.-Mexican border and the various ways in which these issues are dealt with.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 463 or SOS 463 or TCL 443
ASB	464	The Ethnography of Mexico and the Borderlands	Students learn basic principles of ethnographic research and obtain a better understanding of the social, ecological, cultural, political and economic processes affecting people in Mexico and in the U.S.-Mexico borderlands. Through case studies, students become aware of the variety of issues shaping the lives of those living in these regions. Focuses on contemporary issues such as migration, economy, gender, labor, health and the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 464 or TCL 444 or TCL 598 (The Ethnography of Mexico and the Borderlands)
ASB	466	Peoples and Cultures of Africa	Surveys African peoples and their cultures, external contact, and changes. Meets non-Western requirement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 466 (or AFS 466) or ASB 466
ASB	471	Introduction to Museums	History, philosophy, and current status of museums. Explores collecting, preservation, exhibition, education, and research activities in different types of museums.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	
ASB	480	Principles of Linguistics	Descriptive and historical linguistics. Surveys theories of human language, emphasizing synchronic linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASB	483	Sociolinguistics and the Ethnography of Communication	Relationships between linguistic and social categories; functional analysis of language use, maintenance, and diversity; interaction between verbal and nonverbal communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	
ASB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
ASB	485	U.S.-Mexico Border in Comparative Perspective	Explores the multicultural and social dimensions of communities along the U.S.-Mexico border, emphasizing social organization, migration, culture, and frontier ideology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASB	490	Earliest Cities	Archaeological research on the origins and development of the earliest urban centers around the world. Applies urban theory and comparative analysis. Compares ancient and modern cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & H	Pre-requisites: ASB 222 or ASB 223 with C or better; Minimum 45 hours; Credit is allowed for only ASB 490 or PUP 490
ASB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Prerequisite(s): Barrett Honors student
ASB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
ASB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
ASB	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASB	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
ASB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		

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ASB	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	503	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories. ASB 503/SSH 503.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	510	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	511	Ethics in Health Social Science Research	Ethics and social justice issues in community-based health research relevant to health social science, including informed consent, community involvement, control, advocacy.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	512	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	513	Research Design and Proposal Writing in Health Social Science	Research design, piloting, and proposal writing for social scientists conducting health research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	517	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
ASB	525	Introduction to Material Culture	Considers how objects embody social relationships and therefore cultural meanings. Seminar explores theories that give insight into social processes such as exchange, consumption, and identity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	529	Culture and Political Economy	Origin and spread of Western capitalism and its impact on non-Western societies. Utilizes ethnographic and historical case studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	530	Ecological Anthropology	Focuses on the theories and methods that environmental anthropology (EA) can bring to bear on human-environmental questions across a variety of social-ecological systems. Explores how environmental anthropologists approach these complex challenges, and considers the role of EA within larger interdisciplinary approaches for understanding development, adaptation, vulnerability, and change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only ASB 530 or SOS 553
ASB	532	Graduate Field Anthropology	Independent research on a specific anthropological problem to be selected by the student in consultation with the staff. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	2-8		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	537	Topics in Mesoamerican Archaeology	Explores changing organization of pre-Columbian civilizations in Mesoamerica through interpretive issues, such as regional analysis, chiefdoms, urbanism, and exchange.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	540	Scholarly Inquiry in Anthropology	Basic issues and concepts in anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Graduate student within one of the following programs in the School of Human Evolution and Social Change: Anthropology, Museum Anthropology, Social Science and Health, and Environmental Social Sciences
ASB	541	Theory in Sociocultural Anthropology	Basic issues and concepts in sociocultural anthropology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	542	Archaeology of Small-Scale Societies	Approaches to small-scale (i.e., hunter-gatherer and tribal) societies, archaeological method and theory, ethnography, models of human and cultural evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	544	Settlement Patterns	Spatial arrangement of residences, activity sites, and communities over landscape. Emphasizes natural and cultural factors influencing settlement patterns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	547	Origins of Agriculture	Archaeological evidence for transitions in Old World subsistence economies from hunting and gathering to dependence on domesticated plants and animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	549	Chiefdoms	Examines archaeological evidence of chiefdoms, distinguished by hereditary leadership and non-bureaucratized decision-making elite, to illustrate emergence of social complexity, inequality.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	558	Mortuary Practices and Cultural Analysis	Critical overview of theory and methods of reconstructing lifeways of past peoples with ethnographic/archaeological data and a bioarchaeological perspective.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	560	Theory and Archaeology	Applies social theory to archaeological study of societies of the past. Includes practice theory, hierarchy, space and place, material culture.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ASB	563	Hunter-Gatherer Adaptations	Evolution of prehistoric hunter-gatherer societies in the Old and New Worlds from the most ancient times through protohistoric chiefdoms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	567	Southwestern Archaeology	Broad coverage of Southwestern cultural developments focusing on current debates and rigorous use of archaeological data in making cultural inferences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	568	Intrasite Research Strategies	Research issues within a single site context. Topics include quantitative spatial analysis, site definition, sampling, distributional analysis, and substantive interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	572	Museum Collection Management	Principles and practices of acquisition, documentation, care, and use of museum collections; registration, cataloging, and preservation methods; legal and ethical issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	573	Museum Administration	Formal organization and management of museums, governance, personnel matters, fund raising and grantsmanship, legal and ethical issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only ASB 573 or HST 573
ASB	574	Exhibit Design and Development	Exhibition philosophies and development; processes of planning, designing, staging, installing, evaluating, and disassembling temporary and long-term exhibits.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	579	Critical Issues in Museum Studies	Current debates of museum practice from an anthropological perspective. Addresses issues of collection, presentation, authenticity, and authority.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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ASB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ASC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
ASC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		

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ASC	315	Numeracy in Technology	Contextual uses of mathematics in applied sciences. Emphasizes using mathematical methodologies to solve technology-related problems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): BAS major
ASC	325	Physical Sciences in Technology	Physical systems and their interrelationships on technology systems. Real-world applications of physical systems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	Pre-requisites: BAS major
ASC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Pre-requisites: Polytechnic BAS student
ASC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ASC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7		
ASC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		Pre-requisites: Polytechnic BAS student
ASC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisites: Polytechnic BAS student
ASE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		Pre-requisites: Must be a non degree undergraduate student with less than or equal to 25 total earned hours
ASE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
ASE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
ASE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		Prerequisite(s): Barrett Honors student
ASE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Prerequisite(s): Barrett Honors student
ASE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
ASE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
ASE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	104	Bones, Stones, and Human Evolution	Physical anthropology and archaeology. Evidence and processes of human evolution and of culture change. Primates. Fossil hominids and their tools. Race, variation, and heredity. Environment and human biology. Prehistoric culture and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4	SB or SG	
ASM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ASM	201	Epidemics and Outbreaks	Covers epidemiologic methods for the control of conditions such as infectious and chronic diseases, mental disorders, community and environmental health hazards, and unintentional injuries. Other topics include quantitative aspects of epidemiology, including data sources, measures of morbidity and mortality, evaluation of association and causality, and study design. A background in basic biology and a basic understanding of the principles of human diseases helpful in succeeding in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Credit is allowed for only ASM 201 or SSH 201
ASM	246	Human Origins	History of discoveries and changing interpretations of human evolution. Earliest ancestors to emergence of modern humans. Humanity's place in nature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	

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ASM	275	Forensic Anthropology	Discusses the role of the forensic anthropologist in medico-legal investigations involving skeletonized human remains. Includes forensic recovery techniques, identification of decedents through skeletal and dental analysis, and reconstructing the crime scene through analysis of trauma patterns. Covers the legal aspects of forensic practice and considers historical case studies and the contributions forensic anthropologists make to mass disaster investigations and human rights abuses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4	SB or SG	
ASM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASM	300	Anthropological Sciences Seminar	Focuses on the ways in which research findings are produced by diverse theories and methods in the anthropological sciences, usually in combination with other life and physical sciences, with a strong focus on combination anthropological conceptual frameworks with quantitative methodologies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: BS in Anthropology major; Two of the following: ASB 102, 222 (or 223), AML 100, ASM 104 with a C or better
ASM	301	Peopling of the World	Reviews all evidence for human dispersal during the last 100,000 years, origins of language, cultures, races, and beginnings of modern humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Pre-requisite: ASM 104
ASM	332	Life and Death in Ancient Egypt	Reveals ancient Egyptian life through recent research in archaeology and physical anthropology on cemeteries, tombs, and the dead themselves.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only AFR 332 (or AFS 332) or ASM 332
ASM	338	Anthropological Field Session	Anthropological field techniques, analysis of data, and preparation of field reports.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	341	Human Osteology	Osteology, human paleontology, and osteometry. Description and analysis of archaeological and contemporary human populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: ASM 104 with C or better; 25 minimum hours
ASM	342	Evolution of Human Behavior	Examines how evolutionary theory informs our understanding of human behavior, psychology and culture. Explores evolutionary explanations of human behavioral variation and cultural diversity and the influence of natural selection on shaping human cognition. Topics include nepotism, economic decisions, behavioral strategies throughout the life course, mate choice and sexual behavior, perception and judgment, motivation and emotions, social learning and culture, cooperation and prosociality, interpersonal violence and warfare, and norms and moral sentiments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s) with C or better: ASM 104 (or BIO 181 or 282). Credit is allowed for only ASM 342 or BIO 327
ASM	344	Fossil Hominids	The fossil evidence for human evolution, emphasizing the concepts and methods for reconstructing the past.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisite: ASM 104
ASM	345	Disease and Human Evolution	Interaction of people and pathogens from prehistoric times to the present, with emphasis on disease as an agent of genetic selection.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): ASM 104 or BIO 100 or BIO 181 (or BIO 188) or BIO 182 (or BIO 187) or BIO 281 or BIO 282
ASM	348	Social Issues in Human Genetics	Moral and social implications of developments in genetic science, particularly as they affect reproduction, medicine, and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	
ASM	350	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASB 222 (or 223), or GLG 101 (or 103), or GPH 111, with C or better
ASM	365	Doing Archaeology	Using hands-on analysis of artifacts and a mock site, this advanced introduction to archaeology acquaints the student with the field and laboratory methods applied by archaeologists, the information archaeologists use, and how they construct knowledge of the past.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4		Prerequisite(s): ASB 222 (or ASB 223 or 335 or 337)
ASM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	401	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4		Pre-requisites: ASB 100 (or ASM 104); SSH 100; Credit is allowed for only ASM or SSH 401
ASM	414	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): ASB 100, 102, 222, 223, AML 100, ASM 104 or SSH 100 with C or better; minimum 45 hours; Credit is allowed for only ASM 414 or SOS 414 or SSH 414

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ASM	424	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only SOS 424, BIO 424, or ASM 424
ASM	435	Archaeological Pollen Analysis	Theory, methodology, and practice of pollen analytic techniques. Compares uses in botany, geology, and archaeology.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASM	443	Primatology	Evolution and adaptations of nonhuman primates, emphasizing social behavior. Includes material from fossil evidence and field and lab studies in behavior and biology which must be critically integrated with relevant competing theories concerning the evolution of primate behavior and biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASM 104 with C or better; Minimum 56 hours. Credit is allowed for only ASM 443 or 543
ASM	446	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	Prerequisite(s): ASM 301 or BIO 340 or LSC 347 or MBB 347 with C or better; Credit is allowed for only ASM 446 or ASM 546 or BIO 446 or BIO 546
ASM	450	Bioarchaeology	Surveys archaeological and physical anthropological methods and theories for evaluating skeletal and burial remains to reconstruct biocultural adaptation and lifeways.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: ASM 104
ASM	452	Dental Anthropology	Human and primate dental morphology, growth, evolution, and genetics. Within- and between-group variation. Dental pathology and behavioral-cultural-dietary factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4	SG	Pre-requisites: ASM 104. Credit is allowed for only ASM 552 or ASM 452
ASM	453	Human Behavior through Bone Chemistry	Focuses on the many ways that biogeochemical analyses of archaeological bone and teeth can inform our understanding of past human behavior. Topics include migration and residential mobility, paleodiet, post-depositional contamination and dating methods. Students will learn through lectures, discussions, student presentations, and hands-on laboratory projects.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASB 222 or 223 with C or better; ASM 104 with C or better; Minimum 56 hours; Credit is allowed for only ASM 453 or 553
ASM	454	Comparative Primate Anatomy	Functional anatomy of the cranial, dental, and locomotor apparatus of primates, including humans, emphasizing the relation of morphology to behavior and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		
ASM	455	Primate Behavior Laboratory	Instruction and practice in methods of observation and analysis of primate behavior. Discusses the relationship between class work on captive animals and field techniques for studying free-ranging groups.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L	Pre-requisite: ASM 343
ASM	456	Infectious Disease and Human Evolution	Study of infectious disease and humanity, using evidence from anthropology, history, medicine, and ancient skeletons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: ASM 345
ASM	459	Forensic Anthropology	Applies anthropology, primarily human osteology, to legal questions, including individual identification, crime scenes, forensic reports, police work, and court testimony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: ASM 341; ASM 275; Credit is allowed for only ASM 459 or 559
ASM	460	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: ASM 104 with C or better; ASM 341, ASM 342, ASM 344, ASM 345 or ASM 348
ASM	465	Quantification and Analysis for Anthropologists	Statistical and quantitative strategies for envisioning and exploring archaeological, physical anthropological, bioarchaeological, and socialcultural data. Univariate and bivariate methods. A basic understanding of algebra is necessary to be successful in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	CS	
ASM	472	Archaeological Ceramics	Analysis and identification of pottery wares, types, and varieties. Systems for ceramic classification and cultural interpretation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		
ASM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
ASM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Prerequisite(s): Barrett Honors student
ASM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
ASM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
ASM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
ASM	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	506	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	6		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 506, ASM 506 or MCB 506
ASM	520	Agent-Based Modeling	Introduces agent-based modeling to simulate social and social-ecological systems. Topics include design, analysis, and empirical grounding of agent-based models to a variety of application domains including collective action, diffusion processes, resource use, health, and complex societies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	525	Primate Paleobiology	Seminar-based survey of primate evolution, focusing on comparative biology of the extant primates and the fossil record through the Miocene.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	530	Paleoanthropology	Seminar-based in-depth study of the fossil record of human evolution and its geological, environmental, and phylogenetic contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	543	Primateology	Advanced study of nonhuman primate behavioral adaptations, emphasizing comparative sociality, incorporating data on behavior and biology from field and captivity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit allowed for ASM 443 or 543
ASM	546	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); credit is allowed for only BIO 446, ASM 446, BIO 546 or ASM 546
ASM	548	Geoarchaeology	Geologic context relevant to archaeological research. Topics include sediments, deposition environments, soils, anthropogenic and biogenic deposits, and quaternary chronology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	552	Dental Anthropology	Evolutionary anthropology of non-human primate and human dentition and research from extant and extinct species of non-human primates and hominins.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 452 or ASM 552
ASM	553	Human Behavior through Bone Chemistry	Focuses on the many ways that biogeochemical analyses of archaeological bone and teeth can inform our understanding of past human behavior. Topics include migration and residential mobility, paleodiet, post-depositional contamination and dating methods. Students will learn through lectures, discussions, student presentations, and hands-on laboratory projects.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 453 or 553
ASM	555	Advanced Human Osteology	Intensive lab course covers identification of human skeletal remains and bone fragments from archaeological contexts. Emphasizes skeletal biology, variation, anatomical landmarks, determinants of age, sex, and stature.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisite: ASM 341 or Anthropology graduate student
ASM	560	Human Growth and Development: An Evolutionary Perspective	How growth and development influences human variation; stages of human life; evolution through the fossil record; genetic, environmental, and biocultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	565	Quantitative Archaeology	Formal methods of structuring, codifying, and analyzing data for archaeological problems. Designing research to yield data amenable to productive analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	568	GIS and Spatial Technologies in Anthropological Research	In-depth survey of spatial technologies in anthropological research, including GIS, spatial modeling, remote sensing, and image analysis and classification.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	570	Fundamentals of CAS Science	Many phenomena of critical relevance to human society are dynamic systems that change over individual and evolutionary time scales, and are highly interactive, both within and between systems. That is, they are complex adaptive systems (CAS), and thus share isomorphic properties like near-decomposability, hierarchical organization, scale-free networks, self-organized criticality, and emergence. Fundamentals of CAS science explores the diverse, interdisciplinary applications of a complex adaptive systems across the social, behavioral, and life sciences.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Graduate student (degree or non-degree); Credit is allowed for only ASM, BIO, or SOS 570
ASM	573	Lithic Analysis	Analysis and interpretation of chipped stone artifacts. Focus on both techniques and underlying concepts and their application to real collections.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ASM	579	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	611	Paleopathology	Explores patterns of disease manifested in the human skeleton and differential diagnosis of infectious, metabolic, neoplastic, congenital, and other conditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); ASM 555
ASM	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASM	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ASM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	111	Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	
AST	111	Introduction to Solar Systems Astronomy	History, properties of light, instruments, study of solar system and nearby stars. For nonscience majors. Optional lab (AST 113). Both AST 111 and AST 113 or AST 114 must be taken to secure SQ general	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	
AST	112	Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	
AST	112	Introduction to Stars, Galaxies, and Cosmology	Structure and evolution of stars, star clusters, galaxies, cosmology. For nonscience majors. Optional lab (AST 114). Both AST 112 and AST 113 or AST 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	
AST	113	Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SQ	Pre/Co-requisite: AST 111 or AST 321
AST	113	Astronomy Laboratory I	Astronomical observations and experiments designed to help the student become familiar with the sky, telescopes, and astronomical measurements. Both AST 111 and 113 or AST 113 and 321 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre/Co-requisite: AST 111 or AST 321
AST	114	Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SQ	Pre/Co-requisite: AST 111, 112, 321 or 322
AST	114	Astronomy Laboratory II	Similar to AST 113, but material chosen to supplement AST 112 and 322. Both AST 112 and 114 or AST 114 and 322 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre/Co-requisite: AST 111, 112, 321 or 322
AST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisite: Maximum 25 hours
AST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student

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AST	321	Introduction to Planetary and Stellar Astrophysics	Physical laws; celestial mechanics; properties of planets, the sun, and other stars; formation and evolution of stars and planetary systems. Both AST 113 and 321 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	Pre-requisites: MAT 266 or 271 with C or better; PHY 121 and 122 (or PHY 150) with C or better
AST	322	Introduction to Galactic and Extragalactic Astrophysics	Evolved stars, introduction to relativity, galaxies and interstellar matter, structure and dynamics of galaxies, cosmology. Both AST 114 and 322 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	Pre-requisites: MAT 266 (or MAT 271), PHY 150 (or PHY 121/122) with C or better
AST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
AST	421	Astrophysics I	Selected astrophysical topics, including stellar evolution, star formation, interstellar medium, galactic structure, extragalactic astronomy, high-energy astrophysics, and cosmology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: AST 321 or AST 322 with C or better; PHY 252 with C or better
AST	422	Astrophysics II	Same range of astrophysical topics as for AST 421 but emphasizes different specific topics in a given year.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: AST 321 or AST 322 with C or better; PHY 252 with C or better
AST	460	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite with C or better: AST 112 (or BIO 182 or BIO 282 or GLG 102 or SES 122), one 300-level course in AST or BIO or CHM or GLG or MIC or PHY or SES. Credit is allowed for only AST 460 or GLG 460 or MIC 475
AST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
AST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
AST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Prerequisite(s): Barrett Honors student
AST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
AST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
AST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
AST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		
AST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
AST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
AST	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	521	Stars and Interstellar Medium I	Radiative transfer, atomic and molecular properties, stellar atmospheres, line profiles, nonlocal thermodynamic equilibrium, interstellar gas and dust, star formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	522	Stars and Interstellar Medium II	Stellar structure, radiative transport, boundary conditions, equations of state, nuclear reactions, opacity, nucleosynthesis, chemical evolution of the galaxy, stellar evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	523	Stars and Interstellar Medium III	Structure of the interstellar medium, gaseous nebulae, recombination theory, ionization fronts and shock waves, galactic magnetic fields, magnetohydrodynamics, molecular clouds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	531	Galaxies and Cosmology I	Structure and evolution of the Milky Way, stellar properties, populations and associations/clusters, interstellar medium, dark matter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	532	Galaxies and Cosmology II	Structure of galaxies and the nearby universe, Hubble sequence, kappa-space, stellar populations, active galaxies, galaxy environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	533	Galaxies and Cosmology III	Issues in modern cosmology, the distance scale, cosmological parameters, cosmological tests, cosmic background radiation, early universe, galaxy formation and evolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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AST	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
AST	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ASU	10	Connect: ASU Orientation	Students enrolled in the Starbucks College Achievement Plan will learn about ASU's mission as the New American University, discover the value of a university degree from a research institution, discuss academic integrity, explore the tools used in online courses, and identify key components of a work/life/school balance plan.	N	LEC	N	NOG	Office of the Provost	Online & Extended Campus	0		
ASU	11	ASU Online Orientation	Students enrolled in ASU Online Orientation will learn about ASU and its mission as the New American University, discover the value of a university degree from a research institution, discuss academic integrity, explore the tools used in online courses, and identify key components of a work/life/school balance plan.	N	LEC	N	NOG	Office of the Provost	Online & Extended Campus	0		
ASU	19	Jump Start	One-week program for incoming first-year students to ASU and is designed to set them up for academic success. Introduces the tools and processes that support their journey. Students learn how to connect with other students via collaborative environments.	N	LEC	N	YGB	University College	University Academic Success Programs	0		Prerequisite(s): Jump Start or SPIRIT student
ASU	42	Online Military Orientation	Active duty and veteran students enrolled in ASU 42 will explore ASU academic, veteran, and career resources, discover the value of a university degree from a research institution, discuss academic integrity, explore the tools used in online courses, and craft a plan balancing work, school, and life.	N	LEC	N	NOG	Office of the Provost	Online & Extended Campus	0		
ASU	150	The LEAD Project I	Students develop in academic areas while also gaining essential career skills in creativity, problem solving, and teamwork. Students learn how to think critically and manage a project from inception to completion. Through course discussions and assignments, students examine connections between their work in other courses and ASU 150. This is the first part of a two-part curriculum which continues into the spring semester. Separate grades will be issued for each semester.	N	LEC	N	GNA	University College	Dean, University College	1		Credit is allowed for only ASU 150 or ASU 194 (The LEAD Project I) or UNI 120
ASU	151	The LEAD Project II	Students continue to develop in academic areas while gaining essential career skills in creativity, problem solving and teamwork. Students learn how to think critically and manage a project from inception to completion. Through course discussions and assignments, students examine connections between their work in other courses and this course. Second part of a two-part curriculum, which continues from the fall semester. Separate grades are issued for each semester.	N	LEC	N	GNA	University College	Dean, University College	1		Credit is allowed for only ASU 151 or ASU 194 (The LEAD Project II)
ASU	101-AEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Aerospace Engineering undergraduate student
ASU	101-BME	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering student
ASU	101-CEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1		Prerequisite(s): Fulton Schools of Engineering student
ASU	101-CHE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1		Prerequisite(s): Chemical Engineering major

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ASU	101-CHS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	1		Prerequisite(s): College of Health Solutions major
ASU	101-CLS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Prerequisite(s): College of Integrative Sciences and Arts undergraduate student
ASU	101-CNE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1		
ASU	101-CON	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1		Prerequisite(s): Fulton Schools of Engineering student
ASU	101-CPP	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1		Prerequisite(s): College of Public Service and Community Solutions
ASU	101-CS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Prerequisite(s): Cronkite School of Journalism and Mass Communication student
ASU	101-CSE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): School of Computing, Informatics, and Decision Systems Engineering major
ASU	101-EEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1		Prerequisite(s): undergraduate Electrical Engineering student
ASU	101-FSE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): Fulton Schools of Engineering student

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ASU	101-HDA	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Prerequisite(s): Herberger Institute of Design and the Arts student
ASU	101-HNR	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	1		Prerequisite(s): Barrett Honors student
ASU	101-IEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1		Prerequisite(s): School of Computing, Informatics, and Decision Systems Engineering major
ASU	101-LA	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1		Prerequisite(s): College of Liberal Arts & Sciences student
ASU	101-MAE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Mechanical Engineering students or Aerospace Engineering undergraduate student
ASU	101-MEE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Mechanical Engineering undergraduate student
ASU	101-MSE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Prerequisite(s): Fulton Schools of Engineering student
ASU	101-NCIAS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Prerequisite(s): New College of Interdisciplinary Arts and Sciences undergraduate student
ASU	101-NH	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		

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ASU	101-NU	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): Nursing and Healthcare Innovation or Nutrition student
ASU	101-SOS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	1		Prerequisite(s): School of Sustainability student
ASU	101-TE	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): Teacher Education and Leadership student
ASU	101-TPS	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Polytechnic School	1		Prerequisite(s): Ira A. Fulton Schools of Engineering - The Polytechnic School student
ASU	101-UC	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	University College	Dean, University College	1		Prerequisite(s): College of Integrative Sciences and Arts OR University College student
ASU	101-UC	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	University College	Dean, University College	1		Prerequisite(s): ASU Online students
ASU	101-WPC	The ASU Experience	Students will learn about ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students will examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1		Prerequisite(s): W.P. Carey student
ASU	140-CHS	ProMod	Project-based learning.	Y	PRO	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	0-18		
ASU	140-CLS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0-18		
ASU	140-CPSCS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	0-18		
ASU	140-CS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	0-18		
ASU	140-FSE	ProMod	Project-based learning.	Y	PRO	Y	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	0-18		
ASU	140-HDA	ProMod	Project-based learning.	Y	PRO	Y	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	0-18		
ASU	140-HNR	ProMod	Project-based learning.	Y	PRO	Y	GNA	Barrett, The Honors College	Barrett, The Honors College	0-18		Prerequisite(s): Barrett Honors student
ASU	140-LA	ProMod	Project-based learning.	Y	PRO	Y	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	0-18		
ASU	140-NCIAS	ProMod	Project-based learning.	Y	PRO	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	0-18		

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ASU	140-NU	ProMod	Project-based learning.	Y	PRO	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	0-18		
ASU	140-SOS	ProMod	Project-based learning.	Y	PRO	Y	GNA	School of Sustainability	School of Sustainability	0-18		
ASU	140-TB	ProMod	Project-based learning.	Y	PRO	Y	GNA	Thunderbird Sch of Global Mgmt	Dean, Thunderbird School of Global Management	0-18		
ASU	140-TE	ProMod	Project-based learning.	Y	PRO	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-18		
ASU	140-WPC	ProMod	Project-based learning.	Y	PRO	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	0-18		
ASU	194-CLS	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ASU	194-LA	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	1-4		
ASU	194-NCIAS	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ASU	194-UC	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	University College	Dean, University College	1-4		
ASU	240-CHS	ProMod	Project-based learning.	Y	LEC	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	0-18		
ASU	240-CLS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0-18		
ASU	240-CPSCS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	0-18		
ASU	240-CS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	0-18		
ASU	240-FSE	ProMod	Project-based learning.	Y	LEC	Y	GNA	Ira A. Fulton Engineering	Ira A. Fulton Schools of Engineering	0-18		
ASU	240-HDA	ProMod	Project-based learning.	Y	LEC	Y	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	0-18		
ASU	240-HNR	ProMod	Project-based learning.	Y	LEC	Y	GNA	Barrett, The Honors College	Barrett, The Honors College	0-18		Prerequisite(s): Barrett Honors student
ASU	240-LA	ProMod	Project-based learning.	Y	LEC	Y	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	0-18		
ASU	240-NCIAS	ProMod	Project-based learning.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	0-18		
ASU	240-NU	ProMod	Project-based learning.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	0-18		
ASU	240-SOS	ProMod	Project-based learning.	Y	LEC	Y	GNA	School of Sustainability	School of Sustainability	0-18		
ASU	240-TB	ProMod	Project-based learning.	Y	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	Dean, Thunderbird School of Global Management	0-18		
ASU	240-TE	ProMod	Project-based learning.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-18		
ASU	240-WPC	ProMod	Project-based learning.	Y	LEC	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	0-18		
ASU	340-CHS	ProMod	Project-based learning.	Y	PRO	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	0-18		
ASU	340-CLS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0-18		
ASU	340-CPSCS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	0-18		
ASU	340-CS	ProMod	Project-based learning.	Y	PRO	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	0-18		
ASU	340-FSE	ProMod	Project-based learning.	Y	PRO	Y	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	0-18		
ASU	340-HDA	ProMod	Project-based learning.	Y	PRO	Y	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	0-18		
ASU	340-HNR	ProMod	Project-based learning.	Y	PRO	Y	GNA	Barrett, The Honors College	Barrett, The Honors College	0-18		Prerequisite(s): Barrett Honors student
ASU	340-LA	ProMod	Project-based learning.	Y	PRO	Y	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	0-18		
ASU	340-NCIAS	ProMod	Project-based learning.	Y	PRO	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	0-18		
ASU	340-NU	ProMod	Project-based learning.	Y	PRO	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	0-18		
ASU	340-SOS	ProMod	Project-based learning.	Y	PRO	Y	GNA	School of Sustainability	School of Sustainability	0-18		
ASU	340-TB	ProMod	Project-based learning.	Y	PRO	Y	GNA	Thunderbird Sch of Global Mgmt	Dean, Thunderbird School of Global Management	0-18		
ASU	340-TE	ProMod	Project-based learning.	Y	PRO	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-18		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ASU	340-WPC	ProMod	Project-based learning.	Y	PRO	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	0-18		
ASU	394-CLS	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ASU	440-CHS	ProMod	Project-based learning.	Y	LEC	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	0-18		
ASU	440-CLS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0-18		
ASU	440-CPSCS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	0-18		
ASU	440-CS	ProMod	Project-based learning.	Y	LEC	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	0-18		
ASU	440-FSE	ProMod	Project-based learning.	Y	LEC	Y	GNA	Ira A. Fulton Engineering	Ira A. Fulton Schools of Engineering	0-18		
ASU	440-HDA	ProMod	Project-based learning.	Y	LEC	Y	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	0-18		
ASU	440-HNR	ProMod	Project-based learning.	Y	LEC	Y	GNA	Barrett, The Honors College	Barrett, The Honors College	0-18		Prerequisite(s): Barrett Honors student
ASU	440-LA	ProMod	Project-based learning.	Y	LEC	Y	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	0-18		
ASU	440-NCIAS	ProMod	Project-based learning.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	0-18		
ASU	440-NU	ProMod	Project-based learning.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	0-18		
ASU	440-SOS	ProMod	Project-based learning.	Y	LEC	Y	GNA	School of Sustainability	School of Sustainability	0-18		
ASU	440-TB	ProMod	Project-based learning.	Y	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	Dean, Thunderbird School of Global Management	0-18		
ASU	440-TE	ProMod	Project-based learning.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-18		
ASU	440-WPC	ProMod	Project-based learning.	Y	LEC	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	0-18		
ATC	230	Fundamentals of Air Traffic Management	Introduces the manuals, procedures, maps, charts, and regulations used by air traffic controllers in the National Airspace System (NAS).	N	LEL	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Prerequisite(s): AMT 201 with C or better
ATC	331	Tower Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in ATC towers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 201 and ATC 230 with C or better
ATC	332	TRACON Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA TRACONS.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 201 and ATC 230 with C or better
ATC	333	En Route Operations	Provides knowledge of air traffic control procedures, phraseology, equipment, and aircraft separation requirements used in FAA ATC En Route Centers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: AMT 201 and ATC 230 with C or better
ATC	431	Tower Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: ATC 331 with C or better
ATC	432	TRACON Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: ATC 332 with C or better
ATC	433	En Route Operations and Procedures	Opportunity to operate in tower simulator environment to run scenarios for local and ground control and flight data/clearance delivery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisite: ATC 333 with C or better
ATC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Aviation Programs	1-12		Prerequisite(s): minimum junior standing
ATC	491	Air Traffic Management Capstone	Overview of problem solution tools, quality metrics, and current technology initiatives related to air traffic management and related industry problems in a project environment. Student projects focus on airport and airspace requirements. Student teams work with partners from industry, government, and academia to define project objectives and work toward a formal recommendation to help solve the specified problem. Class discussions focus on project management, organizational structures, strategic initiatives, strategy implementation and execution. Uses review and analysis of current industry problems and resolutions to provide examples of practical solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Aviation Programs	3		Pre-requisites: ATC 331, 332 and 333 with C or better; Pre/Co-requisite: ATC 431, 432, 433 with C or better if completed
ATC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Ira A. Fulton Engineering	Aviation Programs	1-4		
ATE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
ATE	242	Introduction to Architectural Technology	Materials and methods of construction. Aesthetic, code and construction costs. Exposure to building information management (BIM).	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Architectural Studies major. Corequisite(s): ALA 226
ATE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ATE	361	Architectural Technology I	Introduces load distribution on structures. Static analysis of determinant beams, trusses, arches, and rigid frames. Computer applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Corequisite(s): ADE 321
ATE	362	Architectural Technology II	Strength of materials: stresses in beams and columns. Thermal effects on structures. Analysis, design, and detailing of wood structural	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): ATE 361 with C or better
ATE	451	Building Systems I	Principles of solar radiation, heat and moisture transfer, and environmental control systems as form influences. Energy-conscious design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Co-requisites: ADE 421
ATE	452	Architectural Technology III	Architectural design implications of heating, ventilation, and air conditioning systems. Principles of lighting, daylighting, and acoustics, and their applications.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): ATE 362 with C or better; Corequisite(s): ADE 422
ATE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
ATE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
ATE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
ATE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
ATE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ATE	521	Building Environmental Science	Scientific principles relating to comfort and environmental control. Heat and moisture transfer. Solar/natural energies for heating, cooling, and lighting.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	550	Passive Heating and Cooling	Theory, analysis, and application of passive and low-energy systems in order to maximize comfort and minimize energy consumption in buildings.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	553	Architectural Technology IV	Design and integration of building systems, including mechanical, electrical, plumbing, security, communications, fire protection, and transportation.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Master of Architecture student; Corequisite(s): ADE 521; ATE 563
ATE	556	Architectural Technology V	Comprehensive design development through the understanding and integration of building materials and systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Corequisite(s): ADE 522; APH 505
ATE	560	Building Energy Analysis	Computer simulation of building thermal behavior. Software review. Detailed study of selected simulation models using case study projects.	N	LAB	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	562	Experimental Evaluation	Instrumentation, measurement and computational techniques for analysis of building components, and assessment of thermal and luminous performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	563	Architectural Technology VI	Analysis, design, and detailing of steel buildings and frames. Lateral analysis of small rigid and braced frame systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Master of Architecture student
ATE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	582	Environmental Control Systems	Heating, ventilation, and air-conditioning systems. Loads, psychrometrics, refrigeration cycle, air/water distribution, controls, energy performance standards, and utility rates.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Bldg Design MS, Master of Architecture, Master of Urban Design, or Master of Landscape Architecture student
ATE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ATE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ATE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
ATE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Herberger Institute of Design and the Arts Graduate student
ATE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
AVC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AVC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AVC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AVC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
AVC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
AVC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
AVC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
AVC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
AVC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
AVC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
BCH	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
BCH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
BCH	341	Physical Chemistry with a Biological Focus	Thermodynamics, equilibrium, states of matter, solutions and chemical kinetics with a focus on biological systems. For students in biochemical, premedical, biomedical and educational curricula.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 114 or 116 or 118 with C or better; CHM 231 or 233 or 333 with C or better; MAT 251 or 265 or 270 with C or better; PHY 101 or 112 or 131 with C or better; Credit is allowed for only BCH 341 or CHM 341
BCH	361	Advanced Principles of Biochemistry	Advanced consideration of the structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; principles and theory of the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. The course is recommended for pre-health students. No credit for Biochemistry majors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): CHM 231 with C or better OR Pre- or corequisite(s): CHM 234 or CHM 334 with C or better if completed
BCH	361	Advanced Principles of Biochemistry	Advanced consideration of the structures, properties, and functions of proteins, enzymes, nucleic acids, carbohydrates, and lipids; principles and theory of the utilization and synthesis of these materials by living systems, and the relationship of these processes to energy production and utilization. The course is recommended for pre-health students. No credit for Biochemistry majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 231 with C or better OR Pre- or corequisite(s): CHM 234 or CHM 334 with C or better if completed
BCH	367	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	367	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre/Co-requisite: BCH 361 or LSC 366 with C or better if completed
BCH	367	Elementary Biochemistry Laboratory	Qualitative/quantitative analyses of constituents of biological systems, enzyme activity measurements and metabolic studies.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisites: BIO 354 (or LSC 355); Pre- or Co-requisites: BCH 361 or LSC 366 (with C or better if completed)
BCH	371	Modern Concepts in Biochemistry	Detailed examination of the chemical structure, conformation, and function of proteins, carbohydrates, lipids, and nucleotides; analysis of the energetics, enzymes, and control of the metabolic pathways by which these molecules are degraded or synthesized.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: BIO 353; CHM 234; Credit is allowed for only BCH 371 or LSC 394 (Modern Concepts in Biochemistry)
BCH	372	Modern Concepts in Biochemistry Laboratory	Analyzes protein structure, purification, and function using spectroscopic, chromatographic, and electrophoretic methods.	N	LAB	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisite: BIO 354; Pre/Co-requisite: BCH 371; Credit is allowed for only BCH 372 or LSC 394 (Modern Concepts in Biochemistry Laboratory)
BCH	392	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects. May be repeated for total of 6 semester hours.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
BCH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		

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BCH	461	General Biochemistry	Structure, chemistry, and metabolism of biomolecules and their role in the biochemical processes of living organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 234 or CHM 334 with C or better; Corequisite(s): BCH 341 or CHM 341 or CHM 346 with C or better if completed
BCH	462	General Biochemistry	Continuation of BCH 461.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: BCH 461 with C or better
BCH	463	Biophysical Chemistry	Principles of physical chemistry as applied to biological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): BCH 341 or CHM 341 or CHM 346 with C or better
BCH	464	Biophysical Chemistry Laboratory	Introduces physical methods in modern biochemistry.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: BCH 467 with C or better; Pre/Co-requisite: BCH 463 with C or better if completed
BCH	465	Protein and Nucleic Acid Biochemistry	Structure and function of proteins and nucleic acids, including protein folding, enzymology, proteomics, DNA/RNA structure, replication, transcription, and genomics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: BCH 461 with C or better; Co-requisite: BCH 462
BCH	467	Analytical Biochemistry Laboratory	Quantitative analysis, separation and purification of biological molecules. Applies chemical and physical methods to the characterization of biological macromolecules.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	L	Pre/Co-requisite: BCH 462 with C or better if completed
BCH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		
BCH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-6		Prerequisite(s): Barrett Honors student
BCH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-6	L	Prerequisite(s): Barrett Honors student
BCH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
BCH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-7		
BCH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
BCH	501	Current Topics in Biochemistry		Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	520	Chemical Biology	Chemical biology, broadly defined, is the application of chemical tools toward the study biological problems. The purpose of this class is to provide the foundation for translational research involving cross-disciplinary approaches to tackling significant problems in the biosciences. This one-semester class will cover topics ranging from traditional molecular biology and biochemistry to state-of-the-art techniques in genomics and proteomics. Particular emphasis will be placed on modern concepts in enzymology. The class will be taught using a combination of current literature and text-based materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: Graduate students (degree and nondegree); Credit is allowed for only BCH or CHM 520
BCH	561	Advanced Topics in Biochemistry	Topics selected from emerging areas of biochemistry based primarily on current literature.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	564	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	568	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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BCH	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCH	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BCS	101	Elementary Serbo-Croatian	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
BCS	102	Elementary Serbo-Croatian	See BCS 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
BCS	201	Intermediate Serbo-Croatian	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
BCS	202	Intermediate Serbo-Croatian	See BCS 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
BCS	311	Bosnian/Croatian/Serbian Composition and Conversation I	Develops writing ability and oral expression.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: BCS 202 with C or better; Credit is allowed for only BCS 311, 394 (Serbo-Croatian Conv & Comp I) or SLC 394 (Serbo-Croatian Comp/Conv)
BCS	312	Bosnian/Croatian/Serbian Composition and Conversation II	Develops writing ability and oral expression.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: BCS 311 with C or better; Credit is allowed for only BCS 312 or 394 (Bosnian/Croatian/Serbian Composition and Conversation II)
BCS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
BCS	495	Serbo-Croatian for Heritage Speakers	Generates professional proficiency by developing communicative and written competency in standard literary Serbo-Croatian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
BDE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	692	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BDE	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	701	Fundamentals of Biological Design I	Training in the essentials of fields underlying interdisciplinary research in the biosciences and in the integration of multiple disciplines in use-inspired research. Modules concentrate on key concepts and current questions in the biological sciences, physical sciences, and engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	9		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	702	Fundamentals of Biological Design II	Emphasizes the integrative areas of computational bioinformatics, systems biology, and synthetic biology, and their application in biomedical research.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	721	Integrative Research	Develops comprehensive solutions to societal problems by small interdisciplinary teams of students, including a proposal for research in an integrated science area. Covers issues of intellectual property, commercialization, societal impact and value, project management, product design, and historical examples of disruptive technological innovations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	722	Research Design	Writing and presentation of a research proposal in the form of a grant application, peer review sessions to provide feedback, examination of the grant review and funding process.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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BDE	751	Teaching in Science	Guidance in teaching and exposition through assisting a faculty teaching mentor in the Biological Design core course and training in oral presentation skills, including instruction in how to effectively present posters and seminars and participation in outreach experiences in the community.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BDE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	100	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SG	
BIO	100	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SG	
BIO	100	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	
BIO	108	Concepts in Plant Biology	Introduces concepts of plant biology that are of human relevance using commercially important, edible, and medicinal plants as examples. Not for majors in the biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SG	
BIO	112	Discovery: Why Sex?	"Why?" is a question that animates the youngest of children to the most seasoned of scientists. The acts of asking and answering "Why?" highlight the integrated nature of scientific knowledge and discovery. Demonstrates scientific disciplines are not walled cities in which knowledge is neatly segregated from lines of inquiry and knowledge in other disciplines. Instead, scientific concepts weave throughout and between disciplines and scientists increasingly rely on colleagues from different scientific fields to find answers to scientific questions. So our journey to find responses to the question "Why Sex?" takes us not just to biology, but also to earth science and to physics. Along the way, scientists are linked together not only through concepts that crosscut the disciplines, but also in their reliance upon key scientific skills such as the ability to observe, think critically, measure, gather data and communicate their findings.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Life Sciences	4	SG	Credit is allowed for only BIO 112 or BIO 194 (Discovery: Why Sex?)
BIO	113	Dinosaurs	Principles of evolution, ecology, behavior, anatomy and physiology using dinosaurs and other extinct life as case studies. Geological processes and the fossil record. Cannot be used for major credit in the biological sciences.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Credit is allowed for only BIO 113 or LSC 294 t 2 (Dinosaurs)
BIO	130	Introduction to Environmental Science	Introduces the interconnected nature of Earth's hydrosphere, lithosphere (soils and rocks), atmosphere, and biosphere.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Credit is allowed for only BIO 130 or ABS 130
BIO	140	Greek and Latin Roots in Bioscientific Terminology	Introduces students to the ancient Greek and Latin root words most commonly used in biological, medical, and other scientific terminology, and gives practice identifying them in context. The knowledge of these root words enables students to memorize with greater ease and increased retention the bioscientific terminology they encounter in other coursework as well as in their medical or scientific profession.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
BIO	151	Biological Thinking	The science behind the science of life. Masters the core concepts of modern biology, understands the scientific discoveries that lie behind those concepts, and develops scientific reasoning skills so that students can contribute discoveries of their own.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SG	Prerequisite: Life Sciences student with a math placement score below 50; Credit is allowed for only BIO 100 or BIO 151
BIO	181	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SG	Credit is allowed for only BIO 181 or BIO 281 or BIO 282
BIO	181	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SG	Credit is allowed for only BIO 181 or BIO 281 or BIO 282
BIO	181	General Biology I	Biological concepts emphasizing principles and the interplay of structure and function at the molecular, cellular, and organismal levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Credit is allowed for only BIO 181 or BIO 281 or BIO 282
BIO	182	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SG	Credit is allowed for only BIO 182, 281, or 282
BIO	182	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SG	Credit is allowed for only BIO 182, 281, or 282

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BIO	182	General Biology II	Biological concepts emphasizing principles and the interplay of structure and function at the organismal, population, and community levels. Intended for life sciences, biology, and health-related science majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Credit is allowed for only BIO 182, 281, or 282
BIO	189	Life Sciences Career Paths	Overview of modern life sciences, including research trends, extracurricular opportunities, degree programs, and potential careers.	N	REC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): Freshmen School of Life Sciences majors
BIO	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
BIO	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	201	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SG	
BIO	201	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SG	
BIO	201	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	
BIO	202	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SG	Pre-requisites: BIO 201 with C or better
BIO	202	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SG	Pre-requisites: BIO 201 with C or better
BIO	202	Human Anatomy and Physiology II	Studies the structure and function of the human body. Topics include cardiovascular, respiratory, lymphatic/immune, endocrine, renal, digestive, and reproductive systems. Cannot be used for major credit in the life sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Pre-requisites: BIO 201 with C or better
BIO	281	Conceptual Approaches to Biology for Majors I	Covers the themes and concepts that underlie the molecular biology of cells and multicellular organisms as well as the biological processes that shape the diversity of organisms on our planet.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	SQ	Prerequisite(s): School of Life Sciences student; Pre- or corequisite(s): STP 226 (or 231) with C or better if completed. Credit is allowed for only BIO 181, 182 or 281
BIO	282	Conceptual Approaches to Biology for Majors II	Builds upon established conceptual foundations, covers the themes and concepts underlying organismal biology, with an emphasis on physiology and ecology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): School of Life Sciences student; BIO 281 with C or better; Credit is allowed for only BIO 181 or BIO 182 or BIO 282
BIO	289	School of Life Sciences Undergraduate Research Apprentice	Students gain exposure to contemporary issues in research excellence, mentoring skills, and professional development in this seminar. Enriches individual lab research experiences students by bringing them together in a peer-community environment. Introduces students to the resources they have at their disposal (e.g. on campus, online) to facilitate research productivity and career planning. Rigorously evaluates their research processes and products, in light of their eventual professional plans.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1		Co-requisite: BIO 310, or BIO 494 (Advanced Study Practicum), or BIO/HP5/MBB/MIC/PLB 484/492/493/495/496/499, or MIC 401
BIO	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	300	Natural History of Arizona	Plant and animal communities of Arizona. Cannot be used for major credit in the biological sciences. Both BIO 300 and BIO 301 must be taken to secure SG General Studies credit	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SG	
BIO	301	Field Natural History	Organisms and their natural environment. Cannot be used for major credit in the biological sciences. Both BIO 300 and BIO 301 must be taken to secure SQ General Studies credit	N	PRA	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SG	Pre/Co-requisites: BIO 300 or LSC 310 with C or better if completed
BIO	302	Cancer--Mother of All Diseases	History of cancer; disease statistics; pathogenesis; diagnosis, treatment and prevention; case studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Prerequisite(s): BIO 181 and 182 (or BIO 282) with C or better
BIO	303	Plant Diversity and Evolution	An examination of the major groups of land plants, emphasizing evolutionary history, comparative data, and phylogenetic methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	L or SG	Prerequisite(s) with C or better: BIO 181 or BIO 188 and BIO 182 or BIO 187 or PLB 200 OR BIO 281 with C or better and BIO 282 with C or better; Credit is allowed for only BIO 303 or LSC 307 or PLB 300

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BIO	304	Plants and Civilization	Plants and plant products used by people throughout the world. Cultivation, processing, and uses in modern life (beverages, fibers, foods, medicinals, and perfumes).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s) with C or better: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) OR BIO 281 and 282; Credit is allowed for only BIO 304 or PLB 302
BIO	305	Biology Behind the Crime Scene	Explores biological technology behind forensic techniques like fingerprinting, Polymerase Chain Reaction (PCR), and paternity testing.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	Pre-requisites: Minimum Sophomore standing
BIO	306	Modes of Biological Thought	Involves students in the process of biological discovery to examine how we identify truth in biological science.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Pre-requisites: ENG101 or ENG 105 with C or better; BIO181 (or BIO188) and BIO182 (or BIO187) with C or better
BIO	307	Dinosaurs	Principles of evolution, ecology, behavior, anatomy, and physiology using dinosaurs and other extinct life as case studies. Geological processes and the fossil record. Weekend field trip required. Cannot be used for major credit in the biological sciences.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisite: Minimum sophomore standing; Credit is allowed for only BIO 307 or LSC 294 (Dinosaurs)
BIO	308	Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s) with C or better: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) OR BIO 281 and 282; CHM 116; Credit is allowed for only BIO 308 or PLB 308
BIO	309	Plant Anatomy	Development and mature structure of tissues of vascular plants; patterns and modifications of the leaf, stem, root, and flower.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
BIO	310	Special Problems and Techniques	Qualified undergraduates may investigate a specific biological problem under the direction of a faculty member.	N	IND	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO	311	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 188 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 311 or HPS 340
BIO	312	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only BIO 312, IAS 340, or PHI 320
BIO	313	The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s) with C or better: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) OR BIO 281 and 282; Credit is allowed for only BIO 313 or PLB 310
BIO	314	Research Colloquium in Biology and Society I	Develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2	L	Prerequisite(s): Biological Sciences (Biology and Society) BS majors; BIO 340 or MBB 347 with C or better
BIO	315	Science, Values, and the Public	Examines science, communication, and a range of public opinion to understand science as a discourse of profound social power.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite: ENG 102, 105, or 108 with C or better. Minimum 35 hours. Credit is allowed for only ENG 370 or BIO 315
BIO	316	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	H	Credit is allowed for only BIO 316 or HPS 330
BIO	317	History of Science	Development and application of scientific thinking from the 18th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H	Prerequisite(s): minimum 45 hours; Credit is allowed for only BIO 317 or HPS 323
BIO	318	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H	Credit is allowed for only BIO 318 or HPS 331
BIO	319	Environmental Science (Nonmajor)	Environmental and biological concepts applied to ecological systems with a specific focus on analysis of problems caused by humans. Cannot be used for major credit in the Biological Sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	G	Pre-requisite: Junior class standing; Credit is allowed for only BIO 319 or PLB 320

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BIO	320	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 or 118 with C or better
BIO	320	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 or 118 with C or better
BIO	320	Fundamentals of Ecology	Organization, functioning, and development of ecological systems; energy flow; biogeochemical cycling; environmental relations; population dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; CHM 116 or 118 with C or better
BIO	321	Introductory Ecology Laboratory	Lab and field observations and experiments to test current concepts and theories in ecology.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 320 with C or better if completed
BIO	322	Conservation of Biodiversity	Species-level approaches to the protection, management, and restoration of biological resources from scientific and policy perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	323	Ecosystem Restoration and Management	Ecosystem-level approaches to the protection, management, and restoration of biota and ecosystem processes from local to global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	324	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU	Credit is allowed for only BIO 324 or PHI 310
BIO	325	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s) with C or better: BIO 100 (or BIO 182 or 282 or GLG 101 or SES 121); CHM 101 (or CHM 113 or 114). Credit is allowed for only BIO 325 or CHM 385 or GLG 325
BIO	327	Evolution of Human Behavior	Examines how evolutionary theory informs our understanding of human behavior, psychology and culture. Explores evolutionary explanations of human behavioral variation and cultural diversity and the influence of natural selection on shaping human cognition. Topics include nepotism, economic decisions, behavioral strategies throughout the life course, mate choice and sexual behavior, perception and judgment, motivation and emotions, social learning and culture, cooperation and prosociality, interpersonal violence and warfare, and norms and moral sentiments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s) with C or better: ASM 104 (or BIO 181 or 282). Credit is allowed for only ASM 342 or BIO 327
BIO	331	Animal Behavior	Theories of evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO or LSC 331
BIO	331	Animal Behavior	Theories of evolutionary, genetic, physiological, and ecological bases of animal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO or LSC 331

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BIO	340	General Genetics	Science of heredity and variation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisites with C or better: BIO 181 and 182 (or both PLB 200 and 201) OR BIO 181 (or BIO 281 or MBB 245) and MBB 247 OR BIO 281 and 282; non-Molecular Biosciences and Biotechnology majors only. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
BIO	340	General Genetics	Science of heredity and variation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisites with C or better: BIO 181 and 182 (or both PLB 200 and 201) OR BIO 181 (or BIO 281 or MBB 245) and MBB 247 OR BIO 281 and 282; non-Molecular Biosciences and Biotechnology majors only. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
BIO	340	General Genetics	Science of heredity and variation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisites with C or better: BIO 181 and 182 (or both PLB 200 and 201) OR BIO 181 (or BIO 281 or MBB 245) and MBB 247 OR BIO 281 and 282; non-Molecular Biosciences and Biotechnology majors only. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
BIO	342	General Genetics Laboratory	Explores general principles of inheritance with special reference to Mendelian, molecular, and computational genetics via lab experiments.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 340 (with C or better if completed)
BIO	343	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	L	Pre-requisite: MBB 347 or BIO 340 with C or better; Credit is allowed for only BIO or MBB 343
BIO	344	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
BIO	345	Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre- or corequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better
BIO	345	Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre- or corequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better
BIO	345	Evolution	Processes of adaptive change and speciation in sexual populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre- or corequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better
BIO	346	The Darwinian Revolution	Intellectual and cultural history of Darwinism and modern evolutionary theory and their impact on 19th- and 20th-century thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
BIO	347	Science and Social Change	Modern science and technology are rapidly and radically transforming our society in innumerable ways, from how we process food to altering the very core of what it means to be human. Explores historical, philosophical, sociological, ethical, economic and political topics and consequences of modern science in society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Credit is allowed for only BIO 347, BIO 394 (Science and Society) or HPS 347
BIO	349	MolecularGenetics:GenesProtein	Emphasizes molecular and cell biology and gene technology, both at the basic and applied research levels, in the growing areas of biotechnology and the molecular biosciences; focuses on molecular processes that allow genetic information to be expressed and regulated and by introducing applications to real-world situations.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 282 (or BIO 181 and 182); CHM 116. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
BIO	351	Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better
BIO	351	Developmental Biology	Principles of developmental biology, including the development of major organ systems and their underlying molecular and cellular mechanisms. Illustrated mainly using vertebrate examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better
BIO	352	Laboratory in Vertebrate Developmental Anatomy	Morphology of representative embryonic and adult vertebrates.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; Pre/Co-requisite: BIO 351 with C or better

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BIO	353	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 181 and 182 (or PLB 200) with C or better OR BIO 281 and 282 with C or better OR MBB 245 and 247 with C or better; CHM 116 or 118 with C or better
BIO	353	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 and 182 (or PLB 200) with C or better OR BIO 281 and 282 with C or better OR MBB 245 and 247 with C or better; CHM 116 or 118 with C or better
BIO	353	Cell Biology	Surveys major topics in cell biology, including structural, biochemical, and molecular aspects of cell function.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181 and 182 (or PLB 200) with C or better OR BIO 281 and 282 with C or better OR MBB 245 and 247 with C or better; CHM 116 or 118 with C or better
BIO	354	Cell Biology Laboratory	Investigational lab using modern molecular and cellular techniques to analyze molecular, biochemical, and anatomical traits of cells.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre/Co-requisite: LSC 353 or BIO 353 (with C or better if completed)
BIO	355	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 or STP 231, or STP 226 with C or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
BIO	360	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; CHM 116 or CHM 118 with C or better
BIO	360	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; CHM 116 or CHM 118 with C or better
BIO	360	Animal Physiology	Principles and mechanisms of physiological regulation in animals, with a focus on humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better; CHM 116 or CHM 118 with C or better
BIO	361	Animal Physiology Laboratory	Experimental lab studies of physiological mechanisms in animals and model systems.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 360 (with C or better if completed)
BIO	370	Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s) with C or better: BIO 181 and 182 OR BIO 281 and 282
BIO	370	Vertebrate Zoology	Characteristics, classification, evolution, and natural history of the major groups of vertebrate animals.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisite(s) with C or better: BIO 181 and 182 OR BIO 281 and 282
BIO	385	Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	385	Comparative Invertebrate Zoology	Characteristics, life cycles, adaptations, and evolution of invertebrate animals.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	386	General Entomology	Specialized focus on form, activities, and classification of insects.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better

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BIO	389	School of Life Sciences Undergraduate Researcher	While performing undergraduate research at ASU, students gain exposure to contemporary issues in research excellence, mentoring skills, and professional development. Goals include: enriching individual lab research experiences of each student by bringing them together in a peer-community environment; introducing students to the resources they have at their disposal (e.g., on campus, online) to facilitate research productivity and career planning; rigorously evaluating their research processes and products, in light of their eventual professional plans.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): School of Life Sciences majors; 3.00 GPA
BIO	390	Medical/Dental Field Placement	Field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
BIO	393	Careers in Natural and Health Sciences	This seminar course is designed to provide students with proficiency in analyzing career options and to help students explore the full range of careers that are open to those who major at the undergraduate level in the natural sciences. The course will include short presentations by professionals in a variety of fields, including environmental biology, biotechnology, business, education, and various health sciences. There will be ample opportunities for questions and personal interactions.	N	LEC	N	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisites: BIO 188 or BIO 182; Minimum 45 hours
BIO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	406	Computer Applications in Biology	Computer analysis techniques in biology emphasizing data entry, management and analysis, and graphic portrayal.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	410	Techniques in Conservation Biology and Ecology	Lecture, field, and laboratory experience in techniques used in conservation biology and ecology. Course is modular, with each module instructed by a discipline-specific expert (e.g., plant ecologist, mammal conservationist, soil ecologist).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisites: ENG 101 (or 105 or 107); BIO 320; BIO 322 or BIO 323 with C or better
BIO	410	Techniques in Conservation Biology and Ecology	Lecture, field, and laboratory experience in techniques used in conservation biology and ecology. Course is modular, with each module instructed by a discipline-specific expert (e.g., plant ecologist, mammal conservationist, soil ecologist).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Pre-requisites: ENG 101 (or 105 or 107); BIO 320; BIO 322 or BIO 323 with C or better
BIO	411	Quantitative Methods in Conservation and Ecology	Quantitative methods in conservation ecology: develop mathematical models of ecological and natural resource systems and use the models to better understand and inform management of ecosystems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 320 or 322 with C or better; BIO 415 or STP 226 or STP 231 with C or better; MAT 210, 251, 265, or 270 with C or better
BIO	412	Conservation in Practice	Global biodiversity patterns, processes, and conservation; global environmental change; sustainable use of natural resources; emphasizing international approaches to conservation biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 322 and BIO 323 with C or better
BIO	412	Conservation in Practice	Global biodiversity patterns, processes, and conservation; global environmental change; sustainable use of natural resources; emphasizing international approaches to conservation biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 322 and BIO 323 with C or better
BIO	414	Research Colloquium in Biology and Society II	Further develops critical thinking abilities, research methods, and writing skills for research in the interactions between biological sciences and society. Both BIO 314 & 414 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1	L	Pre-requisites: BIO 314 with C or better
BIO	415	Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better, or a 200 level statistics course (STP 226, or 231) with C or better
BIO	415	Biometry	Statistical methods applied to biological problems, design of experiments, estimation, significance, analysis of variance, regression, correlation, chi square, and bioassay; the use of computers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	CS	Pre-requisites: MAT 210, 251, 265 or 270 with C or better, or a 200 level statistics course (STP 226, or 231) with C or better
BIO	416	Biomedical Research Ethics	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only for BIO 416 or HPS 410
BIO	417	Experimental Design	Fixed, random, mixed models; crossed and nested factorial designs; balanced and unbalanced data; completely randomized, blocked, repeated measure designs; ANCOVA.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 415 with C or better
BIO	418	Soil Ecology	Soils viewed in an ecosystem context, soil-plant relationships, nutrient budgets, and abiotic factors that influence soil processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: ABS 370 or BIO 320. Credit is allowed for only ABS 434 or BIO 418
BIO	419	Physiological Plant Ecology	Physiological and morphological responses and adaptations of plants to their environment, emphasizing mechanisms that influence carbon and water balance, growth, and population distributions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 320 or PLB 308 with C or better; Credit is allowed for only BIO 419 or PLB 419 or BIO 519 or PLB 519

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BIO	420	Immunology: Molecular and Cellular Foundations	Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 353, BIO 360 or MIC 220 with C or better
BIO	421	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 320 with C or better. Credit is allowed for only BIO 421 or BIO 521 or SOS 421 or SOS 521
BIO	422	Ecosystem Ecology	Explores the structure, development and dynamics of ecosystems, with a focus on the exchange of energy and materials between the atmosphere, soils, water, biosphere, and anthro-sphere.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 320 with C or better. Credit is allowed for only BIO 422 or BIO 494 (Ecosystem Ecology)
BIO	422	Ecosystem Ecology	Explores the structure, development and dynamics of ecosystems, with a focus on the exchange of energy and materials between the atmosphere, soils, water, biosphere, and anthro-sphere.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 320 with C or better. Credit is allowed for only BIO 422 or BIO 494 (Ecosystem Ecology)
BIO	423	Population and Community Ecology	Organization and dynamics of population and communities. Theoretical and empirical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO	423	Population and Community Ecology	Organization and dynamics of population and communities. Theoretical and empirical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 320 or LSC 320 with C or better
BIO	424	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only ASM, BIO or SOS 424
BIO	425	Marine Conservation Ecology	Marine conservation biology is increasingly important for society, as evidenced by frequent media coverage and the recent report by the U.S. Commission on Ocean Policy. Expect exposure to multiple perspectives on important conservation issues in the marine environment and gain valuable experience in critical thinking, communication skills, and the use of science in effective debate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181, 182 with C or better OR BIO 281, 282 with C or better. Credit is allowed for only BIO 425 or BIO 494 (Marine Ecology and Conservation)
BIO	426	Limnology	Structure and function of aquatic ecosystems, with emphasis on freshwater lakes and streams.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3-4	L	Pre-requisites: BIO 320 with C or better
BIO	426	Limnology	Structure and function of aquatic ecosystems, with emphasis on freshwater lakes and streams.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3-4	L	Pre-requisites: BIO 320 with C or better
BIO	427	Fire	A survey of fire on Earth—history, ecology, behavior, and management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	H	Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	428	Biogeography	Environmental and historical processes determining distributional patterns of animals and plants, emphasizing terrestrial life.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisites: BIO 320 with C or better
BIO	429	Human Impacts on Ecosystem Functioning	Explores our current understanding of how humans are impacting the functioning of ecosystems and how changes in ecosystems would affect provisioning of ecosystem services and ultimately human well-being. The two primary drivers of ecosystem change are growth of the human population and increased consumption per capita. These drivers affect the Earth's cycles of carbon, nitrogen and water, as well as regional and global-scale changes in biodiversity and climate. Includes an in-depth discussion of scenarios for the next 50 and 100 years, which articulate costs and benefits of alternative development pathways in terms of climate change, food production, clean water and biodiversity. Scenarios of change in biodiversity lead to the topic of the consequences of biodiversity change for the functioning of ecosystems from the point of view of their productivity and stability. Human activities have disrupted several biogeochemical cycles including nitrogen and carbon cycles.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 320 (or SOS 326); Credit is allowed for only BIO 429, BIO 528, SOS 429, SOS 528, or SOS 494/598 (Human Impacts on Ecosystem Functioning), or BIO 494/598 (Human Impacts on Ecosystem Functioning)
BIO	430	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 or GPH 111 or PLB 200 with C or better; Credit is allowed for only BIO 430 or GPH 422 or PLB 422
BIO	431	Genes, Development, and Evolution	Contribution of genes, developmental processes, and evolution to pattern of phenotypic variation, including disease.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisites: BIO 181 (or BIO 188); BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	431	Genes, Development, and Evolution	Contribution of genes, developmental processes, and evolution to pattern of phenotypic variation, including disease.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Pre-requisites: BIO 181 (or BIO 188); BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better

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BIO	434	People and Nature: Ecosystem Services	Explores the drivers of biodiversity change and the consequences they have for human wellbeing, taking both an ecological and an economic perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: MAT 117 or higher or SOS 101; junior standing. Credit is allowed for only BIO 434, SOS 434, or BIO 494 (Ecosys Servcs:People&Nature)
BIO	435	Research Techniques in Animal Behavior	Experimental and field studies of animal behavior; description and quantification of animal behavior and interpretation of behavior within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 331 with C or better
BIO	436	Sociobiology and Behavioral Ecology	Surveys animal and human social behavior examined from ecological and evolutionary perspectives using theoretical and empirical constructs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 331 with C or better
BIO	437	Comparative Biomechanics and Motor Control	Guides students to critically evaluate how the physical and mechanical properties of organisms and their environment affect biological tissues, structures, and motor control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 with C or better; MAT 170 and PHY 111 with C or better; Credit is allowed for only BIO 437, 537, KIN 437, 537, KIN 494 (Comparative Biomechanics and Motor Control) or 598 (Comparative Biomechanics and Motor Control)
BIO	440	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better; Credit is allowed for only BIO 440 or CBS 540 or MBB 440 or MCB 540
BIO	443	Applied Molecular Genetics and Genomics	Nature and function of the gene; emphasizes the molecular genetic disease states; molecular biology; regulation of gene expression; genomics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: LSC 347 with C or better; CHM 233 or 331 with C or better; CHM 237 or 335 with C or better
BIO	446	Principles of Human Genetics	Molecular and cellular analysis of the human genome.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Prerequisite(s): ASM 301 or BIO 340 or LSC 347 or MBB 347 with C or better; Credit is allowed for only ASM 446 or ASM 546 or BIO 446 or BIO 546
BIO	450	Advanced Developmental Biology	Current concepts and experimental methods involving differentiation and biosynthetic activities of cells and organisms, with examples from <u>microorganisms, plants, and animals.</u>	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 351 with C or better
BIO	451	Cell Biotechnology Laboratory	Mammalian cell culture techniques, including mouse embryonic stem cells, the use of bioreactors, cell fractionation, and digital video imaging.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 353 (or MBB 245) with C or better
BIO	453	Animal Histology	Microscopic study of animal tissues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 201 or MIC 220 or BIO 353 or BIO 360 with C or better
BIO	453	Animal Histology	Microscopic study of animal tissues.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 201 or MIC 220 or BIO 353 or BIO 360 with C or better
BIO	455	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Credit is allowed for only BMI 465 or BIO 455
BIO	456	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better; Credit is allowed for only BMI 466 or BIO 456
BIO	461	Comparative Animal Physiology	A comparative approach to understanding the function of animal physiological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 360 with C or better
BIO	462	Endocrine Physiology	Mechanisms of action of hormones; endocrine control of homeostasis, growth, stress responses, and reproduction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 360 with C or better
BIO	464	Photobiology	Principles underlying the effects of light on growth, development, and behavior of plants, animals, and microorganisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 464 or PLB 440
BIO	465	Neurophysiology	Detailed treatment of cellular and organismal neurophysiology and nervous system function.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 360 with C or better
BIO	467	Neurobiology	Introduces major areas of neurobiology, from fundamental cellular and molecular processes through systems neuroscience and neural bases of behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 360 with C or better

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BIO	469	Computational Neuroscience: Case Studies in Neuroethology	Introduces the use of computational methods for understanding neural function at the cellular, circuit, and systems levels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 360 with C or better
BIO	471	Ornithology	Biology of birds.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): BIO 181 (or BIO 188) and 182 (or BIO 187) OR BIO 281 and 282 with C or better
BIO	471	Ornithology	Biology of birds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and 182 (or BIO 187) OR BIO 281 and 282 with C or better
BIO	471	Ornithology	Biology of birds.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181 (or BIO 188) and 182 (or BIO 187) OR BIO 281 and 282 with C or better
BIO	472	Mammalogy	Classification, structure, habits, ecology, and distribution of mammals, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	473	Ichthyology	Systematics and biology of recent and extinct fishes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	474	Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	474	Herpetology	Classification, structure, habits, ecology and distribution of reptiles and amphibians, emphasizing North American forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) with C or better OR BIO 281 and 282 with C or better
BIO	480	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	480	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	480	Methods of Teaching Biology	Methods of instruction, experimentation, organization, and presentation of appropriate content in biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better
BIO	482	Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: BIO 480 with C or better
BIO	482	Advanced Methods of Teaching Biology	Design, delivery, and evaluation of student-centered, inquiry-based lessons for high school biology students. Learning cycle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 480 with C or better
BIO	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BIO	489	School of Life Sciences Undergraduate Research Fellow	While performing undergraduate research at ASU, students gain exposure to contemporary issues in research excellence, mentoring skills, and professional development. Goals include: enriching individual lab research experiences of each student by bringing them together in a peer-community environment; introducing students to the resources they have at their disposal (e.g., on campus, online) to facilitate research productivity and career planning; rigorously evaluating their research processes and products, in light of their eventual professional plans.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): School of Life Sciences majors; 3.50 GPA
BIO	490	Surgical Field Placement	Advanced field placement for students exploring a career in a health profession. Requires classroom sessions and fieldwork.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 390 with C or better
BIO	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
BIO	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
BIO	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student

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BIO	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
BIO	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
BIO	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
BIO	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		Pre-requisite: Junior or senior standing
BIO	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): junior or senior standing; Credit is allowed for only BIO 496 or HPS 496 or MBB 496 or MIC 496
BIO	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
BIO	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
BIO	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
BIO	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
BIO	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	502	Transmission Electron Microscopy	Theory, use, and methods of preparing biological materials for transmission electron microscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Pre/Co-requisites: BIO 504
BIO	503	Bioimaging Lab	Provides a fundamental understanding of light-based microscopy through the training and use of instruments contained within the SOLS Keck Bioimaging laboratory. Examines the use of bright field, contrast, epi-fluorescent, total internal reflective fluorescence (TIRF), confocal, multiphoton and atomic force microscopy and how they are applied to various research applications. Additional focus given toward image ethics, analysis, and presentation using programs such as Adobe Photoshop and ImageJ. During the second half of the semester, students propose and develop an experimental project, based on their graduate research, in which they collect data, do analysis, and prepare results for a final project presentation.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 504, MCB 504, or BIO 598 Special Topic: Bioimaging Current Techniques; Credit is allowed for only BIO or MCB 503
BIO	504	Bioimaging	Lecture survey of modern techniques for imaging tissues, cells, and macromolecules, including light microscopy (e.g. video, fluorescence, confocal, multiphoton, single molecule), electron microscopy (e.g. transmission, scanning, cryogenic, tomographic) and ancillary techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO or MCB 504
BIO	506	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6		Pre-requisites: Graduate student; Credit is allowed for only ASM, BIO or MCB 506
BIO	515	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 515 or GLG 547 or HSD 515 or PAF 547 or SOS 516
BIO	516	Foundations of Bioethics	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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BIO	517	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
BIO	518	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 518 or HPS or HST 516
BIO	519	Physiological Plant Ecology	Physiological and morphological responses and adaptations of plants to their environment, emphasizing mechanisms that influence carbon and water balance, growth, and population distributions	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 519, PLB 419 or PLB 519
BIO	521	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 421 or BIO 521 or SOS 421 or SOS 521
BIO	522	Populations: Evolutionary Ecology	Principles of population biology and community ecology within an evolutionary framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	527	Environmental Ethics and Policy Goals	Advanced seminar in applied environmental ethics, focusing on the most influential and policy-relevant approaches in the field of environmental ethics. Core topics include the historical and philosophical foundations of alternative understandings of environmental responsibility; the debate over utility and preservation in environmental policy argument; and the interplay of ethical principles, scientific knowledge and societal priorities in environmental decision making. Consideration of the ethical and value dimensions of biodiversity conservation, wilderness protection, environmental valuation, environmental activism, climate change and sustainability, among other challenges.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BIO 527 or SOS 527 or BIO 591 (Environ Ethics & Policy Goals)
BIO	528	Human Impacts on Ecosystem Functioning	Explores our current understanding of how humans are impacting the functioning of ecosystems and how changes in ecosystems would affect provisioning of ecosystem services and ultimately human well-being. The two primary drivers of ecosystem change are growth of the human population and increased consumption per capita. These drivers affect the Earth's cycles of carbon, nitrogen and water, as well as regional and global-scale changes in biodiversity and climate. Includes an in-depth discussion of scenarios for the next 50 and 100 years, which articulate costs and benefits of alternative development pathways in terms of climate change, food production, clean water and biodiversity. Scenarios of change in biodiversity lead to the topic of the consequences of biodiversity change for the functioning of ecosystems from the point of view of their productivity and stability. Human activities have disrupted several biogeochemical cycles including nitrogen and carbon cycles.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only BIO 429, BIO 528, SOS 429, SOS 528, or SOS 494/598 (Human Impacts on Ecosystem Functioning), or BIO 494/598 (Human Impacts on Ecosystem Functioning)
BIO	530	Scientific Teaching	Guides graduate students to better understand issues related to undergraduate learning in science courses, and prepares students to become more effective teachers. Topics focus on emerging research that supports active and student-centered learning activities as well as methods that include the 5Es, concept-mapping, and "backward" design. Students reflect on their own teaching philosophy, and begin building an ePortfolio documenting and validating their ability to teach effectively.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 530 or 591 (Scientific Teaching)
BIO	531	Advanced Scientific Teaching	Further develops the teaching abilities of graduate students by applying knowledge into the more advanced teaching activities including large class sizes, diverse student populations, online delivery, and technology-integrated teaching. Students have more in-depth practice fully developing lesson plans, assessments and other teaching activities based on the concepts of evidence-based teaching.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 531 or BIO 594 (Advanced Scientific Teaching)
BIO	532	Recent Papers in Discipline-Based Education Research	Discipline-based education research is a newly emerging scholarly field that combines the knowledge of teaching and learning with the deep knowledge of discipline-specific science content. Currently, discipline-based education research is being used to transform the way we teach undergraduate science courses. Readings in recent papers in the field of discipline-based education research, spanning the disciplines of physics, chemistry, geosciences and biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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BIO	537	Comparative Biomechanics and Motor Control	Guides students to critically evaluate how the physical and mechanical properties of organisms and their environment affect biological tissues, structures, and motor control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Credit is allowed for only BIO 437, 537, KIN 437, 537, KIN 494 (Comparative Biomechanics and Motor Control) or 598 (Comparative Biomechanics and Motor Control).
BIO	543	Molecular Genetics and Genomics	Advanced study of genetics, focusing on the molecular basis of inheritance and gene expression in eukaryotes and prokaryotes, and study of genomics, or the high-throughput analysis of the entire organism's genes and their function. Knowledge of general genetics recommended before registering for this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	545	Populations: Evolutionary Genetics	Mathematical models in the description and analysis of the genetics of populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	546	Principles of Human Genetics	Examines human molecular genetics from an evolutionary perspective, particularly analysis, current debates, the Human Genome Project, disease, ethics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM 446, 546, BIO 446 or 546
BIO	549	Phylogenetic Biology and Analysis	Basic theory and general concepts of phylogenetic inference as well as practical, hands-on experience with many of the commonly used methods for inferring and interpreting phylogenetic trees.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	552	Developmental Genetics	Genetic approaches to the analysis of development during the life cycle of eukaryotic organisms, and the role of genes in the unfolding of the differentiated phenotype.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	560	Ecological Modeling	Mathematical modeling of animal populations, food-web structural and ecological processes in space and time. May use modeling tools on computer clusters.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ABS, BIO 560 or MAT 561
BIO	564	Cellular Physiology and Signaling	Emphasizes the molecular basis for cell structure, function and intercellular signaling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	568	Stress and the Brain	Covers the fundamentals of stress and brain interactions. Presents a foundation from a historical perspective, then the basics of an organism's stress response, including the activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis. The stress response is highly conserved and allows organisms to respond and adapt to their environment. A highly effective and robust stress response facilitates adaptation and behavioral flexibility. However, a maladaptive stress response can produce detrimental outcomes. The ultimate goal is to understand the dynamic and reciprocal processes by which the stress response and brain interact to produce behavioral flexibility and resilience or detrimental outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	570	Fundamentals of CAS Science	Many phenomena of critical relevance to human society are dynamic systems that change over individual and evolutionary time scales, and are highly interactive, both within and between systems. That is, they are complex adaptive systems (CAS), and thus share isomorphic properties like near-decomposability, hierarchical organization, scale-free networks, self-organized criticality, and emergence. Fundamentals of CAS science explores the diverse, interdisciplinary applications of a complex adaptive systems across the social, behavioral, and life sciences.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ASM, BIO, or SOS 570
BIO	578	Environmental Leadership and Communication	America remains inactive about the ramifications of critical societal challenges such as climate change, environmental hazards and living sustainably, and less than 2% of Congress has any professional background in science. Environmental issues are no longer local and solutions cannot remain provincial. Scientists must become envoys of knowledge that is global; science is now part of an unavoidable and contentious public discussion on these issues, and we need it to catalyze solutions. Increasingly, scientists who are communicators are moving into positions of leadership, engaging with society and changing their academic institutions from within. This seminar provides leadership training and important skills for early career scientists to communicate science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BIO 578 or BIO 591 (Environmental Leadership and Communication)
BIO	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BIO	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	600	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	610	Introduction to Responsible Conduct of Research (RCR) in Life Sciences	Introduces ethical and regulatory issues in the nine core areas of responsible conduct of research. Discusses real and hypothetical cases that tie broad ethical considerations to current concern of scientists.	N	REC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	611	Current Topics in Responsible Conduct of Research (RCR) in Life Sciences	Explores a single topic in the responsible conduct of research in depth. Topic changes depending on current issues in responsible conduct of research as well as the interests of the instructor and students. Possible topics include: responsible authorship; conflicts of interest; human subjects research; and misconduct, data management, and academic integrity.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
BIO	614	Biometry	Fundamental concepts of statistics and how to apply a range of standard statistical tools to the analysis of biological data. Uses the software applications SPSS and R to carry out these tests, and how to identify the particular situations in which each test is appropriate. Topics include: basic probability, descriptive statistics, estimation, hypothesis testing, t-tests, analysis of variance, regression, correlation, chi-square analysis, randomization tests, and nonparametric statistics	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	615	Biology and Society Lab	This course brings together graduate students, postdocs, and faculty members in biology and society. Sessions include panel discussions of biology and society topics from multiple perspectives, student-led discussions of important literature, practice presentations of papers for national meetings, discussion of dissertation and thesis ideas, and other activities that help to forge an active intellectual lab group.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	620	Research Prospectus Writing	Workshop-style course where students develop and peer review graduate-level project prospectuses, such as those for NSF grant proposals, journal articles, theses, and dissertations. Appropriate for graduate students in Biology and Society, History and Philosophy of Science, the life sciences, and related programs.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); ¹ Credit is allowed for only BIO or HPS 620
BIO	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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BIO	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BIO	100M	The Living World	Principles of biology. Cannot be used for major credit in the biological sciences.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	0.25-4	SQ	
BIO	130M	Introduction to Environmental Science	Introduces the interconnected nature of Earth's hydrosphere, lithosphere (soils and rocks), atmosphere, and biosphere.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	0.25-4	SQ	
BIO	201M	Human Anatomy and Physiology I	Studies the structure and function of the human body. Topics include cells, tissues, integumentary system, skeletal system, muscular system, and nervous system. Cannot be used for major credit in the life	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	0.25-4	SG	
BIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
BIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
BIS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
BIS	300	Theories and Applications of Organizational Studies	Critical analysis and application of organizational theory and conceptual perspectives to identify and solve problems, emphasizing personal and organizational application.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or SB	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum sophomore standing
BIS	301	Foundations of Interdisciplinary Studies	Introduces concepts and methods of interdisciplinary study by critically examining anticipated 21st-century workplace and civic trends.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): Interdisciplinary Studies major; minimum 2.00 GPA; ENG 102 or 105 or 108 with C or better; activation of BIS eligibility student group by a BIS advisor; one course meeting General Studies MA requirement
BIS	302	Interdisciplinary Inquiry	Explores interdisciplinarity and integration as applied to various approaches of human inquiry.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): Interdisciplinary Studies major; minimum 2.00 GPA; BIS 301 with C or better; ENG 102 or 105 or 108 with C or better; one course meeting General Studies MA requirement

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BIS	340	Organizational Skills	Develops and enhances skills needed in effective organizations such as communication and the use of technology.	Y	LEC	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum junior standing or minimum 56 hours
BIS	343	Social Processes in Organizations	Examines the interdisciplinary nature of social processes and human interactions across a number of different organizational contexts.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or SB	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum junior standing or minimum 56 hours
BIS	345	Organizational Ethics	Explores and considers normative and applied ethics within a variety of organizations.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum junior standing or minimum 56 hours
BIS	350	Diversity and Organizations	Critical interdisciplinary analysis of individual, cultural, and organizational diversity.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L & C	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 56 hours. Credit is allowed for only BIS 350 or OGL 350
BIS	353	Interdisciplinary Leadership	Offers interdisciplinary perspectives on the theory and practice of leadership in a range of organizational environments	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum junior standing
BIS	355	Peace Corps Seminar	The Peace Corps: its mission, history, concerns and application process.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 45 hours
BIS	357	Assessment in Organizations	Considers the role and function of assessment in effective organizations. Provides the knowledge and tools required to identify, collect and analyze information to assess organizations.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): MAT 117 (or any course with General Studies MA designation); minimum junior standing or minimum 56 hours
BIS	360	Organizational Contexts	Explores how organizations function by analyzing in depth a specific organizational context like health care, family, education, government, community, religion or the economy.	Y	LEC	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum junior standing or minimum 56 hours
BIS	370	Dimensions of Liberal Studies	Critical analysis and application of concepts of liberal studies and its modes of inquiry. Prerequisite: BLS student; sophomore status; completion of first-year composition.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Pre-requisites: BLS student; Sophomore status; ENG 102, 105 or 108 with C or better
BIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
BIS	401	Applied Interdisciplinary Studies	Applies interdisciplinary problem-solving skills in internships, service-learning, or research; may involve individual or group projects combining both concentrations.	N	RSC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: Interdisciplinary Studies student; Minimum 2.0 GPA; BIS 301 with C or better; BIS 302 with C or better
BIS	402	Senior Seminar	Capstone course helps integrate classroom and experiential learning. Students choose among course topics that address their interests.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): Interdisciplinary Studies major; minimum 2.0 GPA; BIS 302 with C or better
BIS	470	Liberal Studies Seminar	Advanced analysis and application of theories and methods of human and social inquiry.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Pre-requisites: BLS student; BIS 370 with C or better; Senior status; ENG 102, 105 or 108 with C or better
BIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
BIS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	OP4	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
BIS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
BIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
BIS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
BIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7		
BIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
BLE	220	Foundations of Structured English Immersion	Examines current educational practices and historical legal issues. Prepares teacher candidates with a provisional Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): non-Educational Studies BAE major

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BLE	221	Theories for Acquiring and Learning Languages	Languages are tools people use and learn to use for a variety of purposes. While nearly all people naturally acquire at least one language in their lifetime, the construct of bilingualism or multilingualism can occur as either an elective or a forced process. The context or the decision that leads to second or multiple language learning can have profound effects on the way and the extent to which those languages are learned. Examines the variables affecting both language acquisition and language learning as well as some methods to better facilitate these processes.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): non-Teacher Preparation student
BLE	322	Reading Methods in BLE/ESL Settings	Instructional/assessment strategies, including systematic, research-based phonics, vocabulary, comprehension, spelling, writing, phonemic writing in Spanish/English.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	324	Social Studies for Diverse Language Classrooms	Social studies education standards, curriculum, and instructional strategies for English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	335	Language Diversity in Classrooms	Issues in sociolinguistics and language variation in schools with a focus on classroom interaction, instruction, curriculum, assessment, and language policy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	Prerequisite(s): admission to the Professional Program
BLE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
BLE	396	Clinical Experience I	Applies course content in BLE/ESL elementary education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Prerequisite(s): admission to the Professional Program
BLE	397	Clinical Experience II	Applies course content in BLE/ESL elementary education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Prerequisite(s): admission to the Professional Program
BLE	400	Principles of Language Minority Education	Overview of philosophical and theoretical foundations of bilingual education and ESL models of instruction. Other topics include significant legislative and judicial measures.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	404	Instructional Design for Culturally and Linguistically Diverse Students	Provides a foundation in instructional design to meet the academic and linguistic needs of culturally and linguistically diverse students, with a focus on English language learners.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only BLE 404 or ELL 504 or SPE 404
BLE	407	SEI for Secondary Students	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the 7-12 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	408	SEI for Linguistically Diverse Learners	Examines foundations, assessment, English language learner proficiency standards, and strategies (including SEI) for the K-8 classroom.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	411	Science Curriculum, Instruction and Assessment in BLE/ESL Settings	Methods, management strategies, and assessment procedures for teaching science to BLE/ESL students in elementary schools.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	412	Mathematics Curriculum, Instruction and Assessment in BLE/ESL Settings	Teaching, management, and assessment of mathematics in K-8 BLE/ESL settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	413	Language Arts in BLE/ESL Settings	Literacy and language arts instruction; assessment of reading and writing; transition literacy skills, particularly critical reading of content.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	478	Student Teaching: BLE/ESL Elementary Schools 1-8	Student teaching in BLE/ESL elementary education classrooms grades 1-8: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-15		Prerequisite(s): admission to the Professional Program
BLE	481	Reading Practicum	Applies concepts from BLE 414. Supervised school-based experiences in teaching reading to BLE/ESL students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BLE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): admission to the Professional Program
BLE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
BLE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
BLE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
BLE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
BLE	511	Introduction to Language Minority Education	Historical, philosophical, theoretical, and pedagogical foundations of language minority education in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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BLE	515	Instructional Methods for Bilingual Students	Introduces general dual language teaching approaches. Focuses on the effective teaching of limited English proficient populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	520	ESL for Children	Examines approaches to second-language development for children congruent with recent research in second-language acquisition in children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	522	Literacy/Biliteracy Development	Acquaints teachers with first- and second-language literacy research, practice, and assessment in elementary school settings (Spanish-English emphasis)	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	527	SEI for Middle and Secondary Schools	Prepares middle and secondary teachers and administrators in the areas required for Structured English Immersion endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BLE	529	Language Assessment and Evaluation of ESL/BLE Students	Assessment and evaluation of linguistic minorities; test theory, score interpretation; culturally responsive assessment; assessment of language and school achievement.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BLE	533	Literacy in Secondary BLE/ESL Settings	Examines first- and second-language literacy research, practice, and assessment across content areas in secondary school settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	535	Sociolinguistic Issues in Bilingual Education	Surveys major theoretical issues (e.g., language situations, communicative competence, language attitudes) interrelating language, social processes, and bilingual education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	537	Language Structure Acquisition	Introduces linguistics and language acquisition. Grammatical theory; language use in educational contexts; first, second, and simultaneous language acquisition.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Credit is allowed for only BLE 537 or LIN 510
BLE	541	Nature of Bilingualism/Second-Language Acquisition	Bilingual and second-language acquisition, with emphasis on children and adolescents. Stresses cognitive, social, and cultural aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	561	Parent Involvement in Language Minority Education Programs	Examines issues, approaches, and strategies for improving parental and community involvement in the schooling of language minority children and youth.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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BLE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	597	Capstone	Reflective, experience-based integration of theory and practice; professional development for individuals working with English language learners.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): MA English as a Second Language major
BLE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BLE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BMD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	501	Introduction to Biomedical Informatics	Overview of the field of biomedical informatics for use of computers and information in healthcare and the biomedical sciences.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate. Credit is allowed for only BMD 501 or BMI 501

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BMD	502	Foundations of Biomedical Informatics Methods I	First semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate. Credit is allowed for only BMD 502 or BMI 502
BMD	507	Introduction to Digital Image Processing and Analysis	Core course with four sections for students seeking to concentrate in biomedical imaging informatics. The first section analyzes the concepts and terms of image processing and analysis. The second section evaluates key algorithms in image processing (e.g., image filtering, Fourier transform, image restoration). The third section examines advanced image analysis methods (e.g., image segmentation, mathematical morphology, image topology, shapes and boundaries, color processing, image coding and compression, wavelet, and special effects). The fourth section develops the practical applications of image processing and analysis in medicine and biology.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BMD 507 or BMI 507
BMD	510	Current Perspectives in Biomedical Diagnostics	Seminar course using external speakers who review the current state of the biomedical diagnostics industry in terms of technology, regulation or legal issues.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	511	Health Economics, Policy, and Payment Models	Economics provides a framework to understand and predict human decision making under scarcity, uncertainty and imperfect information. Examines concepts central to health care economics and their application to important decisions made by patients, families, practitioners, administrators and policy makers. Uses an individual family's scenario through a progressive case study to evaluate how incentives and information affect the health and health care of each family member. Each meeting integrates basic economic principles, existing facts and knowledge from economic research, and individual perspectives and experience regarding how these concepts apply to health care policy.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only BMD 511 or HCD 511
BMD	550	Translational Bioinformatics	Provides an introduction to bioinformatics methods and applications used in the field of translational medical research. Topics include bioinformatics data acquisition and management, analysis methodologies, and applications.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BMD 550 or BMI 550
BMD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Diagnostics MS student
BMD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Diagnostics MS student
BMD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	Biomedical Informatics Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	617	Genetics and the Law	Provides background on genetics and recent genetic advances; addresses the legal consequences and issues associated with such advances.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	2-3		Prerequisite(s): College of Law major or MS in Biomedical Diagnostics major. Credit is allowed for only BMD 617 or LAW 617

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BMD	667	Regulation of Medical Diagnostics	Examines the regulation of drugs, medical devices, and biologics (e.g. vaccines) by the Food and Drug Administration.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate
BMD	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMD	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	100	Introduction to Biomedical Engineering	Introduces engineering design methods, experimental practices, data gathering, presentation and statistical analysis. Lecture/labs focus on device design and application, including hands-on experience.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Pre-requisite: Biomedical Engineering major
BME	101	Introduction to Biomedical Engineering I: Belief Systems in Engineering	Biomedical engineering is a highly interdisciplinary field with a mixture of basic science, design, and application. Reviews the process of building a knowledge base, including how we form belief systems (both founded and unfounded). Understands how the scientific process works to generate "true" knowledge of the world and the dangers of denying fact. Teaches how BME uses science as a belief system to generate innovations that improve our quality of life.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student
BME	102	Introduction to Biomedical Engineering II	Guides the student through the transition from how knowledge is generated by the scientific process/method to how the bioengineer uses the engineering method, design tools, and interdisciplinary skill sets to translate relevant scientific and related knowledge to create new healthcare technological solutions, i.e., medical device solutions, to address unmet biomedical and health care needs for individuals, as well as for society as a whole.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Corequisite: BME 101

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BME	103	Introduction to Biomedical Engineering III: Product Design & Development	Hands-on training in and implementation of selected product design skills necessary to successfully conduct engineering medical device product design using best industry practices. Runs concurrently with BME 101 and BME 102, which introduce the underlying theory that connects the principles of the scientific method with engineering design method in the practice of biomedical product research and development (R&D). Provides the beginning biomedical engineer with a hands-on design experience that connects product design theory with product development best practices via student exposure to the core elements of the engineering design process--specifically prototype conceptualization and realization.	N	LAB	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering major; Pre/Co-requisite: BME 101; Credit is allowed for only BME 103 or 194 (Introduction to BME III)
BME	111	Engineering Perspectives on Biological Systems	Biological concepts for the emerging engineer. Introduces biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Pre-requisite: Engineering student
BME	112	Engineering Perspectives on Biological Systems Laboratory	Introduces biological concepts for the emerging engineer in a lab setting: biological and earth systems engineering, materials, structures, fluid mechanics, bioelectricity, and the dynamic, nonlinear nature of nature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Engineering student
BME	121	Programming in Biomedical Engineering	Introduces computer programming in the context of scientific and engineering problem solving. Topics include loops, functions, pointers, data structures, and algorithms in the context of a biomedical problem. Culminates in an introduction to object-oriented programming, with a look at modern wireless (iPad and iPhone) devices for biomedical applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite: Biomedical Engineering student; Pre/Co-requisite: MAT 265 or MAT 270
BME	182	Biomedical Engineering Product Design and Development I	Continuation of hands-on training and implementation of medical device product design and development skills; FDA-regulated U.S. and global medical device healthcare markets and opportunities, business development in regulated environments, medical product and project management planning, exempt and Class I medical devices, medical product component and device levels, identification and selection of customer needs, translation of customer needs, product specification development, virtual and physical prototypes, prototype product specification verification, product design and development process documentation, FDA regulatory best-industry practices.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering BSE major; Pre- or corequisite(s): ENG 101, 105, or 107 with C or better if completed
BME	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	200	Conservation Principles in Biomedical Engineering	Applies bioengineering analysis and problem solving of mass, energy, and charge balances to medical and biological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): BIO 181, BIO 188 or BME 111 with C or better; CHM 114 (or CHM 116) with C or better; PHY 121 with C or better; Pre/Co-requisite: MAT 275
BME	201	Anatomy & Physiology: Cell & Tissue Physiology	Introduces the major structural and functional characteristics of individual cells and tissues in the mammalian body. Physiological principles in the context of biomedical problem solving. Describes the functions of basic cell and tissue systems in the body, describes how they interact in healthy and diseased tissues, and identifies how simple biomedical devices interface with these systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical engineering student; Pre/Co-requisites: BIO 181 with C or better if completed; CHM 114, 116 or 118 with C or better if completed
BME	202	Anatomy & Physiology: Organs & Systems	Introduces the fundamental structural and functional characteristics of the major organs and systems in the mammalian body. Physiological principles in the context of biomedical problem solving. Describes the functions of fundamental physiology of organs comprised of the five tissue types of the body, describes how they interact in healthy and diseased tissues, and identifies how simple biomedical devices interface with these systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 201 with C or better if completed; Credit is allowed for only BME 202 or 294 (A&P: Tissues)
BME	203	Anatomy & Physiology: Lab	Laboratory introduction to the fundamental structural and functional characteristics of the major physiological systems in the mammalian body. Physiological principles in the context of biomedical problem solving in a lab. Describes how these systems interact in healthy and diseased biological states, and identifies how simple biomedical devices interface with these systems.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisites: BME 201; BME 202; CHM 114, 116 or 118 with C or better if completed; Credit is allowed for only BME 203 or 294 (A&P: Systems)
BME	211	MATLAB & Mathcad in Biomedical Engineering	Introduces the basics of MATLAB and Mathcad programming in the context of biomedical engineering conservation of mass problem solving.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; CHM 114, 116 or 118 with C or better; BIO 181 with C or better; Pre/Co-requisites: PHY 131 or 151 with C or better if completed; MAT 274 or 275 with C or better if completed

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BME	212	Conservation Principles	Basics of conservation principles in complex biological applications. Subsystem approaches to render a simplified approach to solving complex system problems with known and unknown variables. Application of MATLAB and Mathcad for solving conservation problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 211 (with C or better if completed)
BME	213	Biomedical and Bioengineering Ethics	Explores ethical issues in biomedical and medical sciences and engineering practices and includes professional ethics, medical ethics, engineering ethics and the Biomedical Engineering Society (BMES) Code of Ethics, the ethics of human and animal tissue and subjects use in biomedical science and engineering research, responsible conduct for research, ethical issues in the design and manufacture of medical devices for developing and developed countries, and the impact of biomedical engineering solutions on society and the environment.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student
BME	214	FDA Regulatory Processes and Technical Communications	Develops writing skills to factually and effectively communicate all facets of biomedical product design and development activities that are required to successfully conceive, develop, and launch a medical device into the market place using the FDA quality systems best practices that are utilized by the health care technology industry.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering major; Pre- or corequisite(s): ENG 102, 105, or 108 with C or better if completed
BME	235	Physiology for Engineers	Physiology of the nervous, muscular, cardiovascular, endocrine, renal, and respiratory systems. Emphasizes use of quantitative methods in understanding physiological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4		Prerequisite(s): Biomedical Engineering major; BIO 181, BIO 188, or BME 111 with C or better; CHM 114 or 116 with C or better; Pre- or corequisite(s): PHY 131; PHY 132
BME	282	Biomedical Engineering Product Design and Development II	Hands-on training and implementation of product design skills that combine virtual analytical model prototype development with component and sub-assembly integration to develop both virtual and physical prototypes of a medical device product at the product architecture level and verify selected product architecture specifications from design input and earlier design process verification steps.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering major; BME 182 with C or better
BME	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		Prerequisite(s): Barrett Honors student
BME	300	Bioengineering Product Design	The fundamentals of financial and organizational structure of business and how it influences bioengineering analysis, design, and decision making; biomedical ethics and device and drug regulation; and fundamentals of business and technical management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Biomedical Engineering junior, senior, or postbac; BME 100 with C or better; BME 213 with C or better; BME 214 with C or better; ENG 102, 105, or 108 with C or better
BME	301	Numerical Methods in Biomedical Engineering	Applications of numerical methods to biomedical engineering problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	2		Pre-requisites: Biomedical Engineering student; MAT 274 (or MAT 275) with C or better
BME	302	Biomaterials/Physicochemical Properties	Introduces the science and engineering of biomaterials; addresses material properties of natural and artificial biomaterials.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; PHY 121 (or PHY 150) with C or better; Pre/Co-requisite: BME 203 (with C or better if completed)
BME	303	Biological Response to Implanted Biomaterials	How biomaterials interact with surrounding tissue; biocompatibility. Also discusses specific clinical problems that are treated using implants.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 302 (with C or better if completed)
BME	311	Basic Concepts of Signals and Systems in Biomedical Engineering	Applies principles of calculus and ordinary differential equations to analysis and computer processing of biosignals and linear modeling of biosystems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; EEE 202 with C or better; Pre/Co-requisite: MAT 342 or MAT 343 (with C or better if completed)
BME	312	Transforms for Biomedical Engineering Applications	Introduces properties of discrete and continuous transforms for the purpose of analyzing signals and applying the transforms to solve biomedical engineering problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student. Pre/Co-requisite: BME 311 (with C or better if completed)

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BME	313	Preclinical and Clinical Trials in Biomedical Engineering	Explores the rationale and the tools required to evaluate the safety and efficacy of medical devices designed and developed using best industry practices for human consumption. Introduces the design and conduct of pre-clinical trials (in vitro, ex vivo or in vivo systems other than humans), as well as clinical trials that are required for FDA approval to market medical devices in the U.S. Covers the following topics: an overview of medical device development; FDA regulatory affairs and practices; ethics concerns in animal and human trials; experimental design and biostatistics for medical device preclinical and clinical studies; preclinical (IACUC) and clinical trial (IRB) approval; informed consent best practices; medical device preclinical and clinical trial management; recruitment of clinical study participants and populations; ethics of preclinical and clinical trials; and alternatives to animal and human trials.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 213 or BME 294 (Biomedical and Bioengineering Ethics) with a C or better
BME	318	Biomaterials	Material properties of natural and artificial biomaterials. Tissue and blood biocompatibility. Uses of materials to replace body parts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4		Pre-requisites: Biomedical Engineering BSE student; CHM 114, 116, or BIO 181 (or BME 111 or BIO 188) with C or better; MAT 274 (or 275) with C or better
BME	321	Probability for Biomedical Engineering	Introduces probability distributions in the context of basic biological phenomena and biomedical engineering.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: MAT 342 or MAT 343 (with C or better if completed)
BME	322	Statistics for Biomedical Engineering	Introduces parametric and nonparametric statistics tests in the context of common biomedical experiments.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering major; MAT 274 (or 275) with C or better
BME	331	Transport Phenomena for Biomedical Engineering	Transport phenomena with emphasis on momentum, energy, and mass transport in living systems, medical devices, and other therapeutic/diagnostic applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Pre-requisites: Biomedical Engineering student; BME 200, 212 or 294 (Conservation Principles) with C or better; MAT 274 (or 275) with C or better; PHY 121 with C or better
BME	340	Thermodynamics for Biomedical Engineers	Thermodynamics is a branch of science dealing with processes (chemical or mechanical) and the subsequent energy and mass transfers. Studies whether a process is favorable (possible) or unfavorable (impossible) while assessing energy and mass transfer within each specific stage of the process. The operation of living systems is heavily based on the use of chemical reactions and or mechanical processes such as beating of the heart, biochemical reactions of a drug in liver, phase equilibria. Covers the fundamental principles and laws of thermodynamics. Helps students think thoroughly about the applications of thermodynamics in biological sciences and bioengineering with the main emphasis on basic concepts and problem-solving.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Biomedical Engineering BSE major; BME 200 with C or better; Pre- or corequisite(s): MAT 267 or 272 with C or better if completed
BME	341	Engineering Design Method	Covers the engineering design method, a collection of valuable design tools, and the application of the method and tools to address current problems in the field of biomedical engineering.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 100, 101, 103 or BME 194 (Introduction to Biomedical Engineering) with C or better; ENG 102, 105 or 108 with C or better
BME	342	3D Spatial Modeling	3D spatial modeling tools applied in the context of biomedical engineering to create computational models of idealized and anatomical biological structures (e.g., blood vessels).	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 100, 101, 103 or BME 194 (Introduction to Biomedical Engineering) with C or better; BME 203 or 294 (Cell Tissue Physiology) or 294 (A&P: Tissues) or 294 (A&P: Systems) with C or better
BME	350	Signals and Systems for Bioengineers	Applies principles of calculus and ordinary differential equations to analysis and computer processing of biosignals and linear modeling of biosystems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Biomedical Engineering major; MAT 275 with C or better
BME	351	Circuits for Biomedical Engineering Instrumentation	Circuits is a specialized skill that is developed for students interested in building devices which serve as electrical interfaces to the body. These are interfaces which have very specialized requirements. Students who have been familiarized with the basics of electrical circuit design as well as physiology learn some of the issues that arise and solutions that have been generated to provide for these interfaces.	N	LEL	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 312 or BME 394 (Transforms For BME Apps) with C or better

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BME	352	Filtering of Deterministic and Stochastic Signals	Introduces properties of deterministic and stochastic signals and their use in biomedical signal processing.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 312 or BME 394 (Transforms For BME Apps) with C or better if completed
BME	353	Microcomputing & Embedded Systems for Biomedical Engineering	Introduces the use of microcontrollers to analyze biological signals.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 352 (with C or better if completed)
BME	361	Design of Experiments and Clinical Trials	Explores advanced techniques in trial and experimental design in biomedical engineering, including testing new products or drugs, or even generation of new methods and treatments, designed to provide statistical confirmation at the end of trials. Design of trials, experiments, and measures, so that efficacy can be properly evaluated using statistical tests. Although this course makes reference to regulatory procedures, emphasizes the proper application of statistical techniques in the design of experiments.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; BME 322 or BME 394 (Statistics For BME) with C or better
BME	370	Microcomputer Applications in Biomedical Engineering	Uses microcomputers for real-time data collection, analysis, and control of experiments involving actual and simulated physiological systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Biomedical Engineering major; EEE 202 with C or better; BME 350 with C or better
BME	382	Biomedical Engineering Product Design and Development III	Continuation of hands-on training and implementation of medical device product design and development skills; experimental practices, data gathering, presentation, and statistical analysis in regards to demonstration of validation and verification tools and testing, identification and selection of customer needs, translation of customer needs, product specification development, virtual and physical prototypes, prototype product specification verification, product design and development process documentation, FDA regulatory best industry practices.	N	LAB	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering major; BME 282 with C or better; Credit is allowed for only BME 382 or BME 494 (Prototyping from Design to Marketing) or BME 598 (Prototyping from Design to Marketing)
BME	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	401	Biomedical Engineering Product Design & Development: Capstone	Introduces global biomedical engineering design factors that affect the selection and implementation of medical device product innovation, design, and development using best industry practices. These include technical, regulatory, economic, legal, business, entrepreneurial, social, and ethical aspects of medical device systems engineering design.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 313, BME 331, BME 341, BME 342, BME 353 and BME 361 with C or better
BME	402	Biomedical Engineering Product Design & Development: Capstone II	Introduces project management and product innovation, design and development processes and their best practices.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 401 (with C or better if completed)
BME	403	Biomedical Engineering Product Design & Development: Capstone III	Introduces conceptual product design and development best practices using three-dimensional modeling and other design tools for the determination of product specifications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	2		Pre-requisite: Biomedical Engineering student; Pre/Co-requisites: BME 401 and 402 (with C or better if completed)
BME	404	Biomedical Engineering Product Design & Development: Capstone IV	Introduces entrepreneurial biomedical product development business practices for successful quality systems premarket submission of a verified detailed medical device design of a capstone project.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 403 or BME 494 (Capstone III) with C or better
BME	405	Biomedical Engineering Product Design & Development: Capstone V	Introduces prototyping of the capstone device and begins experiments of the device prototype.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisite: Biomedical Engineering student; Pre/Co-requisite: BME 404 (with C or better if completed)
BME	406	Biomedical Engineering Product Design & Development: Capstone VI	Addresses prototype device verification and validation methods to achieve a robust design; the conclusion of the capstone project.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	2		Pre-requisite: Biomedical Engineering student; Pre/Co-requisites: BME 404 and 405 (with C or better if completed)
BME	413	Biomedical Instrumentation	Principles of medical instrumentation. Studies of medical diagnostic instruments and techniques for the measurement of physiologic variables in living systems. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3	L	Pre-requisites: Biomedical Engineering major; BIO 201 and 202 (OR BME 201 and 202 and 203 or BME 235) with C or better; BME 350 with C or better
BME	416	Biomechanics	Mechanical properties of bone, muscle, and soft tissue. Static and dynamic analysis of human movement tasks such as locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Pre-requisites: Bioengineering or Pre-Med Engineering BSE student; BME 318 and MAE 212 with C or better

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BME	417	Biomedical Engineering Capstone Design I	Technical, regulatory, economic, legal, social, and ethical aspects of medical device systems engineering design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4	L	Prerequisite(s) with C or better: BME 300; BME 318; BME 322; BME 331; BME 370; BME 382; Biomedical Engineering major
BME	419	Biocontrol Systems	Applies linear and nonlinear control systems techniques to analysis of neuromusculoskeletal, cardiovascular, thermal, and mass transfer systems of the body.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; BME 350 and BME 370 with C or better
BME	421	Biomedical Instrumentation I	Introduces principles of biomedical instrumentation and techniques of physiologic measurement as used in medicine and biology.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Pre-requisites: Biomedical Engineering student; BME 341 and 353 with C or better
BME	422	Biomedical Instrumentation II	Principles of biomedical instrumentation and techniques as used in medicine and biology with an emphasis on medical diagnostic imaging.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): Biomedical Engineering major; Pre- or corequisite(s): BME 421 with C or better if completed
BME	423	Biomedical Instrumentation Laboratory	Lab experience with problems, concepts, and techniques of biomedical instrumentation in static and dynamic environments. Both BME 413 and BME 423 need to be taken together to secure L General Studies credit.	N	LAB	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1	L	Pre-requisite: Biomedical Engineering student; Co-requisite: BME 413
BME	434	Applications of Bioengineering Transport Phenomena	Develops mathematical models of transport phenomena in physiological systems, medical devices, and pharmacokinetic analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; BME 331 with C or better
BME	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		
BME	490	Biomedical Engineering Capstone Design II	Individual projects in medical systems or medical device design and development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4		Prerequisite(s): Fulton Engineering undergraduate student; BME 417 with C or better
BME	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6		Prerequisite(s): Barrett Honors student
BME	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-6	L	Prerequisite(s): Barrett Honors student
BME	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		
BME	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-7	L	Prerequisite(s): Bioengineering or Pre-Med Engineering BS or BSE student
BME	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-3		
BME	520	Bioelectric Phenomena	Study of the origin, propagation, and interactions of bioelectricity in living things; volume conductor problem, mathematical analysis of bioelectric interactions, and uses in medical diagnostics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	521	Neuromuscular Control Systems	Overview of sensorimotor brain structures. Application of nonlinear, adaptive, optimal, and supervisory control theory to eye-head-hand coordination and locomotion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	522	Biosensor Design and Application	Theory and principles of biosensor design and application in medicine and biology. Principles of measurements with biosensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	524	Fundamentals of Applied Neural Control	Fundamental concepts of electrical stimulation and recording in the nervous system with the goal of functional control restoration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	525	Surgical Techniques	Principles of surgical techniques, standard operative procedures, federal regulations, guidelines, and state-of-the-art methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	2		Pre-requisites: Graduate Engineering students only
BME	526	Introduction to Neural Engineering	Introduces the field of neural engineering. Neural engineering, as with all engineering fields, can be thought of as applied scientific understanding, in this case, applied neuroscience. Covers aspects of neurophysiology, neuroanatomy, neurosurgery, biophysics, electronics and signal processing; integrates these knowledge areas into neural engineering applications. Covers an entire process for conducting research in neural engineering: surgical implantation of electrodes, data acquisition, processing neural signals, decoding neural data, and controlling prosthetic devices. Provides foundation for working with neural engineering applications and conducting research in neural engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BME 526 or BME 598 (Intro to Neural Engineering)

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BME	527	Biomedical Device Design	Basic phenomena behind various types of biomedical devices which measure indicators using optical, thermal and other modalities. Provides an introductory coverage of the theory and history of these devices and includes some hands-on activities to use, reverse engineer and analyze data gathered from in-class activities with currently existing devices. Uses Matlab to perform most of the analysis. Preliminarily exposes students to principles of device design and testing with consideration to FDA regulations and requirements.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): graduate Biomedical Engineering student; Credit is allowed for only BME 527 or BME 598 (Biomedical Device Design)
BME	533	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only BME 533 or CHE 533 or MAE 533
BME	544	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	556	Human Systems Neuroscience	Systems-level neuroscience course focusing on human diseases. Classes involve lectures and/or other activities such as observations of clinical procedures and tours of clinical facilities (e.g., the neurosurgical suite, imaging facilities).	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	4		Pre-requisite: Neuroscience PhD major. Credit is allowed for only BIO 598 (Human Sys Neuroscience), BME 556 or NEU 556
BME	561	Clinical Neuroscience	Fundamental mechanisms that underlie diseases and disorders of the central and peripheral nervous systems. Introduces assessment and pharmacological, surgical and rehabilitative management of nervous systems disorders. Prior knowledge of neural systems is helpful. Identifies the mechanisms by which key disease and trauma states impact neural systems and how clinicians identify the locus and type of damage based on clinical and imaging criteria.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	565	Magnetic Resonance Imaging	Provides a foundation in the fundamental concepts of magnetic resonance imaging and some applications to measure physiological processes and changes with respect to disease. Incorporates real-time demos using a bench-top MRI system. Several local MR experts present guest lectures on specialized topics. Requires a working knowledge of the fundamentals of signal analysis and Fourier transform theory and linear algebra to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): graduate Engineering student or Chemistry MS or PhD student or Physics MS or PhD student; Credit is allowed for only BME 565 or BME 494 (Principles Magnetic Resonance) or BME 598 (Principles Magnetic Resonance Spectroscopy & Imaging)
BME	566	Medical Imaging Instrumentation	Design and analysis of imaging systems and nuclear devices for medical diagnosis, therapy and research.	N	LEC	N	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-4		Pre-requisites: Graduate Bioengineering students only

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BME	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Harrington Bioengineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BME	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Harrington Bioengineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	101	Introduction to Bioinformatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Introduces topics in translational bioinformatics, such as sequence alignment, the Human Genome Project, gene expression analysis, genome-wide association studies, next-generation sequencing.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	102	Introduction to Public Health/Imaging Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field focusing on biomedical informatics applications in public health, including population studies and outbreak detection, and medical imaging, including telemedicine.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
BMI	201	Introduction to Clinical Informatics	Introduces existing and future applications of biomedical informatics. Overview of history and present state of the field. Provides an introduction to biomedical informatics techniques and applications used in clinical environments. Includes searching and organizing free text information, decision analysis techniques and clinical decision support systems, and clinical applications including physician order entry used in electronic medical records. Also covers challenges in clinical informatics, including sociotechnical and cognitive issues in implementation and use.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		
BMI	211	Modeling Biomedical Decisions	First semester of a three-semester course sequence surveying the methods and theories underlying the field of biomedical informatics. Explores models of medical decision making, including classical decision theory, Bayesian, and cognitive models. Also includes a component discussing evaluation methods in biomedical informatics.	N	PRA	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	221	Knowledge Representation for Biomedical Informatics	Introduces topics in knowledge representation and modeling, including frame-based systems, logic-based systems, rule-based systems, inference, and reasoning. Overview of history and present state of the field.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
BMI	311	Modeling Biomedical Knowledge	Introduces concepts of artificial intelligence and knowledge modeling using medical informatics examples. Historical foundations and motivations of AI in medical applications; problem solving, reasoning, knowledge management, and planning as applied to medical informatics problems.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	312	Modeling Biomedical Data	Third semester of a three-semester course surveying the methods and theories underlying the field of biomedical informatics. Explores methods of use in the design and maintenance of biomedical databases, machine learning techniques, information retrieval in biomedicine and other methods specific to bioinformatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	330	Topics in Translational Bioinformatics	Provides an introduction to bioinformatics methods and applications used in the field of translational medicine research. Topics include bioinformatics data acquisition and management, including microarrays, database modeling and integration; analysis methodologies, including statistics and data mining; and applications.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	332	Team Dynamics for Healthcare IT Projects	Teaches the fundamentals of leadership, management, and team dynamics in a project-focused software engineering environment, and with a focus on informatics and healthcare applications. Teaches students about team and group dynamics, recognizing dysfunctional teams, and helping to fostering productive group and leadership skills.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BMI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
BMI	404	Clinical Environments	Designed for medical informatics students who have no significant clinical experience in the U.S. Introduces medical terminology and exposes students to the clinical environments in which health care providers create, manage, and use clinical information. Students attend lectures and spend a significant portion of time examining and reporting on different clinical settings throughout the semester.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): minimum 45 hours
BMI	461	Advanced Topics in Biomedical Informatics I	Covers current trends and cutting-edge research areas of clinical, public health, and consumer health informatics. Particular emphasis on research that is of relevance to patients, and the healthy public, covering such topics as outbreak detection and the personal health record. Also covers research on the use of technology in medical education, and the ways in which clinical decision support systems are applied in contemporary medical practice.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	462	Advanced Topics In Biomedical Informatics II	Covers current trends and cutting-edge research areas of bioinformatics, imaging informatics, and translational science. Emphasizes informatics approaches to the novel data sources that are supplied by the next generation of methods for affordable gene sequencing, and initiatives underway to accelerate the integration of novel research findings into everyday clinical practice. Includes a series on modeling and simulation, current approaches to computer-aided diagnosis of medical images, ways in which technology can support the discovery of new knowledge, and the application of telemedicine to remotely facilitate clinical care.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		
BMI	465	Introduction to Comparative Genomics	Explores genomic sequences and hypotheses for their structure, evolutionary history, and underlying mechanisms.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Credit is allowed for only BMI 465 or BIO 455
BMI	466	Bioinformatics and Molecular Evolution	Fundamental biological motivation and methods used in bioinformatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Pre-requisites: BIO 345 and 355 (or MBB 355, or MAT 355) with C or better; Credit is allowed for only BMI 466 or BIO 456
BMI	482	Capstone I	First course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of a research project in biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3	L	
BMI	483	Capstone II	Second course in capstone sequence for biomedical informatics majors emphasizing the development of technical skills and effective team work within the context of an applied project in biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3	L	Pre-requisite: BMI 482 with C or better
BMI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		
BMI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-6		Prerequisite(s): Barrett Honors student
BMI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-6	L	Prerequisite(s): Barrett Honors student
BMI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
BMI	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-7	L	
BMI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-3		
BMI	501	Introduction to Biomedical Informatics	Overview of the field of biomedical informatics for use of computers and information in healthcare and the biomedical sciences.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate. Credit is allowed for only BMD 501 or BMI 501
BMI	502	Foundations of Biomedical Informatics Methods I	First semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Degree- or Nondegree-seeking graduate. Credit is allowed for only BMD 502 or BMI 502
BMI	504	Introduction to Clinical Environments	Course is divided into three sections. The first section covers medical and health care concepts and terms, and discuss observational techniques. In the second portion, students investigate a variety of different clinical environments and report back to the class on their findings. The final portion summarizes the key points of information technology in these clinical environments.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): graduate BME or BMI major
BMI	505	Foundations of Biomedical Informatics Methods II	Second semester of a two-semester course surveying the methods and theories underlying the field of biomedical informatics.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 502 with C or better

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BMI	506	Clinical Decision Support	The course will provide an in-depth analysis of computer-based approaches to supporting clinical decision making for providers and patients (as well as healthy individuals, for disease prevention/health maintenance). The history of the field of clinical decision support (CDS) and the spectrum of methodologies will be reviewed. Practical issues involved in successful implementations of CDS will be discussed. The roles of standards and infrastructure will be examined. Current research topics and foci will be explored.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	507	Introduction to Digital Image Processing and Analysis	Core course with four sections for students seeking to concentrate in biomedical imaging informatics. The first section analyzes the concepts and terms of image processing and analysis. The second section evaluates key algorithms in image processing (e.g., image filtering, Fourier transform, image restoration). The third section examines advanced image analysis methods (e.g., image segmentation, mathematical morphology, image topology, shapes and boundaries, color processing, image coding and compression, wavelet, and special effects). The fourth section develops the practical applications of image processing and analysis in medicine and biology.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BMD 507 or BMI 507
BMI	515	Applied Biostatistics in Medicine and Informatics	Comprehensive treatment of the statistical methods used most often to analyze quantitative data collected in medical and biomedical informatics studies, including clinical trials, epidemiologic studies, studies of the accuracy and performance of screening and diagnostic tests, and studies to develop predictive models. Students learn to use SAS statistical software to analyze biomedical data.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	516	Advanced Biomedical Data Analysis	Acquisition, conversion and organization of biological data into relevant diagnostic, therapeutic, and research information using information extraction and data mining.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 501 with C or better
BMI	520	Modeling Gene Regulatory Networks	Computational and mathematical modeling used to approximate gene regulatory networks as well as signaling pathways and inference of model parameters.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 505 with C or better; BMI 516 with C or better
BMI	540	Problem Solving in Biomedical Informatics	Theory and practice of software engineering principles as they apply to large- and medium-scale clinical systems from bench to bedside.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 501 with C or better
BMI	550	Translational Bioinformatics	Provides an introduction to bioinformatics methods and applications used in the field of translational medical research. Topics include bioinformatics data acquisition and management, analysis methodologies, and applications.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BMD 550 or BMI 550
BMI	555	Statistical Learning for Data Mining	Surveys data analysis methods for massive data sets and provides experience in analysis with computer software.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 515 or IEE 572 or IEE 578; Credit is allowed for only BMI 555 or IEE 520
BMI	560	Teaching in Biomedical Informatics	Student serves as a teaching assistant with a faculty member who is teaching either a required or elective course in the Biomedical Informatics curriculum. Such courses will generally be BMI courses but with the approval of the student's faculty program advisor may include a course that is an approved elective in the BMI program but is offered in another department within the university. The experience provides a significant teaching role, either lecturing or moderating small group sessions or laboratories. Grading class homework assignments and designing/grading examinations will also typically be part of the experience. Assisting other students outside of class and being available during office hours will also generally be part of the student teacher's role. A student may also receive 1 hour of credit for participating substantively in the design of a new course, working closely with a faculty member. Generally in such circumstances the student should then serve as course teaching assistant when it is offered for the first time (separate enrollment in this course).	N	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1		Pre-requisite: Biomedical Informatics PhD student
BMI	570	BMI Symposium	Students attend the BMI Symposium Speaker Series twice a month and the student journal club discussion on alternate weeks. During the journal club weeks, each student leads a discussion on a current topic pertinent to the field of biomedical informatics.	N	SEM	Y	YGB	College of Health Solutions	Biomedical Informatics Program	1		Pre-requisite: BMI Graduate student
BMI	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Pre-requisite: BMI Graduate student
BMI	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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BMI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Pre-requisite: Biomedical Informatics Masters student
BMI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Informatics MS student
BMI	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Informatics MS student
BMI	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	Y	LEC	Y	Z3	College of Health Solutions	Biomedical Informatics Program	1		Prerequisite(s): graduate Biomedical Informatics student
BMI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, <u>highly specialized courses responding to unique student demand.</u>	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	Biomedical Informatics Program	1-12		Pre-requisite: Biomedical Informatics Masters student
BMI	601	Fundamentals of Health Informatics	Offers an overview of the field of health informatics. Combines perspectives from medicine and computer science for use of computers and information in health care and the health sciences. Includes an overview of health information literacy and data standards. Covers specific applications and general methodology in health informatics using current topics in the field. Discusses evaluations of health systems.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	602	Programming in a Health Care Domain	Intensive introduction to object-oriented programming concepts focused on the unique challenges such as those related to data volume, complexity, and uncertainty inherent to applications in a health care domain. Also covers the fundamentals of algorithm analysis and data structure design. Stresses a software engineering approach to abstraction for problem decomposition and solution formulation, with object-oriented and reusability concepts introduced early. Emphasizes the use of generic data structures and abstractions from template libraries for reusability, as well as modular design. In addition, also covers <u>basic concepts of algorithms and data structures.</u>	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	603	Health Informatics Database Modeling and Applications	Thorough coverage of the foundations of database systems and their specific use and modeling in healthcare and biomedical environments. Students learn through hands-on experience with the modeling and implementation of health-related databases using the relational approach. Topics include an overview of database models and architecture, database design, SQL, XML, and data warehousing as they are applied in clinical domains. Students are encouraged to explore database-related topics of their own, choosing ones that are relevant to a <u>bioinformatics or clinical domain.</u>	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	604	Health Information Literacy	Students learn to locate, retrieve, and store information with an emphasis on electronic search, retrieval, and storage. They also learn to assess the validity and quality of information, improve the quality of information, and how to improve the quality of, protect, and effectively <u>communicate health information.</u>	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	2		Pre-requisite: Health Informatics MAS student
BMI	605	Health Information Systems and Applications	Explores the use of information systems in different health care settings, analyzing operational and strategic objectives for their deployment. Emphasizes the analysis of the different factors that influence decision making during the process of design and deployment of systems, including human factors, hardware, software, policy, communications, and the successful management of such systems. Also covers guidelines for the design and successful deployment of systems to meet those objectives and includes discussion of architectures, components, and models. Analyzes specific case studies of successfully and <u>unsuccessfully deployed systems.</u>	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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BMI	606	Health Data Standards	The cost-effective delivery of high quality, safe healthcare requires access to multiple data sources and systems and applications responsible for data acquisition and management, the ability to aggregate, integrate, and analyze data from multiple sources, and the ability to communicate the results of such analyses or the knowledge resulting from those analyses to users in a timely fashion at points where they are needed. A variety of standards are required, at the data and communication level. Reviews the state of these standards, and the multiple entities that have a stake in them, and enables the student to navigate this complex process in selecting, implementing, or extending health systems in a variety of settings.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	1		Pre-requisite: Health Informatics MAS student
BMI	607	Effective Professional Communications	To be able to work in the field of biomedical informatics or health information technology requires an understanding of not only science and technology but also biomedicine and healthcare. This requires both familiarity with the basic concepts of these fields, as covered in other courses, as well as the ability to present ideas clearly in both written and oral communication. Also requires the ability to work effectively in groups, with shared understanding of group and individual roles, assignments, and responsibilities. Provides experience with oral, written, and group communication tasks, and uses critique and feedback as a method for highlighting issues and areas for improvement.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	2		Pre-requisite: Health Informatics MAS student
BMI	608	Project Management for Interdisciplinary Teams	Introduces students to the health care team and explores tools and techniques for establishing effective interdisciplinary teams in a health care setting, emphasizing collaborative clinical decision-making and patient management. By working in small teams, the course puts into practice these techniques, allowing students to collaborate with other health professionals to solve specific problems, provide services, or develop new understandings. Also covers the concepts, skills, tools, and techniques involved in the management of information system projects, providing an introduction to the established discipline of project management, with a specific focus on how they apply to managing information systems for a biomedical setting.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	609	Capstone	This course assists students in preparing their capstone project, which represents the culmination of their study for the MAS in Health Informatics focusing on development process, technical skills, and communication.	N	LEC	N	OPT	College of Health Solutions	Biomedical Informatics Program	3		Pre-requisite: Health Informatics MAS student
BMI	610	Clinical Culture and the Health Care Environment	Designed for medical informatics students who have no significant clinical experience in the U.S. Introduces medical terminology and reviews clinical environments in which health care providers create, manage and use clinical information. Students perform observations in a variety of clinical environments.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): Health Informatics MAS student
BMI	611	Applied Data Analysis	Students learn what statistical methods are used most widely in the analysis of data from studies of disease risk factors, health interventions, and health care improvements, and what statistical methods should be used to analyze data from various types of studies. They learn how to estimate the number of subjects needed for studies of various designs. They learn to conduct and interpret multiple linear, multiple logistic, and multivariate lifetable analysis. Hands-on experience in the use of statistical software to conduct analysis of health data.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	612	Applied Data Mining	Comprehensive introduction to data mining methods and algorithms used most often to analyze data collected in biomedical informatics studies, including genomics and proteomic disease association studies, clinical trials, clinical image analysis and studies of the accuracy and performance of screening and diagnostic tests. Emphasizes assessing data quality, understanding how to select an overall approach to analysis, and presenting and interpreting the results of data mining analysis. Students learn to use Excel to effectively display data collected in biomedical research studies and Weka software to analyze data using approaches that are used commonly in biomedical studies.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	613	Workflow Analysis and Redesign in Health Systems Engineering	Provides an overview of workflow analysis and process redesign and their use in quality improvement activities, including specification. Uses case examples to highlight key concepts and measurement concepts and covers techniques. Includes the links of systems engineering to fundamentals of decision theory, statistics and optimization. Includes discussion of current successful techniques for systems engineering. System engineering seeks to enable the successful design, implementation, deployment and maintenance of successful systems. Emphasizes gathering and analysis of customer needs for the specification and documentation of required functionality early in the system's lifecycle.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	614	Current Perspectives in Health Informatics	Seminar course using external speakers to discuss and review the current state of the health informatics field.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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BMI	615	Human Factors Engineering for Biomedical Applications	Fundamental principles of human-computer interaction and human factors and how to apply them to real-world problems through class projects, homework, and real-world design. Focuses on learning why user-friendly interfaces can greatly improve work productivity and enhance the quality of healthcare without radically changing the underlying technology.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	616	Clinical Decision Support and Evidence-Based Medicine	Focuses on the major problems of human decision making in health care including causes of errors, decreased quality and increased costs. Explores the role of information technology, primarily through computer-based clinical decision support (CDS), to address these problems. Explores key methods used to provide CDS, the capabilities and limitations of current approaches, and the challenges for managing and updating the knowledge needed to deliver CDS in an enterprise setting. Origins of evidence-based decision making and policy formulation; how to use the tools and approaches that have been developed to support evidence-based decision making and policy formulation; and the history and evolution of systematic review and meta-analysis as a tool to inform decisions and policies based on evidence. Students gain hands-on experience by conducting a systematic review and a meta-analysis and using the results to draw conclusions and formulate health policy.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	617	Principles of Evidence-based Medicine	The origins of evidence-based decision making and policy formulation; how to use the tools and approaches that have been developed to support evidence-based decision making and policy formulation. The history and evolution of systematic review and meta-analysis as a tool to inform decisions and policies based on evidence. Hands-on experience by conducting a systematic review and a meta-analysis and using the results to draw conclusions and formulate policy.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	2		Prerequisite(s): Health Informatics MAS student
BMI	618	Leadership and Change in Clinical Environments	Covers core concepts related to leadership and specific methodologies used by effective leaders, including running meetings, negotiation, and conflict management. Also reviews change management as a structured approach to transitioning individuals, teams, and organizations from a current state to a desired future state. Provides exposure to various models and processes related to change management and the tradeoffs between these different approaches. Includes case examples related to health information.	N	LEC	N	GNA	College of Health Solutions	Biomedical Informatics Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student
BMI	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-12		Prerequisite(s): Biomedical Informatics PhD student
BMI	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	Biomedical Informatics Program	1-15		Prerequisite(s): Biomedical Informatics PhD student
BMI	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	Biomedical Informatics Program	1-15		Prerequisite(s): Biomedical Informatics PhD student
BMY	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BMY	501	Essentials of Biomimicry	Offered as a sampler of the various topics (discipline, emulate, ethos, (re)connect and iSites, human-nature connection, biomimicry thinking, and life's principles) within the discipline of biomimicry. Each week is devoted to a specific topic and is led by a different instructor. Provided a basic overview of each aspect of the discipline with ample opportunity for conversation and dialogue around the specific components, with an understanding that greater depth into each topic can be learned by taking the advanced BMY courses.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	502	Life's Principles	Life's principles are nature's universal design guidelines based on 3.8 billion years of successful strategies across all life. With instruction by Dr. Dayna Baumeister, this 16-week online course takes participants on a deep dive of life's principles, including the review and study of life's operating conditions, the six primary principles and their related sub-principles. Gives participants the experience necessary to bring these design guidelines into practice.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	4		Pre- or corequisite(s): Biomimicry MS or Biomimicry certificate student; BMY 501
BMY	503	Biology Taught Functionally	Biomimicry teaches biology through the lens of function, thereby providing a core understanding in biology for all students, no matter their background. Explores how biologists gather and research information and how that knowledge can inform other disciplines. Also introduces the art of translating biological concepts into strategies for application, which is then carried throughout all the courses. Students learn how to work with biologists on a biomimicry team and how to weave biology and biomimicry together. The biologists in the cohort not only learn to look at nature through the function lens, but also act as subject matter experts for their interdisciplinary teams and teaching assistants.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BMY	504	Biomimicry Thinking	Biomimicry thinking is the practice of biomimicry from a methodology-based approach. 16-week intensive in the methodology of biomimicry reviews how biology and biomimicry can be incorporated into the four major phases of any design process: scoping, discovering, creating and evaluating. Covers the art of translating biological concepts into strategies for application and building a taxonomy of design principles.	N	LEC	N	OP2	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	511	Biomimicry and Design	Biomimicry is innovation inspired by nature, or the conscious emulation of nature's genius. Prepares participants to design sustainable innovations using the biomimicry philosophy and methodology. Participants complete a 16-week series of lectures and assignments to demystify the design thinking process, understand how to harness the potential of approaching challenges with a design mind, distill a design challenge, understand user needs, build a bridge between biology and design, use a methodology for discovering models from nature, abstract design principles from bio-inspired strategies, and translate those principles into sustainable innovations. Participants both with a design background and without equally experience a deep immersion into the world of biomimetic design.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre- or corequisite(s): Biomimicry MS student; BMY 501
BMY	512	Biomimicry and Engineering	Prepares participants to understand the field of engineering; identify the types of engineers and what each one does; what constrains engineers' work under, materials selected by engineers, how to present biological ideas to engineers and how to integrate ideas from their discipline into sustainable engineering designs using biomimicry principles. Most examples used are of large engineered structures. These structures play critical functions in human systems, have a significant impact on the environment and last for over a 100 years, so it is important to imbue as much sustainability into their design as possible. Requires a final team project designed to put these ideas into practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre- or corequisite(s): Biomimicry MS student; BMY 501
BMY	516	Biomimicry and Business	Addresses business topics from the biomimicry point of view; explains mechanisms and tools for comparing and contrasting business and nature. Challenges participants to question conventional ways of conducting business and come up with new approaches based on a different point of view.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre- or corequisite(s): Biomimicry MS student; BMY 501
BMY	517	Human-Nature Connection	Grounds the emerging discipline of biomimicry as a continuation of our ancestral connection with nature. Human-Nature Connection (HNC) engages participants in an exploration of the meaning and value of connecting with nature. Topics include defining humans, nature, and our connection with nature; establishing the evolutionary, personal, and socio-cultural influences on the different expressions of this connection; and illustrating the relevance of biomimicry to the human-nature connection.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre- or corequisite(s): Biomimicry MS student; BMY 501
BMY	530	Virtual Design Lab Practicum	Practicum designed to allow participants to dive deep into the biomimicry tools and resources presented during the program and to apply them selectively to a specific and unique opportunity of the student's choosing. Projects should have a meaningful outcome achievable within the semester, and should engage the scoping, discovering, creating and evaluating phases of biomimicry thinking. Deliverables are milestone based, and the final deliverable should have application in a real-world setting.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	2		Pre- or corequisite(s): Biomimicry MS student with minimum 20 hours OR Biomimicry certificate student with minimum 13 hours
BMY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	LEC	Y	GNA	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): BMY 504; Pre- or corequisite(s): Biomimicry MS student; BMY 503
BMY	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
BMY	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BMY	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
BMJ	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BMJ	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, <u>highly specialized courses responding to unique student demand.</u>	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BUA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
BUA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
BUA	330	Organizational Leadership	Strategies, skills, and techniques that promote successful leadership within organizations. Practice leadership skills and self-discovery in preparation for leadership positions.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
BUA	380	Small Business Leadership	Develops leadership skills needed to form, lead, and operate a small business. Emphasizes creating a vision, research, and problem solving.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	381	Small Business Accounting and Finance	Accounting and finance skills needed by small business owners to acquire, allocate, and track monetary resources and evaluate performance.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student. Must not have earned credit in ACC 382.
BUA	383	Small Business Working Relationships	Addresses communication and the people in a business--clients, employees, suppliers, competitors, governments, family, and self development.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR Non-degree student with a minimum ASU Cum GPA of 2.00, OR Graduate student.
BUA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
BUA	440	Strategic Management	Strategic formulation and administration of the total organization, including integrative analysis and strategic plan; interrelationship of business functional areas.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Agribusiness senior; FIN 300 with C or better; MGT 300 with C or better; MKT 300 with C or better; SCM 300 with C or better; Credit is allowed for only AGB 414, BUA 440 or 441
BUA	441	Entrepreneurship and Feasibility	Assessment of the opportunities, risks, and challenges associated with business start-up and continued operation.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		Pre-requisites: Agribusiness senior; FIN 300 with C or better; MGT 300 with C or better; MKT 300 with C or better; SCM 300 with C or better; Credit is allowed for only AGB 414, BUA 440 or 441
BUA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Morrison School of Agribusiness	1-6	L	Prerequisite(s): Barrett Honors student
BUA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
BUA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-7		
BUA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		

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BUE	480	Teaching Business Subjects	Organization and presentation of appropriate content for business subjects in the secondary school.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BUE	481	Technology in Business and Vocational Education	Emerging curricula and instructional technology in business and vocational education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
BUE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): admission to the Professional Program
BUE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
BUS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-3		
BUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
BUS	384	Business Operations and Planning	Planning and executing plans--the what, when, where, how, and who from product/service/project idea to pay back or completion.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	3		Prerequisite(s): SCM 300 or 303
BUS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Prerequisite(s): minimum 45 hours
BUS	424	Sales and Negotiations	Principles and techniques of selling, merchandising and negotiations applicable for all businesses and organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	3		Prerequisite(s): MKT 300
BUS	434	Risk Management and Insurance	Strategies to manage business risk: derivatives, insurance, self-insurance and public policy.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	3		Prerequisite(s): FIN 300 or 303
BUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		
BUS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-6		Prerequisite(s): Barrett Honors student
BUS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-6		Prerequisite(s): Barrett Honors student
BUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-7		
BUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-3		
BUS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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BUS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	0.5-12		Prerequisite(s): W.P. Carey degree-seeking graduate student
BUS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	0.5-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Prebusiness Office	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Prebusiness Office	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		Pre-requisite: W.P. Carey Degree-seeking Graduate student
BUS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Prebusiness Office	1		Prerequisite(s): degree- or nondegree-seeking graduate student
BUS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Prebusiness Office	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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CBS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
CBS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CBS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
CDE	232	Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
CDE	232	Human Development	Lifespan development from conception through adulthood, with emphasis on family influences. Recognition of individuality within the universal pattern of development.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
CDE	244	Children Facing Health Care Challenges	Provides a comprehensive introduction to family-centered care, psychosocial assessment of the hospitalized and chronically ill child, and techniques to support their coping. Utilizes the principles/theories of child development, and introduces the role of a child-life specialist in the promotion of effective coping through play, preparation and education among children, youth and families facing challenges related to health care and hospitalization.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Credit is allowed for only CDE 244 or CDE 294 (Children Facing Health Care Challenges)
CDE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
CDE	312	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: Minimum 24 hours; SOC 101, PSY 101(PGS 101), FAS 101 or FAS 330 with C or better; Credit is allowed for only CDE 312 or SOC 312
CDE	337	Early Childhood Intervention	Explores how child development theory affects practice with children and families, emphasizing development of young children and early intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
CDE	338	Child Development Practicum	Supervised practicum in the Child Development Lab preparing students for work in child care centers and agencies serving young children and families.	N	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	2-4		Prerequisite(s): minimum 45 hours
CDE	350	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CDE	356	Race and Child Development	Reviews the current research and literature about the particular role of race in child development. Even though race is not a valid biological construct, it has significant social implications as it shapes how children interact and are treated by others. Through primarily class discussions/activities, presentations and papers, addresses: (1) What are the research and theoretical issues in studying race? (2) What does race and racism mean? (3) How does race influence developmental processes?	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): APA 200 or APA 210 or 30 hours. Credit is allowed for only APA 356 or CDE 356 or APA 394 (Race and Child Development)
CDE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
CDE	418	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & H	Pre-requisites: FAS 101 or FAS 330 or PGS 101 or SOC 101 with C or better; Minimum 30 hours. Credit is allowed for only CDE 418 or SOC 418
CDE	418	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & H	Pre-requisites: FAS 101 or FAS 330 or PGS 101 or SOC 101 with C or better; Minimum 30 hours. Credit is allowed for only CDE 418 or SOC 418
CDE	430	Infant/Toddler Development in the Family	Examines the development of infants/toddlers, the socialization processes of families, and the interactions of these processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
CDE	450	Child Dysfunction in the Family	This course will provide a focused study of the development of dysfunction within the family context. Other contextual influences will also be considered.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: CDE 232, PGS 101, or SOC 101 with C or better; Minimum Junior standing
CDE	450	Child Dysfunction in the Family	This course will provide a focused study of the development of dysfunction within the family context. Other contextual influences will also be considered.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: CDE 232, PGS 101, or SOC 101 with C or better; Minimum Junior standing
CDE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
CDE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6	L	Prerequisite(s): Barrett Honors student
CDE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
CDE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
CDE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-7		
CDE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		
CDE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	501	Social Statistics	Understands and uses statistics for applications in the social sciences.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only CDE 501, SOC 501 or SOC 598 (Statistics for Social Sciences)
CDE	531	Theoretical Issues in Child Development	Major developmental theories, related research, and their application to family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	533	Research Issues in Child Development	In-depth exploration and critique of research focusing on child development in a family setting.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	534	Risk and Resilience in Children and Adolescents	Integrates child development, family theory, and research to understand risk and resilience in children and adolescents.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: CDE 531; FAS 500
CDE	570	Child Development for Infant Family Practice	Examines development during infancy and early childhood with an emphasis on social and emotional development, mental health, and early parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	571	Infant Mental Health for Infant Family Practice	Surveys the biological and environmental risk factors that jeopardize the mental health of infants and young childre; overview of prevention and intervention strategies.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	572	Assessment of Infants, Toddlers, and Families for Infant Family Practice	Developmentally appropriate assessment of mental disorders and developmental disabilities in infants, toddlers, and preschool children and parent-child relationships.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CDE	573	Cultural Competence for Infant Family Practice	Examines cultural issues impacting parent-child relationships and child rearing and the effectiveness of infant mental health and early intervention services on families of various ethnic and cultural backgrounds.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	574	Observation and Reflection for Infant-Family Practice	Strategies for observing infant behavior and parent-child relationships and skills for reflective, relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	575	Advanced Observation and Reflection for Infant-Family Practice	Advanced strategies for observing infant behavior and parent-child relationships and skills for reflective relationship-based intervention.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	576	Applied Research Methods for Infant Family Practice	Survey and critical examination of child development, parent-child relationships, family relationships, and early intervention research and the application to IFP.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-IFP student
CDE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	610	Gender Development	Examines current theories and research concerning the various aspects of gender and developmental change.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	612	Children's Peer Relationships	Studies scientific theory, research, and evidence on peer relationships and social competence from early childhood through adolescence.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: CDE 531 with C or better
CDE	634	Prevention and Child Development	Advanced training in research and theory-based approaches to developing and evaluating prevention programs for children at risk.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite: CDE 534
CDE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CDE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CDE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CDH	501	Digital Humanities: Critical Theory and Methods	Digital technologies are now intricately woven into our lives--whether it's in terms of authoring a paper in a text editor, sending texts and emails, or doing data analysis. Popular narratives of the "big" and the "new" celebrate and sometimes bemoan the ways that these tools shape our communication, access to information, habits and even our physical bodies. Focuses on the histories of these technologies, their operations, popular conceptions about such tools, and their affordances and limits for humanities scholarship. Students learn how to leverage digital technologies, but also how to critically read them. Broad ranging; in addition to surveying the "big tent," students are encouraged to utilize their final projects to engage with specific disciplinary digital tools and methods relevant to their scholarly work.	N	LEL	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CDH	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDH	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CDH	598	Special Topics	Topical courses not offered in regular course rotation (e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand).	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
CED	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
CED	250	Career Development	Covers models of the individual, the world of work, and decision making with emphasis on individual application.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	
CED	294	Special Topic	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
CED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
CED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
CED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
CED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
CED	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7		
CED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
CED	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	501	Intro to Research and Evaluation in Counseling	Introduction to the basic models of research and evaluation in the field of counseling.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CED 501 or 591 (Res. & Eval. in Counseling)
CED	502	Counseling Research Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate counseling research problems using statistical software.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CED 502 or CED 591 (Counseling Research Data Analysis)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CED	522	Theories of Counseling and Psychotherapy	Presents major theories of psychological intervention as well as underlying personality theory upon which they are based.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	523	Psychological Tests	Standardized tests in the study of the individual, with emphasis on test score interpretation in counseling.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	525	Evaluation of Learning Systems	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate; Credit is allowed for only CED 525 or EDT 506
CED	527	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	528	School Counseling	Introduces counseling within multicultural settings. Emphasizes counseling, consultation, and coordination skills needed for schools' comprehensive developmental guidance programs.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	529	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	534	Occupations and Careers	The world of work, career development, education, and training for occupational entry and mobility.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	545	Analysis of the Individual	Theory and methods commonly used in studying the individual. Observational methods, diagnostic interviews, structured, and semi-structured methods for assessing personality.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	567	Group Dynamics and Counseling	Group process factors, theory, and diversity issues determining effective interaction in small groups. Emphasis placed on lecturettes, self awareness, and experiential components.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CED	577	Counseling Prepracticum	Focus on racial, social, and cultural factors in the development of helping relationships through integration of cognitive and affective self-awareness with counseling skills.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling Psychology MC or PhD student
CED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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CED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	672	Marriage and Family Counseling	Introduces marriage and family counseling theories. Emphasizes a systems-communication model utilizing cocounseling.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Counseling Graduate student
CED	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Counseling Graduate student
CED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Counseling Graduate student
CED	685	School Counseling Internship	Structured practical experience in school counseling following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	YGB	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Masters of Counseling major
CED	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CED	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student

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CED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate student
CEE	181	Technological, Social, and Sustainable Systems	Introduces the importance and role of technological, social, and sustainable systems in the modern world. Provides a framework for the theory and practice of sustainable engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3	HU	Credit is allowed for only CEE 181, FSE 181, or SOS 181
CEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		
CEE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	210	Engineering Mechanics I: Statics	Force systems, resultants, equilibrium, distributed forces, area moments, fluid statics, internal forces, friction, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: FSE 100 with C or better; MAT 266 (or MAT 271) with C or better; PHY 121 with C or better; PHY 122 with C or better; Credit is allowed for only CEE or CNE 210
CEE	212	Engineering Mechanics II: Dynamics	Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: CEE 210 (or CNE 210) and MAT 275 (or MAT 274) completed with C or better; Credit is allowed for only CEE or CNE 212
CEE	213	Introduction to Deformable Solids	Strain-displacement and stress-strain-temperature relations. Stresses and deformations due to axial, shear, torsional and bending moments. Buckling, stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: CEE 210 (or CNE 210) with C or better; MAT 274 (or MAT 275) with C or better; Credit is allowed for only CEE or CNE 213
CEE	281	Surveying	Theory and fieldwork in construction and land surveys.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): MAT 170 or higher with C or better; Credit is allowed for only CEE 281, CNE 241 or CON 241
CEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	300	Engineering Business Practice	Engineering economic principles, cost/benefit analysis, project financing and delivery, management of engineering design, business practices, ethical and professional responsibilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3	L	Pre-requisites: Engineering BSE student; Junior or Senior standing; MAT 267 with C or better
CEE	321	Structural Analysis and Design	Statically determinate and indeterminate structures (trusses, beams, and frames) by classical and matrix methods. Introduces structural design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Pre-requisite(s): Civil Engineering BSE or Construction Engineering BSE major; CEE 212 or CNE 212 or MAE 212; CEE 213 or CNE 213 with C or better; Credit is allowed for only CEE 321

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CEE	341	Fluid Mechanics for Civil Engineers	Fundamental principles and methods of fluid mechanics forming the analytical basis for water resources engineering. Conduit and open channel flow.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Pre-requisites: BSE Civil Engineering student; CEE 212 (or CEE 211 or MAE 212) and CEE 213 with C or better; Pre/Co-requisite: CEE 384 or MAE 384 (with C or better if completed)
CEE	351	Geotechnical Engineering	Index properties and engineering characteristics of soils. Compaction, permeability and seepage, compressibility and settlement, and shear strength.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Prerequisite(s): CEE 213 (or CNE 213) with C or better; BSE Civil Engineering or Construction Engineering major; Credit is allowed for only CEE or CNE 351
CEE	353	Civil Engineering Materials	Structure and behavior of civil engineering materials, including steel, aggregate, concrete, masonry, asphalt, wood, composites. Atomic structure and engineering applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Prerequisite(s): CEE 213 or CNE 213 with C or better; Civil Engineering or Construction Engineering BSE major; Credit is allowed for only CEE 353 or CNE 353
CEE	361	Introduction to Environmental Engineering	Concepts of air and water pollution; environmental regulation, risk assessment, chemistry, water quality modeling, water and wastewater treatment systems designs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4		Prerequisite(s): Fulton Engineering undergraduate student; CEE 213 with C or better; CHM 114 or CHM 116; Pre- or corequisite(s): IEE 380
CEE	372	Transportation Engineering	Fundamental background of highway and traffic engineering in the areas of planning, design, and operations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): Civil Engineering BSE student; CEE 213 with C or better; Pre- or corequisite(s): IEE 380
CEE	384	Numerical Methods for Engineers	Numerical methods and computational tools for selected problems in engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3	CS	Prerequisite(s): Fulton Engineering undergrad; MAT 274 or 275 with C or better; MAT 242 or 343 (or 342 for non-MAE student) with C or better; Pre- or corequisite(s): MAT 267 or 272 with C or better if complete; Credit allowed for only MAE 384 or CEE 384
CEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	400	Earth Systems Engineering and Management	Introduces earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3	(L or HU) & H	Prerequisite(s): Civil Engineering BSE major; CEE 300 with C or better OR non-CEE junior or senior; Credit is allowed for only CEE 400 or CNE 400
CEE	412	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 351 and 353 with C or better; Credit is allowed for only CEE 412 or 511
CEE	420	Steel Structures	Behavior of structural components and systems. Design of steel members and connections. Load and resistance factor design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: BSE Civil Engineering or Construction Engineering major; CEE 321, or CNE 321 with C or better. Credit is allowed for only CEE 420 or CNE 420
CEE	421	Concrete Structures	Behavior of concrete structures and the design of reinforced and prestressed concrete members, including footings. Partial design of concrete building system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: BSE Civil Engineering or Construction Engineering major; CEE 321 or CNE 321 with C or better; Credit is allowed for only CEE or CNE 421
CEE	423	Structural Design	Analysis and design of reinforced concrete steel, masonry, and timber structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 421 with C or better; Pre/Co-requisite: CEE 420 (with C or better if completed)

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CEE	432	Developing Software for Engineering Applications	Matrix and computer applications to structural engineering and structural mechanics. Stiffness and flexibility methods, finite elements, and differences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; Credit is allowed for only CEE 432 or 532
CEE	440	Hydrology	Descriptive and quantitative hydrology; hydrologic cycle, models, and systems. Rain-runoff models. Hydrologic design. Concepts, properties, and basic equations of groundwater flow. Emphasizes quantitative methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): CEE 341 or MEE 340 or GLG 362 with C or better; Credit is allowed for only CEE 440 or CEE 545 or CEE 598 (Hydrology) or GLG 471 or GLG 490 (Hydrology)
CEE	441	Water Resources Engineering	Applies the principles of hydraulics and hydrology to the engineering of water resources projects; design and operation of water resources systems; water quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 341 with C or better
CEE	452	Foundations	Applies soil mechanics to foundation and retaining wall systems, including bearing capacity, settlement, and lateral earth pressure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): Civil Engineering BSE or Construction Engineering major; CEE 351 or CNE 351 with C or better; Credit is allowed for only CEE 452 or CNE 452
CEE	462	Unit Operations in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 361 with C or better
CEE	466	Urban Water System Design	Capacity; planning and design of water supply; domestic and storm drainage; and solid waste systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 341 and 361 with C or better
CEE	467	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 361 or MIC 220 with C or better; Credit is allowed for only CEE 467 or 567
CEE	470	Sustainable Environmental Biotechnologies	Introduces principles of green chemistry and green engineering and their integration in the design of sustainable bioengineering and biotechnology applications that protect environmental quality and human health.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: CEE 361; Credit is allowed for only CEE 470, 494 (Sustainable Environmental Biotechnologies), 570 or 598 (Sustainable Environmental Biotechnologies)
CEE	474	Transportation Systems Planning	Transportation systems modeling procedures, travel characteristics analysis, traffic predictions, transportation systems management, and transit planning methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 372 and 384 with C or better
CEE	475	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 372 with C or better; Credit is allowed for only CEE 475 or 576
CEE	481	Civil Engineering Project Management	Civil engineering project management and administration, planning and scheduling, cost estimating and bidding strategies, financial management, quality control and safety, and computer applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 321 with C or better; CEE 351 with C or better; CEE 372 with C or better. Credit is allowed for only CEE 481 or 585
CEE	483	Highway Materials, Construction, and Quality	Properties of highway materials, including aggregates, asphalt concrete, and portland cement concrete; construction practice; material delivery, placement, and compaction; quality control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 351 and CEE 372 and CEE 353 with C or better. Credit is allowed for only CEE 483 or 583
CEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		
CEE	485	Sustainable Civil and Environmental Systems Engineering	Provides working knowledge of operations research methodologies, both the traditional and more modern metaheuristic techniques, to evaluate sustainable civil engineering systems and quantitatively evaluate project alternatives involving single or multiple goals.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil Engineering BSE student; CEE 300; MAT 242 with C or better

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CEE	486	Integrated Civil Engineering Design	Requires completion of a civil engineering design in a simulated practicing engineering environment. Limited to undergraduates in their final semester.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	4	L	Pre-requisites: Civil Engineering BSE student; CEE 321; CEE 341; CEE 351; CEE 361; CEE 372 with C or better OR Construction Engineering student; CEE or CNE 321; CEE or CNE 351 with C or better. Credit is allowed for only CEE or CNE 486
CEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6		Prerequisite(s): Barrett Honors student
CEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-6	L	Pre-requisite: Barrett Honors Engineering student
CEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		
CEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-7		
CEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-3		
CEE	506	Life Cycle Assessment for Civil Systems	Covers fundamental and advanced concepts of the life cycle assessment framework exploring products, services, activities and infrastructure systems. Examines key concepts for system boundary selection, functional unit selection, inventorying, impact assessment and interpretation stages with a focus on energy and environmental assessment. Advanced concepts include allocation of effects, problem formulation for assessing footprints versus decisions or policies, and assessment of infrastructure interdependencies and supply chains. Exposes tools and data sources and presents approaches for evaluation of sensitivity and uncertainty of results. Encourages students with broad sustainability interests to enroll and explore how life cycle assessment can aid their work by shifting their views from direct to cradle-to-grave effects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CEE 506 or CEE 598 (Lifecycle Assessment) or SOS 546 or SOS 598 (Lifecycle Assessment)
CEE	507	Urban Infrastructure Anatomy and Sustainable Development	Understanding how built environment infrastructure systems interact with ecosystem services is critical for policies and decisions directing urban sustainability. Brings together students from several disciplines to develop a semester-long research project focused on a particular urban sustainability problem in Phoenix. During the semester, students are given background on how infrastructure systems work and are interdependent, and explore tools and methods for urban sustainability assessment with peers from several disciplines. As a class, students evaluate a particular urban sustainability problem for Phoenix, interact with local policy and decision makers in developing solutions, and present their findings at the end of the semester to the ASU community.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit for only CEE 507 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or PUP553 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or SOS547 or SOS598 (Urban Infrastr Anatomy & Sustain Dev)
CEE	511	Pavement Analysis and Design	Design of flexible and rigid pavements for highways and airports. Surface, base, and subgrade courses. Cost analysis and pavement selection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Graduate Civil Engineering student; Credit is allowed for only CEE 412 or 511
CEE	512	Pavement Performance and Management	Pavement management systems, including data collection, evaluation, optimization, economic analysis, and computer applications for highway and airport design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Graduate Civil Engineering student
CEE	513	Pavement Evaluation, Maintenance, and Rehabilitation	Provides the necessary information for pavement engineers to evaluate, identify, and select reliable and cost-effective rehabilitation alternatives for existing Hot Mix Asphalt (HMA) and Portland Cement Concrete (PCC) pavements.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	514	Bituminous Materials and Mixture	Types of bituminous materials used in pavement mixtures. Chemical composition, physical properties, desirable aggregate characteristics, optimum asphalt contents, superpave asphalt binder, mixture design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Graduate Civil Engineering student
CEE	515	Properties of Concrete	Materials science of concrete. Cement chemistry, mechanisms of hydration, interrelationships among micro- and macro-properties of cement-based materials. Mechanical properties, failure theories, fracture mechanics of concrete materials. Cement-based composite materials and the durability aspects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate tudent
CEE	516	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student

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CEE	521	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods: applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	522	Experimental Stress Analysis	Specification and analysis of stress and strain at a point, stress-strain relationships. Mechanical, optical, and electrical strain gages and circuits, digital data acquisition and analysis, closed loop mechanical testing, fracture mechanics, optical methods and photoelasticity, and introduction to nondestructive testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	523	Structural Damage	Fundamental mechanisms of damage in infrastructural materials from both imposed mechanical and environmental loading. Covers assessment of damage through noninvasive tools involving stress-wave, electrical, electro-chemical, radiographic and optical techniques. Methods for strengthening of structural elements and selected methods of design of strengthening systems for concrete and steel structures.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): graduate Civil or Construction Engineering student; Credit is allowed for only CEE 523 or CEE 598 (Structural Damage Evaluation and Strengthening)
CEE	526	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): graduate Engineering student; APM 505 or MAE 501 with C or better; Credit is allowed for only CEE 526 or MAE 527
CEE	527	Advanced Concrete Structures	Ultimate strength design. Combined shear and torsion. Serviceability. Plastic analysis. Special systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	530	Prestressed Concrete	Materials and methods of prestressing. Analysis and design for flexure, shear, and torsion. Prestress losses due to friction, creep, shrinkage, and anchorage set. Statically indeterminate structures. Design of flat slabs, bridges, and composite beams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	532	Developing Software for Engineering Applications	Fundamentals of engineering software development and object-oriented programming. Programming in C++. Development of matrix toolbox. Introduces finite element method. Computer graphics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 432 or 532
CEE	533	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	536	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Engineering CEE Graduate student; Credit is allowed for only CEE 536, MAE 494 (Structural Dynamics) or 515
CEE	540	Groundwater Hydrology	Physical properties of aquifers, well pumping, subsurface flow modeling, unsaturated flow, numerical methods, land subsidence, and groundwater pollution.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	541	Surface Water Hydrology	Hydrologic cycle and mechanisms, including precipitation, evaporation, and transpiration; hydrograph analysis; flood routing; statistical methods in hydrology and hydrologic design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	543	Water Resources Systems	Theory and application of quantitative planning methodologies for the design and operation of water resources systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	545	Hydrology	Descriptive and quantitative hydrology; hydrologic cycle, models and systems. Rain-runoff models. Hydrologic design. Concepts, properties and basic equations of groundwater flow. Emphasizes quantitative methods.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): Civil, Environmental and Sustainable Engineering MS, MSE or PhD major; Credit is allowed for only CEE 440 or CEE 545 or CEE 598 (Hydrology) or GLG 471 or GLG 490 (Hydrology)
CEE	550	Soil Behavior	Physicochemical aspects of soil behavior, stabilization of soils, and engineering properties of soils.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	551	Advanced Geotechnical Testing	Oedometer, triaxial (static and cyclic) back pressure saturated and unsaturated samples, pore pressure measurements, closed-loop computer-controlled testing, in-situ testing, and sampling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	553	Advanced Soil Mechanics	Applies theories of elasticity and plasticity to soils, theories of consolidation, failure theories, and response to static and dynamic loading.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	554	Shear Strength and Slope Stability	Shear strength of saturated and unsaturated soils strength-deformation relationships, time-dependent strength parameters, effects of sampling, and advanced slope stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	555	Advanced Foundations	Deep foundations, braced excavations, anchored bulkheads, reinforced earth, and underpinning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	557	Geoenvironmental Engineering	Environmental site assessment, solid waste management, waste containment system design, soil and groundwater remediation, soil erosion control, brownfields development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	558	Unsaturated Soil Mechanics	Advanced unsaturated soil mechanics theory, including introduction of stress-state variables and constitutive relationships for unsaturated flow and stress-strain applications. Knowledge of CEE 351 or equivalent material is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student

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CEE	559	Earthquake Engineering	Characteristics of earthquake motions, selection of design earthquakes, site response analyses, seismic slope stability, and liquefaction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	560	Soil and Groundwater Remediation	Presents techniques for remediation of contaminated soils and groundwaters with basic engineering principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	561	Physical-Chemical Treatment of Water and Waste	Theory and design of physical and chemical processes for the treatment of water and wastewaters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	562	Environmental Biochemistry and Waste Treatment	Theory and design of biological waste treatment systems. Pollution and environmental assimilation of wastes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3-4		Pre-requisite: Engineering CEE Graduate student
CEE	563	Environmental Engineering Chemistry	Analyzes water, domestic and industrial wastes, lab procedures for pollution evaluation, and the control of water and waste treatment processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	564	Contaminant Fate and Transport	Fate and transport processes with emphasis on governing equations and parameters relevant to the migration of chemicals in the environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	565	Advanced Environmental Biotechnology	Emerging topics in environmental biotechnology and related problem-solving techniques.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); CEE 562 and 567; Credit is allowed for only CEE 565 or 598 (Advanced Environmental Biotechnology)
CEE	566	Water Reuse and Reclamation	Reuse and reclamation of water, tertiary treatment technologies of water for reuse applications, cloth filtration and UV disinfection, agricultural reuse and engineering, landscape irrigation, industrial reuse, environmental restoration, groundwater recharge, direct and indirect potable reuse, water reuse planning and dual distribution systems, storage requirements.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CEE 566 or CEE 598 (Water Reuse & Reclaim)
CEE	567	Environmental Microbiology	Overview of the microbiology of natural and human-impacted environment, microbial detection methodologies, waterborne disease outbreaks, risk assessment, and regulations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Engineering CEE Graduate student; Credit is allowed for only CEE 467 or 567
CEE	568	Unit Processing in Environmental Engineering	Design and operation of unit processes for water and wastewater treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	569	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): graduate Engineering major; Credit is allowed for only CEE 469 or CEE 569 or CHE 469 or CHE 569
CEE	570	Sustainable Environmental Biotechnologies	Introduces principles of green chemistry and green engineering and their integration in the design of sustainable bioengineering and biotechnology applications that protect environmental quality and human health.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisites: Civil, Environmental and Sustainable Engineering MS, MSE or PhD student; Credit is allowed for only CEE 470, 494 (Sustainable Environmental Biotechnologies), 570 or 598 (Sustainable Environmental Biotechnologies)
CEE	571	Advanced Environmental Chemistry	Applied water quality and water treatment aquatic chemistry. Knowledge of environmental chemistry topics is necessary to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental and Sustainable Engineering MS, MSE or PhD major
CEE	572	Life Cycle Assessment for Civil Systems	Concepts of the life cycle assessment (LCA) framework exploring products, services, activities and infrastructure systems. Examines key concepts for system boundary selection, functional unit selection, inventorying, impact assessment and interpretation stages with a focus on energy and environmental assessment. Advanced concepts include allocation of effects, problem formulation for assessing footprints versus decisions or policies, and assessment of infrastructure interdependencies and supply chains. Exposure to tools and data sources occur throughout the course; presents approaches for evaluation of sensitivity and uncertainty of results.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): graduate Civil Engineering or Construction Engineering major
CEE	573	Transportation Operations	Driver, vehicle, and roadway characteristics; traffic control devices; traffic engineering studies; and transportation system management measures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student
CEE	576	Highway Geometric Design	Design of visible elements of roadway, design controls, at-grade intersections, freeways, and interchanges.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Engineering CEE Graduate student; Credit is allowed for only CEE 475 or 576
CEE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student

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CEE	581	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student; Credit is allowed for only CEE 581 or SOS 552
CEE	582	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student; Credit is allowed for only CEE 483 or 583
CEE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	585	Civil Engineering Project Management	Civil engineering project management and administration, planning and scheduling, cost estimating and bidding strategies, financial management, quality control and safety, and computer applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	3		Prerequisite(s): MS, MSE or PhD Civil, Environmental and Sustainable Engineering major. Credit is allowed for only CEE 481 or CEE 585
CEE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Engineering CEE Graduate student
CEE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1		Pre-requisite: Civil Engineering MS or MSE student
CEE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-4		Pre-requisite: Engineering CEE Graduate student
CEE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering MS or MSE student
CEE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil, Environmental, and Sustainable Engineering Graduate student
CEE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	OPT	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-12		Pre-requisite: Civil Engineering PhD student

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CEE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Pre-requisite: Civil Engineering PhD student
CEE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	IND	Y	Z3	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1		Pre-requisite: Civil Engineering PhD student
CEE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Civil, Environmental and Sustainable Eng Program	1-15		Prerequisite(s): Civil Engineering PhD student
CEN	501	Computer Systems I	Introduces digital CMOS circuit and logic design and signal processing and analysis. Design of digital CMOS logic gates, combinational and sequential logic circuits, arithmetic logic unit; register-transfer-level design; Fourier and z transforms, filters, sampling, random variables, distribution and density functions.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisites: Computer Engineering Graduate student; Credit is allowed for only CEN 501 or 591 (Computer Systems I)
CEN	502	Computer Systems II	Covers fundamentals of computer architecture and focuses on basic principles of systems programming, operating systems, compilers and networking topics that cover the computer science to computer engineering interface.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Engineering Graduate student; Credit is allowed for only CEN 502 or 591 (Computer Systems II)
CEN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CEN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CEN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CEN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CEN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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CEN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CHE	100	Introduction to Chemical Engineering	Introduces design in chemical engineering, teaming, chemical engineering profession, computer models, communication skills, quality and customer satisfaction. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	2		Pre-requisite: Ira A. Fulton School of Engineering and University College student
CHE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	211	Introduction to Chemical Processing	Applies chemical engineering analysis and problem solving to chemical processes material and energy balance methods and skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): CHM 116 with C or better; MAT 266 or 271 with C or better
CHE	231	Introduction to Transport Phenomena I: Fluids	Transport phenomena, with emphasis on fluid systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s) with C or better: CHE 211; MAT 266 or 271; PHY 121; Corequisite(s): MAT 274 or 275; Credit is allowed for only CHE 231 or 501
CHE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Prerequisite(s): Barrett Honors student
CHE	334	Introduction to Transport Phenomena II: Heat and Mass Transfer	Applies heat and mass transport principles. Design of heat exchangers and continuous contactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Chemical Engineering BSE major; CHE 231 with C or better
CHE	342	Introduction to Applied Chemical Thermodynamics	Applies conservation and accounting principles with nonideal property estimation techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Biomedical Engineering BSE major with BME 200 with C or better OR Chemical Engineering BSE major with CHE 211 with C or better; Pre- or corequisite(s): MAT 267 or 272 with C or better if completed
CHE	352	Chemical Engineering Lab I	Engineering lab equipment, data collection and analysis; strengthens ability to generate written reports and oral presentations; reinforces teamwork skills; strengthens and extends the understanding of earlier technical contents in the curriculum; strengthens abilities in recognizing and understanding key issues associated with lab and process safety.	N	LAB	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3	L	Prerequisite(s): Chemical Engineering BSE major; CHE 334 with C or better
CHE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		
CHE	432	Principles of Chemical Engineering Design	Multicomponent distillation, engineering economics, equipment sizing and costs, plant operation economics, and simulation and optimization techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; CHE 334, 342, 442, and 433 with C or better
CHE	433	Modern Separations	Design of modern separation equipment in chemical engineering other than fractionation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; CHE 334 and CHE 342 with C or better
CHE	442	Introduction to Chemical Reactor Design	Applies kinetics to chemical reactor design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; CHE 334 and CHE 342 with C or better; Credit is allowed for only CHE 442 or CHE 505
CHE	451	Chemical Engineering Laboratory II	Operation, control, and design of experimental and industrial process equipment; independent research projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Chemical Engineering BSE major; CEE 384 or CHE 394 (Numerical Methods for Chemical Engineers) with C or better; CHE 334 with C or better; CHE 342 with C or better; CHE 352 with C or better

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CHE	461	Process Dynamic Control	Process dynamics, instrumentation, and feedback applied to automatic process control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3	CS	Prerequisite(s): Chemical Engineering BSE major; CEE 384 or CHE 394 (Numerical Methods for Chemical Engineers) with C or better; CHE 211 with C or better; CHE 433 or 442 with C or better
CHE	462	Process Design	Applies economic principles to optimize equipment selection and design; process safety; development and design of process systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3	L	Prerequisite(s): Chemical Engineering BSE major; CHE 432 with C or better; CHE 433 with C or better; CHE 442 with C or better
CHE	469	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Chemical Engineering BSE major; CHE 342, or Civil Engineering BSE major; CEE 361, or Materials Science and Engineering BSE major; MSE 330; Credit is allowed for only CEE 469 or CEE 569 or CHE 469 or CHE 569
CHE	475	Biochemical Engineering	Applies chemical engineering methods, mass transfer, thermodynamics, and transport phenomena to industrial biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Pre-requisite: CHE 334 and 442
CHE	476	Bioreaction Engineering	Principles of analysis and design of reactors for processing with cells and other biologically active materials; applies reaction engineering in biotechnology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Pre-requisites: Engineering BS or BSE student OR Graduate Engineering student
CHE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		
CHE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6		Prerequisite(s): Barrett Honors student
CHE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
CHE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		Prerequisite(s): Fulton Engineering undergraduate student
CHE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-7		Prerequisite(s): Fulton Engineering undergraduate student
CHE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-3		
CHE	518	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only MSE 518, EEE 518, MAE 518, MSE 475, or CHE 518
CHE	533	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only BME 533 or CHE 533 or MAE 533
CHE	543	Thermodynamics of Chemical Systems	Classical and statistical thermodynamics of nonideal physicochemical systems and processes; prediction of optimum operating conditions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Pre-requisites: Graduate Engineering student
CHE	544	Chemical Reactor Engineering	Reaction rates, thermodynamics, and transport principles applied to the design and operation of chemical reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
CHE	561	Advanced Process Control	Dynamic process representation, linear optimal control, optimal state reconstruction, and parameter and state estimation techniques for continuous and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
CHE	569	Air Quality Engineering	Chemical and physical processes by which air pollutants are generated and controlled with an emphasis on urban air quality.	N	LEC	N	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	3		Prerequisite(s): graduate Engineering major; Credit is allowed for only CEE 469 or CEE 569 or CHE 469 or CHE 569
CHE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
CHE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): graduate Chemical Engineering student
CHE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
CHE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student
CHE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): graduate CHE major
CHE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
CHE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
CHE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-4		Pre-requisite: Graduate Engineering student
CHE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Pre-requisites: Chemical Engineering Master's degree student
CHE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
CHE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Chemical Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
CHE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student
CHE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Chemical Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
CHE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Chemical Engineering Program	1-15		Pre-requisites: Chemical Engineering Doctoral student
CHI	101	First-Year Chinese I	Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills. Standard dialect. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Credit is allowed for only CHI 101 or MND 101
CHI	102	First-Year Chinese II	Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills. Standard dialect. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Prerequisite(s): CHI 101; Credit is allowed for only CHI 102 or MND 102
CHI	110	Intensive Chinese I	Adopts different pedagogical approaches to help students acquire basic skills in listening, speaking, reading and writing in Modern Standard Chinese. While linguistic elements are the focus of this course, appropriate cultural information related to language use is also an important component of instruction. Trains students to be able to function successfully in Chinese culture. Students don't simply learn to "speak Chinese" or read and write characters as some form of party trick. Teaches a practical skill set that allows students to communicate and behave appropriately in Chinese culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		Credit is allowed for only CHI 101 or CHI 102 or CHI 110
CHI	120	Introduction to Chinese Culture	Introduces geographical, historical, literary, and intellectual premises of Chinese culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre/Co-requisites: ENG 101, 105, or 107; Credit is allowed for only SLC 120 or CHI 120
CHI	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Maximum 25 hours

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CHI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	201	Second-Year Chinese I	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Prerequisite(s): CHI 102; Credit is allowed for only CHI 201 or MND 201
CHI	202	Second-Year Chinese II	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills. 5 class hours.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Prerequisite(s): CHI 201; Credit is allowed for only CHI 202 or MND 202
CHI	205	Chinese Calligraphy	Introduces styles and techniques of Chinese writing. Requires no knowledge of Chinese or Japanese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1		
CHI	210	Intensive Chinese II	Intensive 2nd-year college-level Modern Standard Chinese designed for students who are highly motivated and have successfully completed at least 1st-year college-level Modern Standard Chinese language course or equivalent. Reviews and reinforces 1st-year Chinese grammatical patterns and introduces new ones in order to further develop students' communicative competence in listening, speaking, reading and writing in modern Chinese. Introduces over 500 new characters and presents and expands an equal number of spoken vocabulary items. Students increase their vocabulary, consolidate their grammar, describe objects and express ideas more accurately and fluently.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		Prerequisite(s): CHI 102 or 110 with C or better; Credit is allowed for only CHI 201 or CHI 202 or CHI 210
CHI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	301	Third-Year Chinese I	Expansion of proficiency in listening comprehension, speaking, reading, and writing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: CHI 202 with C or better
CHI	302	Third-Year Chinese II	Continuation of CHI 301.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: CHI 301 with C or better
CHI	307	Introduction to Literary Chinese I	Reading in various genres of pre-20th century literature (wen-yen), with analysis of the structure of the classical writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: CHI 302, JPN 202, or KOR 202 with C or better
CHI	308	Introduction to Literary Chinese II	Continuation of CHI 307.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: CHI 307 with C or better
CHI	321	Chinese Literature	Masterworks of the tradition from the 7th century BCE through the 13th century. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	
CHI	322	Chinese Literature	Masterpieces from the later tradition and its transition to modern times. Readings, lectures, and examinations are in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	
CHI	333	China	Political, economic, social, and cultural history of the Chinese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 333, HST 383 or SLC 333
CHI	335	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only CHI 335, HPS 325, HST 385 or SLC 335
CHI	336	Interpreting China's Classics	Study of selected Confucian and/or Taoist classics and ways they have been read in both Asian and Western scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 336, HST 386 or SLC 336
CHI	338	The Daoist Bible: The Daode jing	At 5,000 words, the Daode Jing (Tao-te ching) is arguably the shortest religious book in the world. It is also the most widely translated, after the Christian Bible. Introduces the wisdom of the Old Boy, Laozi himself, and to some of the startlingly wide variety in which his short, gnomic utterances have been interpreted. No knowledge of Chinese required; all readings and lectures in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101, 105 or 107 with C or better; Credit is allowed for only CHI 338, 394 (Daoist Bible: The Dao De Jing) or REL 338
CHI	343	Daoism	Introduces the history, doctrines, and practices of Taoism from the mid-second century CE up to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G & H	Pre-requisites: ENG 102, 105 or 108 with C or better; 24 or more hours; Credit is allowed for only CHI or REL 343
CHI	345	Chinese Film and Civilization	Screening and discussion of recent films from China, Taiwan, and Hong Kong in the context of modern Chinese civilization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
CHI	348	Pathways into Chinese Culture	Introduces some important aspects of China's cultural history and traditions. Provides an overview of Chinese history and culture and reviews major developments in science and technology. Incorporates current social and cultural topics and reviews through the lens of historical context. Classroom activities enable students to gain a better understanding of traditional Chinese culture with respect to both elite and popular culture. Conducted in Mandarin and is designed for the students who are currently enrolled in CHI 301 and CHI 401 or whose Chinese proficiency level in all four skills (speaking, listening, reading and writing) are at the intermediate mid to intermediate high level according to ACTFL guidelines.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): CHI 202 with C or better. Credit is allowed for only CHI 348 or CHI 394 (Pathways into Chinese Culture)

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CHI	380	The Chinese Language	Introduces the Chinese languages from linguistic perspectives. Topics include the linguistic structure and characteristics (phonetics, phonology, morphology and syntax) of the Chinese language; linguistic history and dialects of Chinese; and its relationship with culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
CHI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	401	Fourth-Year Chinese I	Focuses on solidifying and improving students' knowledge of modern Mandarin. Emphasizes learning strategies to increase reading and listening comprehension, as well as further strengthening oral fluency and written skills. Surveys a wide variety of original text and media materials, in both full-form and simplified characters. Conducted in Chinese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: CHI 302 with C or better
CHI	402	Fourth-Year Chinese II	Continuation of CHI 401.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: CHI 401 with C or better
CHI	407	Chinese for Academic and Professional Purposes I	Part of the Chinese Flagship program; course has a three-fold objective: (1) to improve language proficiency in all four language skills; (2) to support other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; and (3) to develop the use of explicit language learning strategies that support professional-level literacy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: CHI 402 with C or better
CHI	408	Chinese for Academic and Professional Purposes II	Part of the Chinese Flagship Program. Improves language proficiency in all four language skills; supports other Flagship courses by introducing specific vocabulary, literary genres, key reference materials; develops the use of explicit language learning strategies that supports professional level literacy. All course work in Mandarin Chinese.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: CHI 407 with C or better
CHI	430	Readings in Chinese Religions	Readings in Chinese religious texts, including Buddhism, Daoism, local religious cults, and others. May be repeated once for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 308 (CHI 414) with C or better
CHI	450	Classical Prose	Readings in classical prose forms, including guwen, sanwen, pian wen, fu, and incidental writings. Course content varies with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 308 with C or better
CHI	451	Chinese Cultural History I	China's classics in translation studied both for their intrinsic ideas and for the origins of Chinese thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(HU or SB) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 451, HST 451 or SLC 451
CHI	452	Chinese Cultural History II	Evolution of Confucian thought, its synthesis with Taoism and Buddhism, and modern reactions against, and uses of, Confucian traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & G & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 452 or HST 452 or SLC 452
CHI	461	Classical Vernacular Performance Literature	Readings in performance literature in colloquial Chinese. Bianwen, zhugongdiao, baojuan, zaju, chuangqi drama.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 302; CHI 307 with C or better
CHI	462	Readings in Traditional Xiaoshuo	Readings in the shorter and longer fiction of the late imperial period written in classical vernacular language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 302; CHI 308
CHI	470	Modern Chinese Literature and Culture	Readings in modern Chinese literary texts, including prose, fiction, and poetry. Course content changes with instructor.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: CHI 302 with C or better
CHI	482	History of the Chinese Language	Introduces the history of the Chinese language. Graduate/advanced undergraduate-level introductory course on the historical changes of the sounds, writing system, grammar, and other aspects of the Chinese language. Topics include the historical phonology of Chinese, development of graphs (Hanzi), some topics of syntactic changes in texts, morphology, lexicography, cultural implication of language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: CHI 302; CHI 308
CHI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
CHI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
CHI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
CHI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
CHI	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	509	Methods of Research in Chinese Applied Linguistics	Offers an overview of issues in applied linguistics, specifically related to the teaching and learning of Chinese as a second language. Divided according to broad topics and may vary depending on interests and background of class participants.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student. Credit is allowed only for CHI 509 or 591 (Chinese Applied Linguistics)

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CHI	514	Advanced Classical Chinese	Close readings in selected premodern texts, with focus on special grammatical features, and increased vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	520	Teaching of Chinese as a Second Language	Theory and practice of teaching Chinese, including presentation, interaction, and evaluation, with consideration given to cultural factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	561	Readings in Traditional Xiaoshuo	Introduces major issues, texts, and resource materials for the study of narrative forms, including short stories and longer works of fiction. Focuses on the period from 1400 to 1900. One year of university-level classical Chinese or equivalent proficiency; three years of university-level modern Chinese recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHI	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
CHI	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHI	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	101	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	
CHM	101	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4	SQ	
CHM	101	Introductory Chemistry	Elements of general chemistry. Adapted to the needs of students in nursing and kinesiology and those preparing for general chemistry. Recommended for General Studies credit. Cannot be used for major credit in chemical or biochemical sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	
CHM	107	Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This lecture course may be combined with the laboratory CHM 108 for those interested in lab course credit. Cannot be used for major credit in chemical or biochemical sciences. Both CHM 107 and CHM 108 must be taken to secure SQ credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	
CHM	107	Chemistry and Society	General chemical principles and concepts presented in context of social and technological issues, e.g., energy, pollution, global warming, and others. This lecture course may be combined with the laboratory CHM 108 for those interested in lab course credit. Cannot be used for major credit in chemical or biochemical sciences. Both CHM 107 and CHM 108 must be taken to secure SQ credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	SQ	
CHM	108	Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	
CHM	108	Chemistry and Society Laboratory	Experiments in chemical principles presented in chemistry and society lectures (CHM 107). Students must complete both CHM 107 and CHM 108 to receive an SQ (General Studies).	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	SQ	Pre/Co-requisite: CHM 107
CHM	111	General Chemistry Laboratory for Majors I	Laboratory course in general chemistry for chemistry and biochemistry majors intended to complement CHM 117 lecture course. Covers a diverse range of laboratory experiments appropriate to chemistry and biochemistry majors designed to reinforce chemical principles and to develop a broad range of chemical synthesis skills. Uses modern analytic and characterization techniques to study the physical and chemical properties of substances. Suitable for students who have completed introductory chemistry at the high school level. Both CHM 117 and CHM 111 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	SQ	Pre- or corequisite(s): CHM 117 with C or better if completed; Biochemistry, Biophysics or Chemistry major

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CHM	112	General Chemistry Laboratory for Majors II	Continuation of CHM 111 laboratory course in general chemistry for chemistry and biochemistry majors intended to complement CHM 118 lecture course. Covers a diverse range of laboratory experiments appropriate to chemistry and biochemistry majors designed to reinforce chemical principles and to develop a broad range of chemical synthesis skills. Uses modern analytic and characterization techniques to study the physical and chemical properties of substances. Both CHM 118 and CHM 112 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	SQ	Prerequisite(s): CHM 111 with C or better; Biochemistry, Biophysics or Chemistry major. Pre- or corequisite(s): CHM 118 with C or better if completed
CHM	113	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	Prerequisite(s): CHM 101 with C or better, Mathematics Placement Test score of 50% or higher, or Pre/Corequisite(s): MAT 170, 171, 210, 251, 265 or 270 with C or better if completed
CHM	113	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4	SQ	Prerequisite(s): CHM 101 with C or better, Mathematics Placement Test score of 50% or higher, or Pre/Corequisite(s): MAT 170, 171, 210, 251, 265 or 270 with C or better if completed
CHM	113	General Chemistry I	Principles of chemistry. Adapted to the needs of students in the physical, biological, and earth sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	Prerequisite(s): CHM 101 with C or better, Mathematics Placement Test score of 50% or higher, or Pre/Corequisite(s): MAT 170, 171, 210, 251, 265 or 270 with C or better if completed
CHM	114	General Chemistry for Engineers	Chemical principles with emphasis toward engineering. Students without high school chemistry or are chemical engineering majors must enroll in the CHM 113, 116 sequence instead of CHM 114.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4	SQ	Prerequisite(s): CHM 101 with C or better, or Mathematics Placement Test score of 50% or higher, or Pre- or corequisite(s): MAT 170, 171, 210, 251, 265, or 270 with C or better if completed
CHM	116	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	Prerequisite(s): CHM 113 or 114 or 117 with C or better
CHM	116	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4	SQ	Prerequisite(s): CHM 113 or 114 or 117 with C or better
CHM	116	General Chemistry II	Continuation of CHM 113. Equilibrium theory, thermodynamics, kinetics, electrochemistry, nuclear chemistry, descriptive chemistry.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	Prerequisite(s): CHM 113 or 114 or 117 with C or better
CHM	117	General Chemistry for Majors I	Lecture course in general chemistry for chemistry and biochemistry majors and is complemented by the CHM 111 laboratory course. Covers electronic structure of atoms and molecules, intermolecular forces, bonding models, molecular geometry, physical states of matter, gas laws, and chemistry of condensed matter and modern materials. Highlights chemical reactivity, periodic trends and descriptive chemistry. Both CHM 111 and CHM 117 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	SQ	Prerequisite(s): Biochemistry, Biophysics, or Chemistry major; CHM 101 with C or better OR Mathematics Placement Test score of 50% or higher OR Pre- or corequisite(s): MAT 170, 171, 210, 251, 265, or 270 with C or better if completed
CHM	118	General Chemistry for Majors II	Continuation of CHM 117 lecture course in general chemistry for chemistry and biochemistry majors and is complemented by the major's CHM 112 laboratory course. Topics include thermodynamics, properties of solutions, chemical equilibrium, aqueous chemistry, acids and bases, electrochemistry, chemical kinetics, nuclear chemistry, coordination chemistry. Both CHM 118 and CHM 112 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	SQ	Prerequisite(s): Biochemistry, Biophysics, or Chemistry major; CHM 117 with C or better; Pre- or corequisite(s): MAT 266 or 271 with C or better if completed
CHM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-3		Pre-requisites: Biochemistry or Chemistry major; Maximum 45 hours
CHM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		

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CHM	231	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	Prerequisite(s): CHM 101, 114, 116, or 118 with C or better
CHM	231	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3	SQ	Prerequisite(s): CHM 101, 114, 116, or 118 with C or better
CHM	231	Elementary Organic Chemistry	Surveys organic chemistry, with emphasis on the reactivity of basic functional groups. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	Prerequisite(s): CHM 101, 114, 116, or 118 with C or better
CHM	233	General Organic Chemistry I	Chemistry of organic compounds.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): CHM 116 or CHM 118 with C or better
CHM	233	General Organic Chemistry I	Chemistry of organic compounds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 116 or CHM 118 with C or better
CHM	233	General Organic Chemistry I	Chemistry of organic compounds.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): CHM 116 or CHM 118 with C or better
CHM	234	General Organic Chemistry II	Continuation of CHM 233.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites:CHM 233 or CHM 333 with a C or better; Credit is allowed for only CHM 234 or 334
CHM	234	General Organic Chemistry II	Continuation of CHM 233.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites:CHM 233 or CHM 333 with a C or better; Credit is allowed for only CHM 234 or 334
CHM	234	General Organic Chemistry II	Continuation of CHM 233.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites:CHM 233 or CHM 333 with a C or better; Credit is allowed for only CHM 234 or 334
CHM	235	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	Pre- or corequisite(s): CHM 231 with C or better if completed
CHM	235	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	SQ	Pre- or corequisite(s): CHM 231 with C or better if completed
CHM	235	Elementary Organic Chemistry Laboratory	Organic chemistry experiments in synthesis, purification, analysis, and identification. Both CHM 231 and 235 must be taken to secure SQ General Studies credit.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre- or corequisite(s): CHM 231 with C or better if completed
CHM	237	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre/Co-requisites: CHM 233 with C or better if completed; Credit is allowed for only CHM 237 or 337
CHM	237	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre/Co-requisites: CHM 233 with C or better if completed; Credit is allowed for only CHM 237 or 337
CHM	237	General Organic Chemistry Laboratory I	Microscale organic chemical experiments in separation techniques, synthesis, analysis and identification, and relative reactivity.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre/Co-requisites: CHM 233 with C or better if completed; Credit is allowed for only CHM 237 or 337
CHM	238	General Organic Chemistry Laboratory II	Continuation of CHM 237.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Prerequisite(s): CHM 237 or 337 with C or better; Pre- or corequisite(s): CHM 234 with C or better if completed; Credit is allowed for only CHM 238 or 338
CHM	238	General Organic Chemistry Laboratory II	Continuation of CHM 237.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): CHM 237 or 337 with C or better; Pre- or corequisite(s): CHM 234 with C or better if completed; Credit is allowed for only CHM 238 or 338
CHM	238	General Organic Chemistry Laboratory II	Continuation of CHM 237.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): CHM 237 or 337 with C or better; Pre- or corequisite(s): CHM 234 with C or better if completed; Credit is allowed for only CHM 238 or 338

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CHM	240	Mathematical Methods in Chemistry	Introduces mathematical/computational methods in chemical kinetics, thermodynamics, quantum chemistry. Mathematical-based computer lab.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Molecular Sciences	3	CS	Pre-requisite: CHM 116 (or 118) with C or better; Pre/Co-requisites: MAT 272 or MAT 267 with C or better if completed
CHM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
CHM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
CHM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-6		Prerequisite(s): Barrett Honors student
CHM	302	Environmental Chemistry	Explores major environmental issues, problems, and solutions from analytical and chemistry perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 114 or 116 or 118 with C or better; CHM 231 or 233 or 333 with C or better
CHM	302	Environmental Chemistry	Explores major environmental issues, problems, and solutions from analytical and chemistry perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 114 or 116 or 118 with C or better; CHM 231 or 233 or 333 with C or better
CHM	303	Environmental Chemistry Laboratory	Lab in environmental chemistry to complement CHM 302. First-hand experience with sampling methods, analytical techniques, and environmental lab methods. Both CHM 303 and CHM 348 must be taken to secure L General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	2	L	Pre/Co-requisites: CHM 302 with C or better if completed
CHM	325	Analytical Chemistry	Advanced principles and theory of quantitative analysis, including stoichiometry, equilibria, photometric methods, electrochemistry, separation processes, statistical data analysis, and applications to advanced topics in analytical chemistry.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	325	Analytical Chemistry	Advanced principles and theory of quantitative analysis, including stoichiometry, equilibria, photometric methods, electrochemistry, separation processes, statistical data analysis, and applications to advanced topics in analytical chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	325	Analytical Chemistry	Advanced principles and theory of quantitative analysis, including stoichiometry, equilibria, photometric methods, electrochemistry, separation processes, statistical data analysis, and applications to advanced topics in analytical chemistry.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 116 or CHM 118 with C or better
CHM	326	Advanced Analytical Chemistry Laboratory	Practical methods of quantitative analysis for chemistry majors, including titrimetric, gravimetric, and photometric analysis, and analytical separation processes, statistical data analysis, and applications to advanced topics in chemical analysis.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre- or co-requisite(s): CHM 325 with C or better if completed
CHM	326	Advanced Analytical Chemistry Laboratory	Practical methods of quantitative analysis for chemistry majors, including titrimetric, gravimetric, and photometric analysis, and analytical separation processes, statistical data analysis, and applications to advanced topics in chemical analysis.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre- or co-requisite(s): CHM 325 with C or better if completed
CHM	326	Advanced Analytical Chemistry Laboratory	Practical methods of quantitative analysis for chemistry majors, including titrimetric, gravimetric, and photometric analysis, and analytical separation processes, statistical data analysis, and applications to advanced topics in chemical analysis.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre- or co-requisite(s): CHM 325 with C or better if completed
CHM	327	Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 325 and CHM 326 with C or better; Pre/Co-requisite: CHM 346 with C or better if completed
CHM	327	Instrumental Analysis	Principles of instrumental methods in chemical analysis. Electroanalytical and optical techniques.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: CHM 325 and CHM 326 with C or better; Pre/Co-requisite: CHM 346 with C or better if completed
CHM	328	Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	2		Pre/Co-requisite: CHM 327 with C or better if completed
CHM	328	Instrumental Analysis Laboratory	Experiments in chemical analysis by electroanalytical and optical techniques.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	2		Pre/Co-requisite: CHM 327 with C or better if completed
CHM	333	Organic Chemistry for Majors I	Structures, reaction mechanisms and kinetics, and systematic syntheses of organic compounds.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Biochemistry or Chemistry major; CHM 116 or 118 with C or better; Credit is allowed for only CHM 231, 233 or 333
CHM	334	Organic Chemistry for Majors II	Continuation of CHM 333.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Biochemistry or Chemistry major; CHM 333 with C or better; Credit is allowed for only CHM 234 or 334

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CHM	337	Organic Chemistry Laboratory for Majors I	Emphasizes mechanisms, kinetics, and products of organic reactions.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre-requisites: Biochemistry or Chemistry major; Pre/Co-requisite: CHM 333 with C or better if completed; Credit is allowed for only CHM 237 or 337
CHM	338	Organic Chemistry Laboratory for Majors II	Continuation of CHM 337.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre-requisites: Biochemistry or Chemistry major; CHM 337 with C or better; Pre/Co-requisites: CHM 334; Credit is allowed for only CHM 238 or 338
CHM	341	Elementary Physical Chemistry	Thermodynamics, equilibrium, states of matter, solutions, and chemical kinetics. For students in premedical, biological, and educational curricula.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 114, 116, or 118 with C or better; CHM 231, 233, or 333 with C or better; MAT 251, 265, or 270 with C or better; PHY 101, 112, or 131 with C or better; Credit is allowed for only BCH 341 or CHM 341
CHM	343	Elementary Physical Chemistry Laboratory	Physical chemistry experiments.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Pre- or corequisite(s): BCH 341 or CHM 341 with C or better if completed; Credit is allowed for only CHM 343 or CHM 348 and CHM 349
CHM	345	Physical Chemistry I	Introduces quantum chemistry with application to electronic structure and dynamics of atoms and molecules.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): CHM 116 or 118 with C or better; CHM 240 OR PHY 201 OR both MAT 274 (or MAT 275) and MAT 242 (or MAT 342 or 343) with C or better; MAT 267 or 272 with C or better; PHY 131 or 151 with C or better
CHM	346	Physical Chemistry II	Introduces equilibrium and statistical thermodynamics. Laws of thermodynamics, equations of state, multicomponent chemical and phase equilibria, and electrochemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: CHM 345 with C or better
CHM	348	Physical Chemistry Laboratory I	Lab experiments in spectroscopy and computational chemistry. To secure L General Studies credit the following must be taken: CHM 303 & CHM 348 or CHM 348 & CHM 349 & CHM 452.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	L	Pre/Co-requisite: CHM 345 with a C or better if completed
CHM	349	Physical Chemistry Laboratory II	Lab experiments in thermodynamics, electrochemistry, and computational chemistry. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	L	Pre/Co-requisites: CHM 346 with C or better if completed
CHM	385	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s) with C or better: BIO 100 (or BIO 182 or 282 or GLG 101 or SES 121); CHM 101 (or CHM 113 or 114). Credit is allowed for only BIO 325 or CHM 385 or GLG 325
CHM	392	Introduction to Research Techniques	Instrumental methods and philosophy of research by actual participation in chemical research projects.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
CHM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
CHM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
CHM	424	Separation Science	Basic theory and practical aspects of gas, liquid, ion-exchange, and gel-permeation chromatographies, and other important industrial and research techniques.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: CHM 234, or 334, or 346, with C or better
CHM	433	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 234 or 334 with C or better; CHM 341 or 346 with C or better; Credit is allowed for only CHM 433 or 531
CHM	434	Advanced Organic Chemistry II	Continuation of CHM 433.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: CHM 433 or CHM 531 with C or better
CHM	435	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s) with C or better: BCH 361 or BCH 461 or CHM 460; BIO 353; CHM 234 or CHM 334. Credit is allowed for only CHM 435 or CHM 535

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CHM	442	Practical NMR Spectroscopy	Covers the practical operation of NMR spectrometers, common ¹ H/ ¹³ C/X nuclei NMR spectroscopy, safety around NMR spectrometers and basic NMR data processing, handling and analysis.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): CHM 101, 114, 116, or 118 with C or better; Credit is allowed for only CHM 442 or CHM 494 (Practical Nuclear Magnetic Resonance Spectroscopy)
CHM	452	Inorganic Chemistry Laboratory	Preparation and characterization of typical inorganic substances, emphasizing methods and techniques. CHM 348, CHM 349 and CHM 452 must be taken to secure L General Studies credit.	N	REC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1	L	Pre/Co-requisite: CHM 453 with C or better if completed
CHM	453	Inorganic Chemistry	Principles and applications of inorganic chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): BCH 341 or CHM 341 or CHM 346 with C or better
CHM	460	Biological Chemistry	Structure and function of macromolecules and their involvement in the processing of energy and information by living cells.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 234 (or 334) with C or better; CHM 346 with C or better
CHM	471	Solid-State Chemistry	Crystal chemistry, thermodynamics and electrochemistry of solids, nonstoichiometric compounds, diffusion and solid-state reactions, crystal growth, and selected topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre/Co-requisite: CHM 346 with C or better if completed; Credit is allowed for only CHM 471 or 571
CHM	480	Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
CHM	480	Methods of Teaching Chemistry	Organization and presentation of appropriate content of chemistry; preparation of reagents, experiments, and demonstrations; organization of stock rooms and laboratories; experience in problem solving.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		
CHM	481	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: CHM 341, CHM 346 or GLG 321 with C or better. Credit is allowed for only CHM or GLG 481
CHM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		
CHM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
CHM	485	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: CHM 341, CHM 346, or GLG 321 with C or better; Credit is allowed for only GLG 485 or CHM 485
CHM	489	Field Geochemistry	Explores basic field measurements and sampling techniques for environmental systems, with a focus on carbon cycling in the Colorado River. Surveys a variety of geochemical principles, including: equilibrium aqueous speciation, acid-base chemistry, solution-mineral equilibrium systems, oxidation-reduction reactions, organic and environmental geochemistry and biogeochemical cycles. Applies chemical principles and analytical techniques to answer questions about environmental systems and processes.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Molecular Sciences	3	L	Prerequisite(s): CHM 302 or GLG 321 or GLG 481 with C or better; Credit is allowed for only CHM 489 or GLG 490 (Field Geochemistry)
CHM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-6		Prerequisite(s): Barrett Honors student
CHM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-6	L	Prerequisite(s): Barrett Honors student
CHM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		
CHM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
CHM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-6		Prerequisite(s): Barrett Honors student
CHM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-7		
CHM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-3		
CHM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		

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CHM	501	Current Topics in Chemistry		Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	520	Chemical Biology	Chemical biology, broadly defined, is the application of chemical tools toward the study biological problems. The purpose of this class is to provide the foundation for translational research involving cross-disciplinary approaches to tackling significant problems in the biosciences. This one-semester class will cover topics ranging from traditional molecular biology and biochemistry to state-of-the-art techniques in genomics and proteomics. Particular emphasis will be placed on modern concepts in enzymology. The class will be taught using a combination of current literature and text-based materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Graduate students (degree and non-degree); Credit is allowed for only BCH 520 or CHM 520
CHM	523	Advanced Analytical Chemistry	Theoretical principles of analytical instrumentation and measurements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	524	Separation Science	Addresses principles and applications for all areas of chemical separations. Emphasizes separations principles in microfluidics and its interface with nanotechnology and traditional electronic materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	531	Advanced Organic Chemistry I	Reaction mechanisms, reaction kinetics, linear free energy relationships, transition state theory, molecular orbital theory, and Woodward-Hoffmann rules.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: degree- or nondegree-seeking graduate. Credit is allowed for only CHM 433 or CHM 531
CHM	532	Advanced Organic Chemistry II	Organic mechanisms, thermodynamic and kinetic control, structure/activity relationships, isotope effects, multistep reactions, reactive intermediates, radical reactions, electron transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	535	Medicinal Chemistry	Principles of medicinal and pharmaceutical chemistry. Drug design, synthesis, and mechanism of action.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Graduate degree or non-degree seeking students; Credit is allowed for only CHM 435 or 535
CHM	540	Integrated Physics and Chemistry	Collaborative inquiry methods for teaching and coordinating physics and chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CHM 540 or PHS 540
CHM	541	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CHM 541 or MSE 524
CHM	542	Practical NMR Spectroscopy	Covers the practical operation of NMR spectrometers, common ¹ H/ ¹³ C/X nuclei NMR spectroscopy, safety around NMR spectrometers and basic NMR data processing, handling and analysis.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CHM 542 or CHM 598 (Practical Nuclear Magnetic Resonance Spectroscopy)
CHM	543	Computational Chemistry	Provides basic concepts and practical experience in computational chemistry as applied to molecules and solids. Systematically covers theoretical background and applied aspects of electronic structure methods/simulation, and related visualization techniques. Provides weekly laboratory session will provide hands-on experience with state-of-the-art molecular and solid-state simulation/visualization packages, with an emphasis on their reliability, predictive capability and practical limitations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking). Pre/Co-requisite: CHM 545
CHM	544	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CHM 544, NAN 544, PHY 444 or PHY 544
CHM	545	Quantum Chemistry	Wave and matrix formulation of quantum mechanics applied to the vibrational, rotational, and electronic states of polyatomic molecules. Hartree-Fock, electron correlation, and molecular orbital theory. Selection rules and introduction to group theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	546	Molecular Spectroscopy and Group Theory	Applies quantum mechanics to the general problem of the interaction of light with molecular systems. Angular momentum and group theory. Symmetry classifications. Overview of the formalism and experimental techniques in different resonant-based spectroscopies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	549	Advanced Topics in Physical Chemistry	Various advanced and special topics in physical chemistry. Previous topics included: supercooled liquids and the glass transition, vibrational spectroscopy of solids, phase transitions and critical phenomena.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	553	Advanced Inorganic Chemistry	Principles of modern inorganic chemistry applied over the entire periodic system. Bonding theory, chemical reactivity, spectroscopic and magnetic properties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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CHM	560	Matter and Light	Interactions of light with matter. Lasers and spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CHM 560 or PHS 560
CHM	571	Structure, Bonding, and Symmetry in Materials	Principles of structural and materials chemistry, emphasizing crystal chemistry. Symmetry of periodic structures (space groups), factors determining bond lengths and coordination geometries, and the role of structure in determining physical properties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CHM 471 or 571
CHM	581	Structure of Matter and its Properties	Models of matter and its properties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Molecular Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CHM 581 or PHS 581
CHM	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Molecular Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Molecular Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Molecular Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CHM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Molecular Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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CHS	100	Introduction to Health Solutions	Addresses the roles, responsibilities and scope of practice for various health professions. Explores interprofessionalism, ethical care and current issues in health and health care through the use of case studies and activities.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		
CHS	101	The ASU Experience for Health Solutions Students	Required, one-hour course, offered in sections capped at 19 and designed to introduce all new first-time ASU students to the unique elements, culture, challenges and opportunities of their university. Covers several core topics.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	1		
CHS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	College of Health Solutions	College of Health Solutions	1-4		
CHS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): minimum 45 hours; minimum 2.00 GPA
CHS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-6		Prerequisite(s): Barrett Honors student
CHS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	College of Health Solutions	1-6		Prerequisite(s): Barrett Honors student
CHS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
CIS	105	Computer Applications and Information Technology	Introduces business information systems from a business intelligence perspective and the uses of application software with emphasis on database and spreadsheet packages for efficient and effective problem solving.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3	CS	
CIS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-3		
CIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		
CIS	235	Introduction to Information Systems	Survey course introducing the competitive and strategic uses of information systems, how information systems are transforming organizations and their management, and the issues, difficulties, and opportunities facing the technology professional and business manager today.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: CIS 105, 200 or 220 with C or better; MAT 210, 270, 211 or 271 with C or better; Credit allowed for only CIS 235 or CIS 236
CIS	236	Honors Introduction to Information Systems	Introduces strategic leveraging of IS solutions and surveys different facets of IS in order to gain an understanding of how business problems are addressed and opportunities realized.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3	CS	Prerequisite(s): Barrett Honors student
CIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Accountancy or Computer Information Systems BS or PRE student
CIS	300	Web Design and Development	Focuses on Web site development, including target audience, image presentation, page/content topic organization, site navigational functionality, implementation needs, and future needs. Web site design and development practice using business software products.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: Minimum 2.0 ASU cumulative GPA AND minimum 56 earned hours, OR be post-bacc undergraduate, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
CIS	308	Advanced Excel in Business	Covers advanced Excel skills using an applied focus on different types of decisions one may analyze using spreadsheet capabilities; graphs and charts to communicate complex analytics; pivot tables to slice and dice data for reporting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): CIS 105 or CIS 236 with C or better; minimum 45 hours. credit is allowed for only CIS 308 or CIS 394 (Advanced Excel in Business)
CIS	309	Business Process Management	Flow charting, swimlane diagramming, process simulation using modern tool suites. Teaches the types of process evaluation decision analytics most commonly used and covers applied process analysis in a variety of contexts.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): CIS 105 or 236 with C or better; minimum 45 hours. credit is allowed for only CIS 309 or CIS 394 (Process Management)
CIS	311	Business Project Management	Overview of project management emphasizing the fundamentals and analytics that can support project decision making. Covers project planning, resource and disruption management and problem resolution skills. Leverages widely available project management computer tools.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): CIS 105 or 236 with C or better; minimum 45 hours. Credit is allowed for only CIS 311 or CIS 394 (Project Management - Information Systems)
CIS	315	Introduction to Business Data Analytics	Overview of analytics in the business context; concepts of strategic and operational analytics; overview of concepts like dimensional modeling, the Model Lifecycle, data mining, big data, KPIs and metrics, ERP and analytics, in-database/memory analytics; real-time analytics and data stream analysis.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s) with C or better: CIS 235 (or CIS 236); ECN 221; MAT 211; BS Business Data Analytics major

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CIS	340	Business Information System Development I	Systems Development Life Cycle (SDLC) tools, techniques, and methodologies used to plan and analyze the needs of modern business information system development.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey CIS BS student; ACC 241, 242 or 271 with C or better; CIS 235 or 236 with C or better; ECN 221 with C or better; MAT 211 with C or better.
CIS	345	Business Information System Development II	Provides a clear understanding of the Systems Development Life Cycle (SDLC) tools, techniques, and methodologies used to design, implement, and support modern business information systems development.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey Computer Information Systems BS student; CIS 340 with C or better.
CIS	355	Business Data Warehouses and Dimensional Modeling	SQL, stored procedures and data warehouse architectures; data warehouse requirements definition, design and analysis; overview of the steps in building information-enabled business models; role of data warehousing in data mining and analytics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisites(s): BS Business Data Analytics major. Corequisite(s): CIS 315
CIS	360	Business Database Concepts	Database theory, design, and application, including the entity-relationship model; the relational, hierarchical, and network database models; and query languages.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey Accountancy BS student and CIS 105 or 236; ACC 231, 232 or 261; ACC 241, 242 or 271 with C or better.
CIS	365	Business Database Systems Development	Focuses on business database and data warehousing systems, development and management. Topics include capturing business requirements using data modeling, SQL, data security, operational and analytical data stores and data integrity.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): Computer Information Systems BS major; CIS 235 or 236 with C or better
CIS	375	Business Data Mining	Building predictive analytics (e.g., SEMMA, KDD); exposure to logistic regression, machine learning and decision tree methods; Understanding lift factors, ROC curves; hands-on use of mining software; business case studies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisites(s): CIS 315 with C or better; BS Business Data Analytics major
CIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisites: Minimum 2.0 ASU cum GPA and minimum 56 earned hours, OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student
CIS	405	Business Intelligence	Business intelligence (BI) is a term describing a broad category of applications, technologies, architectures and processes for gathering, storing, accessing and analyzing data to provide business users with timely information to enable better insights into project and process management and evidence-based decision making. BI is based on techniques for data decision capture, cleansing, validation, warehousing and analytics to help decision makers improve decision outcomes. Provides a capstone understanding of the concepts of managing data resources and the development of business intelligence capabilities using data visualization, data warehousing, data mining, online analytical processing decision support systems and other advanced BI topics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s) CIS 105 or 236 with C or better; minimum 45 hours. Credit is allowed for only CIS 394 (Business Intelligence) or 405
CIS	415	Big Data Analytics and Visualization in Business	Text and stream mining, visualizations for big data, Hadoop, cloud-based solutions, fundamentals of big data programming, social media and big data, NoSQL, software tool support for visualizations; GIS, business case studies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisites(s): CIS 315 with C or better; BS Business Data Analytics major
CIS	425	Electronic Commerce Strategy	Key business strategies and technology elements of contemporary electronic commerce. Covers Web design and interactions between Web pages and databases.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey Accountancy BS or Computer Information Systems BS student; CIS 360 or 365 with C or better
CIS	430	Networks and Distributed Systems	Advanced topics such as communications protocols, distributed systems, network security and client-server systems; applications based on platforms such as .NET and networked UNIX.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisites: W. P. Carey Computer Information Systems student; ACC 330 or 444; CIS 340 or 410 with C or better; Pre/Co-requisite: CIS 360 or 365
CIS	440	Systems Design and Electronic Commerce	Systems design for organizational and electronic commerce systems; use of project management and systems analysis and design tools.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3	L	Pre-requisites: W. P. Carey Computer Information Systems BS student; CIS 360 or 365 with C or better; CIS 430 with C or better.
CIS	450	Enterprise Analytics	Model lifecycle analysis, analytics governance, aligning governance, aligning firm and analytics strategy, big data security issues, enterprise search, applied projects.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisites(s) with C or better: CIS 355, 375, 415; BS Business Data Analytics major
CIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey CIS BS student
CIS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CIS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Information Systems	1-6	L	Prerequisite(s): Barrett Honors student
CIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Prerequisite(s): W.P. Carey ACC BS or CIS BS
CIS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-6		Prerequisite(s): Barrett Honors student
CIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-7		Prerequisite(s): W.P. Carey CIS BS major
CIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-3		Pre-requisites: W.P. Carey CIS BS student
CIS	502	Information Systems: Digital Innovations and Transformation	Organizational, strategic, and technical issues of the management of information. Evaluation, design, and use information systems as competitive advantage.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Prerequisite(s): W.P. Carey MBA degree program student
CIS	503	Decision Making with Data Analytics	Presents frameworks and approaches to equip students to recognize patterns in data and models, recommend actions and implement organizational changes. Students learn multiple concepts to improve decision making in organizations including the curation of data repositories for cross-functional analytics, recognition of decision biases, recommendation and communication of business process changes, and the establishment of iterative processes for decision analytics. Readings address decision-making dilemmas and challenges facing managers in analytics-rich business environments. Students get an immersive experience in analyzing the individual biases inherent in decision making, the informational requirements and the data analytics governance requirements to ensure effective deployment and continuous renewal of analytics culture at the enterprise level.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	2.5-3		Prerequisite(s): W.P. Carey graduate student
CIS	505	Introduction to Enterprise Analytics	Ensuring the foundational understanding of contextualized analytics within the business enterprise continuum by covering how data flows and is managed across the landscape of enterprise business processes.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate student
CIS	506	Information Management	Addresses central issues in managing information to achieve competitive advantage and support innovation. Specific topics covered include data quality, data modeling using both entity relationship models and star schemas, data governance, document management, document search, enterprise performance management and visualization techniques.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Prerequisite(s): graduate W. P. Carey major
CIS	508	Data Mining I	Charting a roadmap for data-driven decision making and getting a practical understanding of how IT tools and techniques can allow managers to extract predictive analytics and patterns from primarily numeric data.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate student
CIS	509	Data Mining II	Uses tools and techniques to analyze unstructured data that are applied to business problems to support informed decision making and the extraction of predictive analytics and patterns from primarily nonnumeric data.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-req for CIS 509
CIS	510	Business Process and Workflow Analysis	Builds foundations for process analysis by focusing on information, documents, people, roles and business rules. Provides an introduction to various techniques and tools of process analysis, including an understanding of organizational issues in rolling out change initiatives.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major. Credit is allowed for only CIS 510 or CIS 591 (Business Process Management Analysis)
CIS	512	Business Intelligence	Understanding how organizations make use of Business Intelligence (BI) to gain a sustainable competitive advantage. Builds the foundations for evidence-based managerial decision making. Covers technologies for data warehousing and data mining from a managerial perspective. Covers contemporary topics such as real-time BI, business analytics, and business performance management with the help of case studies, audio-video content, guest speakers, online forums to generate creative thinking and discussion.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	1-4		Prerequisite(s): W.P. Carey graduate major
CIS	515	Business Analytics Strategy	Evaluating, strategically aligning, planning for and directing investments in and governance of processes for continuous renewal of analytics deployments in business.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Pre-requisite: W.P. Carey graduate major
CIS	525	Strategic Value of Information Technology	Instills balanced and disciplined view of IT and business with their interplay. Assigns cases and assignments involving the symbiotic relationship of IT and business to provide real-world exposure for critical thinking and engaging discussion.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major; Credit is allowed for only CIS 525 or CIS 591 (Strategic Value of Information Technology)
CIS	540	Enterprise Information Security and Controls	Provides a broad survey of information security and controls, utilizing the COBIT framework to illustrate how information security and controls contribute to effective IT governance. Develops an understanding of the issues associated with information security and effective IT governance, with particular emphasis on how management contributes to the effectiveness of an organization's information security program.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major. Credit is allowed for only CIS 540 or CIS 591 (Information Security & Controls)

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CIS	545	Managing Enterprise Systems	Investigates major categories of enterprise systems, factors driving software adoption and keys for successful implementation. Pays special attention to evaluating the potential impact of emerging technologies on business environments.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major; Credit is allowed for only CIS 545 or CIS 591 (Enterprise Systems)
CIS	560	IT Services and Project Management	Provides an overview of the project management process groups and knowledge areas (defined by the PMBOK) and focuses on the application of key concepts, tools and techniques for delivering on-time, on-budget IT project and services that meet end-user needs.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major; Credit is allowed for only CIS 560 or CIS 591 (IT Services and Project Management)
CIS	575	Emerging Technologies	Explores decision models and frameworks applied to assess, evaluate and implement emerging technologies. Explains the principles of sustaining and disruptive technological innovation on the adoption and diffusion of emerging technologies. Discusses the technical, industrial and legal parameters that enable convergence and commoditization of technologies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Information Systems	3		Prerequisite(s): W.P. Carey graduate major; Credit is allowed for only CIS 575 or CIS 591 (Emerging Technologies in IT)
CIS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite: Specific W.P. Carey Graduate student
CIS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite: Specific W.P. Carey Graduate student
CIS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-4		Pre-requisite: Specific W.P. Carey Graduate student
CIS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CIS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Information Systems	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-12		Pre-requisite: W.P. Carey Info Systems PhD student
CIS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Information Systems	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Information Systems	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CIS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Information Systems	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CMN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	502	Theory and Practice in Communication and Persuasion	Theoretical exploration of communicative and persuasive practices as applied in various contexts. Surveys classical, modern, and contemporary theories of persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	505	Methods in Applied Communication Research	Examines the intellectual, practical, and ethical dimensions of engaging in applied research. Emphasizes empirical and quantitative methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	506	Humanistic Inquiry and Field Research in Communication	Examines interpretive, critical, and rhetorical approaches to communication and advocacy, including hermeneutics, ethnography, and cultural studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	515	Ethical Issues in Communication Advocacy	Examines the ethical issues or concerns related to communication advocacy. Variable topics; examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	516	Mediation and Dispute Resolution	Examines advocacy's role in fair negotiation and effective and successful dispute resolution. Examines research, theory, and/or practice.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	520	Communication Campaigns	Explores public communication strategies aimed at advocating for general or specific audiences and/or for particular issues and causes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better
CMN	522	Argumentation and Advocacy	Introduces various models of argumentation and their applications to various spheres of advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts students
CMN	531	Communication and Social Change	Examines human communication and technologies of communication as agents of social change within groups, communities, organizations, and/or cultures.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	532	Advocacy in Interpersonal Settings	Examines particular relational contexts in which advocacy plays a pronounced role (e.g., personal, family, and service provider relationships).	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	550	Advocacy in Organizational Settings	Examines issues of upward influence, the expression of dissent, and grievance systems within organizational contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	551	Democracy and Power in Organizations	Examines structural, historical, relational, and symbolic dimensions of organizational communication and discourses that foster or impede communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Communication Studies Master of Arts student; CMN 502 or COM 502 with C or better
CMN	557	Communication and Technology	Assesses technology's role in the social dynamics of human interaction. Emphasizes the impact of technology with regard to communication advocacy.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	565	Globalization and Advocacy	Explores the forces leading to increased intergroup contact and their impact on social, economic, and political dynamics.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	570	Communication and Advocacy in Social Context	Variable topics course exploring the intersection of communication and advocacy in specific contexts not addressed in other elective courses.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisite: Communication Studies Master of Arts student
CMN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student

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CMN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
CMN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisite: Communication Studies Master of Arts student
CMN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Pre-requisite: Communication Studies Master of Arts student
CMN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CMN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Pre-requisite: Communication Studies Master of Arts student
CNE	210	Engineering Mechanics I: Statics	Force systems, resultants, equilibrium, distributed forces, area moments, fluid statics, internal forces, friction, and stability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Construction Engineering	3		Pre-requisites: FSE 100 with C or better; MAT 266 (or MAT 271) with C or better; PHY 121 with C or better; PHY 122 with C or better; Credit is allowed for only CEE or CNE 210
CNE	212	Engineering Mechanics II: Dynamics	Kinematics and kinetics of particles, translating and rotating coordinate systems, rigid body kinematics, dynamics of systems of particles and rigid bodies, and energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Pre-requisites: CEE 210 (or CNE 210) and MAT 275 (or MAT 274) completed with C or better; Credit is allowed for only CEE or CNE 212
CNE	213	Introduction to Deformable Solids	Strain-displacement and stress-strain-temperature relations. Stresses and deformations due to axial, shear, torsional and bending moments. Buckling, stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Pre-requisites: CEE 210 (or CNE 210) with C or better; MAT 274 (or MAT 275) with C or better; Credit is allowed for only CEE or CNE 213
CNE	241	Surveying	Theory and fieldwork in construction and land surveys.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Prerequisite(s): MAT 170 or higher with C or better; Credit is allowed for only CEE 281, CNE 241 or CON 241
CNE	243	Heavy Construction Equipment, Methods and Materials	Emphasizes Horizontal construction. Fleet operations, maintenance programs, methods, and procedures to construct tunnels, roads, dams, and the excavation of buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Credit is allowed for only CON 243 or CNE 243
CNE	271	Construction Safety	Safety procedures and equipment. OSHA requirements for construction. Biological aspects of construction safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; Credit is allowed for only CNE 271 or CON 271
CNE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Construction Engineering	1-4		
CNE	296	Field Internship	Participation as interns on construction projects to observe and experience the daily activities.	N	PRA	N	OPT	Ira A. Fulton Engineering	Construction Engineering	1		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CON 271 or CNE 271; Credit is allowed for only CON 296 or CNE 296

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CNE	321	Structural Analysis and Design	Statically determinate and indeterminate structures (trusses, beams, and frames) by classical and matrix methods. Introduces structural design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	4		Prerequisite(s): Civil Engineering BSE or Construction Engineering BSE major; CEE 212 or MAE 212; CEE 213 or CNE 213 with C or better; Credit is allowed for only CEE 321 or CNE 321
CNE	351	Geotechnical Engineering	Index properties and engineering characteristics of soils. Compaction, permeability and seepage, compressibility and settlement, and shear strength.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	4		Prerequisite(s): CEE 213 (or CNE 213) with C or better; BSE Civil Engineering or Construction Engineering major; Credit is allowed for only CEE or CNE 351
CNE	353	Civil Engineering Materials	Structure and behavior of civil engineering materials, including steel, aggregate, concrete, masonry, asphalt, wood, composites. Atomic structure and engineering applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	4		Prerequisite(s): CEE 213 or CNE 213 with C or better; Civil Engineering or Construction Engineering BSE major; Credit is allowed for only CEE 353 or CNE 353
CNE	383	Construction Estimating	Analyzes construction drawings and specifications. Utilizes advanced technical and ethical practices in estimating process. Quantity surveying techniques for CSI divisions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	4		Prerequisite(s): Construction Management BS major; CON 243 and CON 252 OR Construction Engineering BSE major; CNE 243 or CON 243; Credit is allowed for only CNE 383 or CON 383
CNE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Construction Engineering	1-4		
CNE	400	Earth Systems Engineering and Management	Introduces earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3	(L or HU) & H	Prerequisite(s): Civil Engineering BSE major; CEE 300 with C or better OR non-CEE junior or senior; Credit is allowed for only CEE 400 or CNE 400
CNE	420	Steel Structures	Behavior of structural components and systems. Design of steel members and connections. Load and resistance factor design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Pre-requisites: BSE Civil Engineering or Construction Engineering major; CEE 321, or CNE 321 with C or better. Credit is allowed for only CEE 420 or CNE 420
CNE	421	Concrete Structures	Behavior of concrete structures and the design of reinforced and prestressed concrete members, including footings. Partial design of concrete building system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Pre-requisites: BSE Civil Engineering or Construction Engineering major; CEE 321 or CNE 321 with C or better; Credit is allowed for only CEE or CNE 421
CNE	450	Geotechnical Applications for Construction	Soil formation, engineering properties and use as building materials. Soil's influence on construction of built environment, including specifications and biological aspects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Prerequisite(s): Construction Management BS major; CON 223 with C or better; CON 310; Credit is allowed for only CNE 450 or CON 450
CNE	452	Foundations	Applies soil mechanics to foundation and retaining wall systems, including bearing capacity, settlement, and lateral earth pressure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Prerequisite(s): Civil Engineering BSE or Construction Engineering major; CEE 351 or CNE 351 with C or better; Credit is allowed for only CEE 452 or CNE 452
CNE	453	Construction Project Management I	Building information modeling, including current computer programs and LEED methodologies for advanced project deliveries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CON 271 or CNE 271 with C or better; CON 383 or CNE 383; Pre-or Corequisite(s): CON 495 or CNE 495; Credit is allowed for only CON 453 or CNE 453

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CNE	455	Construction Project Management II	Advanced topics in administrative procedures, planning processes, and coordination required to successfully complete construction projects on time and budget.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CNE 453 or CON 453; Pre- or corequisite(s): CNE 495 or CON 495; Credit is allowed for only CNE 455 or CON 455
CNE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Construction Engineering	1-12		Prerequisite(s): Construction Management BS major with CON 296 or CNE 296 OR Construction Engineering BSE major with CON 271 or CNE 271; Credit is allowed for only CON 484 or CNE 484
CNE	486	Integrated Civil Engineering Design	Requires completion of a civil engineering design in a simulated practicing engineering environment. Limited to undergraduates in their final semester.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	4	L	Pre-requisites: Civil Engineering BSE student: CEE 321; CEE 341; CEE 351; CEE 361; CEE 372 with C or better OR Construction Engineering student: CEE or CNE 321; CEE or CNE 351 with C or better. Credit is allowed for only CEE or CNE 486
CNE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Construction Engineering	1-4		
CNE	495	Construction Planning and Scheduling	Various network methods of project scheduling, such as AOA, AON Pert, bar-charting, line-of-balance, and VPM techniques. Microcomputers used for scheduling, resource allocation, and time/cost analysis.	N	LEL	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3	CS	Prerequisite(s): Construction Management BS major or Construction Engineering BSE major; CON 383 or CNE 383; Credit is allowed for only CON 495 or CNE 495
CNE	496	Construction Contract Administration	Surveys administrative procedures of general and subcontractors. Studies documentation, claims, arbitration, litigation, bonding, insurance, and indemnification. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Construction Engineering	3	L	Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CNE 453 or CON 453; Credit is allowed for only CNE 496 or CON 496
COE	501	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
COE	502	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	503	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate

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COE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
COE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
COE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	100	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
COM	100	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	
COM	100	Introduction to Human Communication	Topics-oriented introduction to basic theories, dimensions, and concepts of human communicative interaction and behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
COM	110	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 2.25 GPA
COM	110	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Prerequisite(s): minimum 2.25 GPA
COM	110	Elements of Interpersonal Communication	Demonstration and practice of communicative techniques in establishing and maintaining interpersonal relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 2.25 GPA
COM	124	Media and Culture	Introduces contemporary intercultural issues as expressed through various media in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	C	
COM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Maximum 24 earned hours
COM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
COM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
COM	207	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: COM 100 with C or better; Minimum 2.50 GPA
COM	207	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: COM 100 with C or better; Minimum 2.50 GPA
COM	207	Introduction to Communication Inquiry	Bases of inquiry into human communication, including introduction to notions of theory, philosophy, problems, and approaches to the study of communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 100 with C or better; Minimum 2.50 GPA
COM	222	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	222	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	222	Argumentation	Philosophical and theoretical foundations of argumentation, including a comparison of models of advocacy and evidence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisite: ENG 101, 105 or 107 with C or better
COM	225	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisites: ENG 101, 105 or 107 with C or better

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COM	225	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	225	Public Speaking	Verbal and nonverbal communication in platform speaking. Discussion and practice in vocal and physical delivery and in purposeful organization and development of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisites: ENG 101, 105 or 107 with C or better
COM	230	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
COM	230	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	
COM	230	Small Group Communication	Principles and processes of small group communication, attitudes, and skills for effective participation and leadership in small groups, small group problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
COM	235	Disability, Justice and Advocacy	Overarching history of the disability rights movement and how it is similar to and different from other civil and rights movements. Examines how policies and activism are interconnected within this movement, in addition to looking at other human categories related to disabilities such as gender, sexuality, race and socioeconomic status.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	C	Credit is allowed for only COM 235, JUS 235, SST 235, WST 235 or SST 294 (Disability Justice and Advocacy)
COM	241	Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better
COM	241	Introduction to Oral Interpretation	Communication of literary materials through the mode of performance. Verbal and nonverbal behavior, interface of interpreter with literature and audience, and rhetorical and dramatic analysis of literary modes.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L or HU	Pre-requisites: Minimum 2.25 GPA; ENG 101, 105 or 107 with C or better
COM	250	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisite: Minimum 2.25 GPA
COM	250	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisite: Minimum 2.25 GPA
COM	250	Introduction to Organizational Communication	Introduces the study of communication in organizations, including identification of variables, roles, and patterns influencing communication in organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: Minimum 2.25 GPA
COM	259	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): non-Communication student; minimum 25 hours
COM	259	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): non-Communication student; minimum 25 hours
COM	259	Communication in Business and the Professions	Interpersonal, group, and public communication in business and professional organizations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 25 hours
COM	263	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	263	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	263	Elements of Intercultural Communication	Basic concepts, principles, and skills for improving communication among persons from different minority, racial, ethnic, and cultural backgrounds.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C & G	Pre-requisite: Minimum 2.25 GPA
COM	281	Communication Activities	Nongraded participation in forensics or interpretation cocurricular activities. Maximum 3 semester hours each semester.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		
COM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		
COM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
COM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	PRA	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Prerequisite(s): Barrett Honors student
COM	300	Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): Barrett Honors student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM	300	Communication in Interdisciplinary Studies	Examines and analyzes communication in the context of other academic disciplines. Open to BIS majors only.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): Barrett Honors student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 100 and COM 225 with C or better or COM 259 with C or better
COM	308	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum 2.50 GPA

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COM	308	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum 2.50 GPA
COM	308	Advanced Research Methods in Communication	Advanced communication research methods, including quantitative, qualitative, and critical approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisites: COM 207 with C or better; MAT 117 or an MA general studies course with C or better; Minimum 2.50 GPA
COM	309	Rhetorical, Interpretive, and Critical Methods in Communication	Examines humanistic and qualitative approaches to communication. Introduces textual, interactional and ethnographic methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: COM 207 with C or better; Minimum GPA of 2.0
COM	310	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	310	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	310	Relational Communication	Explores communication issues in the development of personal relationships. Current topics concerning communication in friendship, romantic, and work relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	312	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: COM 100 with C or better; Minimum GPA of 2.50
COM	312	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: COM 100 with C or better; Minimum GPA of 2.50
COM	312	Communication, Conflict, and Negotiation	Theories and strategies of communication relevant to the management of conflicts and the conduct of negotiations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: COM 100 with C or better; Minimum GPA of 2.50
COM	314	Inner-City Families: The Cycle of Poverty	Examines issues and concerns that confront inner-city families. Blends theory and application. From a theoretical perspective, examines issues that affect families who live in the inner city (e.g., race and poverty), as well as specific skills and programmatic elements that are needed to work with families in an urban setting. In terms of application, provides an intensive service-learning-based experience. Engages students in specific service to an embedded inner-city organization for a minimum of 3 hours per week. Students work with the professor to determine appropriate service placements.	N	PRA	Y	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 100 OR Junior standing; Credit is allowed for only COM 314 or 498 (Inner City Family)
COM	316	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	316	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	316	Gender and Communication	Introduces gender-related communication. Examines verbal, nonverbal, and paralinguistic differences and similarities within social, psychological, and historic perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Pre-requisite: Minimum 2.50 GPA
COM	317	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: Minimum 2.50 GPA; Minimum 45 hours; Credit is allowed for only COM 317 or CMN 475
COM	317	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; Minimum 45 hours; Credit is allowed for only COM 317 or CMN 475
COM	317	Nonverbal Communication	Study of communication using space, time, movement, facial expression, touch, appearance, smell, environment, objects, voice, and gender/cultural variables.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 2.50 GPA; Minimum 45 hours; Credit is allowed for only COM 317 or CMN 475
COM	319	Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319
COM	319	Persuasion and Social Influence	Variables that influence and modify attitudes and behaviors of message senders and receivers, including analysis of theories, research, and current problems.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: COM 207 with C or better; Minimum 2.50 GPA; Credit is allowed for only CMN 329 or COM 319
COM	320	Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisite: Minimum 2.50 GPA
COM	320	Communication and Consumerism	Critical evaluation of messages designed for public consumption. Perceiving, evaluating, and responding to political, social, and commercial communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: Minimum 2.50 GPA

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COM	321	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & H	Prerequisite(s): minimum 2.50 GPA; COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Prerequisite(s): COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	321	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	(L or HU) & H	Prerequisite(s): minimum 2.50 GPA; COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Prerequisite(s): COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	321	Rhetorical Theory and Research	Historical development of rhetorical theory and research in communication, from classical antiquity to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(L or HU) & H	Prerequisite(s): minimum 2.50 GPA; COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Prerequisite(s): COM 100 with C or better; ENG 101, 105, 107 or 111 with C or better; Minimum 2.50 GPA
COM	323	Communication Approaches to Popular Culture	Critical analysis of popular culture within social and political contexts; emphasizes multicultural influences and representations in everyday life.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	C	Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	323	Communication Approaches to Popular Culture	Critical analysis of popular culture within social and political contexts; emphasizes multicultural influences and representations in everyday life.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	C	Pre-requisites: Minimum 2.50 GPA; COM 100 with C or better
COM	324	Rhetoric and Media Criticism	Critical examination of media arts, including cinema, television, and video. Applies rhetorical, textual, and interpretive methods of criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.0 GPA
COM	325	Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM	325	Advanced Public Speaking	Social and pragmatic aspects of public speaking as a communicative system; strategies of rhetorical theory and the presentation of forms of public communication.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisites: COM 225 or COM 259 with C or better; Minimum 2.50 GPA
COM	326	Court Room Oratory	Increases knowledge and appreciation of the role of communication in the development of legal and public policies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
COM	326	Court Room Oratory	Increases knowledge and appreciation of the role of communication in the development of legal and public policies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		
COM	327	Civil Communication	Offers a theoretical understanding of civil communication and methods for applying civil communication practices in a variety of contexts.	N	LEC	N	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): minimum 2.50 GPA; Junior standing
COM	341	Social Contexts for Performance	Adaptation and performance of literature for the community outside the university. Research into the practical uses of performed literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Minimum 2.50 GPA
COM	342	Oral History and Storytelling	Examines the formation of culture and history through research, presentations, the collection of oral history, and the telling of stories.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: ENG 101 or 102; Credit is allowed for only CMN 394 (Storytelling and Oral History), COM 342 or 394 (Storytelling and Oral History)
COM	353	Professional Communication	Introduces both verbal and written professional communication styles and technologies in preparation for communication-related internships and careers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.0 GPA
COM	371	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	371	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	371	Language, Culture, and Communication	Cultural influences of language on communication, including social functions of language, bilingualism, biculturalism, and bidialectism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C & G	Pre-requisites: Minimum 2.50 GPA; COM 263 with C or better
COM	377	Communication, Terrorism, and National Security	Surveys strategic communication and its relationship to terrorism challenges facing the United States and the rest of the world. Begins with a look at language and definitions, how strategic communication functions are traditionally conceptualized, and the scope and extent of the terrorism problem. Focuses on the contemporary problems of terrorism, including its extent, tactics, and strategies and strategies that aim to combat it. Concludes with a look at new frontiers in the terrorism struggle, including new media and communication approaches.	N	LEC	N	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: minimum 2.50; minimum Junior standing; Credit is allowed for only COM 377 or 394 (Communication: Terrorism and National Security)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	382	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Pre-requisites: Minimum 2.50 GPA; Credit is allowed for only CMN 382 or COM 382
COM	382	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Pre-requisites: Minimum 2.50 GPA; Credit is allowed for only CMN 382 or COM 382
COM	382	Classroom Apprenticeship	Nongraded credit for students extending their experience with a content area by assisting with classroom supervision in other COM courses.	N	PRA	N	YGB	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Pre-requisites: Minimum 2.50 GPA; Credit is allowed for only CMN 382 or COM 382
COM	383	Communication and Mentoring	Explores the role of communication in face-to-face and online mentoring relationships with an emphasis on message shaping, nonverbal communication, professionalism and audience analysis. Applies practice and theory from a variety of lower-division communication courses (public speaking, professional and business, small group, intercultural and interpersonal) to prepare students for mentoring roles in the Communication Assessment Learning Lab (CALL) on ASU's west campus. During the semester, students (individually and as a member of a group) are engaged in creating and delivering both online and in-person public speaking tutorials.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 100 (or COM 110 or 230 or 259 or 263) with B or better; COM 225 with B or better; Credit is allowed for only COM 383 or 498 (Call Lab Mentorship)
COM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Pre-requisite: Minimum 2.50 GPA
COM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Pre-requisite: Minimum 2.50 GPA
COM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Pre-requisite: Minimum 2.50 GPA
COM	400	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & C	Prerequisites: Interdisciplinary Studies or Business Communication student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 259 (or COM 100 and COM 225) with C or better
COM	400	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	HU & C	Prerequisites: Interdisciplinary Studies or Business Communication student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 259 (or COM 100 and COM 225) with C or better
COM	400	Communication in Professions	Specialized study of communication processes in professional and organizational settings.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU & C	Prerequisites: Interdisciplinary Studies or Business Communication student; Minimum Sophomore standing; Minimum 2.00 GPA; COM 259 (or COM 100 and COM 225) with C or better
COM	404	Research Apprenticeship	Direct research experience on faculty projects. Student/faculty match based on interests.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	407	Advanced Critical Methods in Communication	Examines critical approaches relevant to communication, including textuality, social theory, cultural studies, and ethnography.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better; Credit is allowed for only COM 407
COM	408	Quantitative Research Methods in Communication	Advanced designs, measurement techniques, and methods of data analysis of communication research.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better; Credit is allowed for only COM 408
COM	410	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	410	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better
COM	410	Interpersonal Communication Theory and Research	Survey and analysis of major research topics, paradigms, and theories dealing with message exchanges between and among social peers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 308 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	411	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better; Credit is allowed for only COM 411 or CMN 598 (Communication in the Family)
COM	411	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better; Credit is allowed for only COM 411 or CMN 598 (Communication in the Family)
COM	411	Communication in the Family	Broad overview of communication issues found in marriage and family life, focusing on current topics concerning communication in the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: Minimum 2.50 GPA; COM 207 with C or better; Credit is allowed for only COM 411 or CMN 598 (Communication in the Family)
COM	414	Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Minimum 2.50 GPA
COM	414	Crisis Communication	Role of communication in crisis development and intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.50 GPA
COM	415	Risk Communication	Understanding how risk is constructed and assessed across social spheres, developing familiarity with dominant approaches to framing risk and the principles and professional practices of risk communication.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 2.50 GPA; minimum junior standing; Credit is allowed for only COM 415 or COM 494 (Risk Communication)
COM	416	Gender and Race in the Media	Explores how the mass media constructs gender and race and perpetuates views of minorities and varied nationalities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 2.00 GPA
COM	417	Communication and Aging	Critical study of changes in human communicative patterns through the later adult years, with attention on intergenerational relationships and self-concept functions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.0 GPA
COM	420	Rhetoric and Community Advocacy	Critical rhetorical study of local communities and advocacy, including fieldwork guided by rhetorical theory; the intersection of media, rhetoric and advocacy; and reflexivity in rhetorical fieldwork. Examines rhetoric in the context of community advocacy and through participant observation within social controversies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): COM 308 with C or better; Pre- or corequisite(s): junior or senior standing; Credit is allowed for only COM 420 or COM 494 (Rhetoric and Community Advocacy)
COM	421	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	421	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	421	Rhetoric of Social Issues	Critical rhetorical study of significant speakers and speeches on social issues of the past and present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU	Pre-requisites: COM 308 or COM 309 with C or better; COM 321 or 323 with C or better; Minimum 2.50 GPA
COM	422	Advanced Argumentation	Advanced study of argumentation theories and research as applied to public forums including: political, business, and legal contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Pre-requisites: Minimum Junior standing; Minimum 2.00 GPA; ENG 101, 105, 107 or 111 with C or better
COM	424	Television Studies and Criticism	Surveys critical and historical approaches to television as a medium; to television research; and to television's effects.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 207 with C or better or Junior standing with minimum 3.00 GPA
COM	426	Political Communication	Theories and criticism of political communication; including campaigns, mass persuasion, propaganda, and speeches. Emphasizes rhetorical approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisite: Minimum 2.50 GPA
COM	428	Graphic Novels and Popular Culture	Rhetorical analysis, with a focus on the graphic novel as both persuasive product and practice. Explores the communicative, persuasive and cultural effects of this medium and specifically offers vocabulary and tools for critically viewing its influence on popular culture.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only COM 428 or COM 494 (Graphic Novels and Popular Culture)
COM	429	Semiotics and Visual Communication	Semiotic analysis of mediated forms of communication, including film, television, and photography. Includes the political and aesthetic dimensions of images.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 207 with C or better OR Junior standing with minimum 3.00 GPA

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COM	430	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Minimum 2.50 GPA
COM	430	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Minimum 2.50 GPA
COM	430	Leadership in Group Communication	Theory and process of leadership in group communication, emphasizing philosophical foundations, contemporary research, and applications to group situations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 2.50 GPA
COM	441	Performance Studies	Theory, practice, and criticism of texts in performance. Emphasizes the interaction among performer, text, audience, and context.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 and COM 308 with C or better
COM	442	Identity, Performance, and Human Communication	Explores communication dimensions of self and others as performance. Examines topics that include gender, race, sexuality, age, and ethnicity through performance.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: COM 225 (or COM 241); Minimum 2.50 GPA
COM	445	Narrative Performance	Theory and practice of performing narrative texts (e.g., prose fiction, oral histories, diaries, essays, letters). Includes scripting, directing, and the rhetorical analysis of storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	HU	Pre-requisites: Minimum 2.50 GPA; COM 241 with C or better
COM	446	Performance of Literature Written by Women	Explores, through performance and critical writing, literature written by women.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	(L or HU) & C	Pre-requisite: Minimum 2.50 GPA
COM	450	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	450	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	450	Theory and Research in Organizational Communication	Critical review and analysis of the dominant theories of organizational communication and their corollary research strategies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: COM 308 or COM 309 with C or better; Minimum 2.50 GPA
COM	451	Communication and Work Relationships	Communication principles and practices associated with supervisory, peer, and client relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: COM 100; Minimum 45 completed hours; Minimum 2.50 GPA
COM	452	Communication and the Art of Happiness	Examines how communication behaviors relate to constructing happiness and wellbeing. Topics include gratitude, forgiveness, social support, appreciation, social networks and communicative contagion of mood intersecting with issues of dyadic, group and organizational communication. Auxiliary readings come from a variety of disciplines, including psychology, management, sociology, positive organizational scholarship and appreciative inquiry. Course activities include reading, field exercises, journal writing, exams, project presentation(s) and paper(s).	N	LEC	N	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: 2.50 GPA; Junior standing; Credit is allowed for only COM 452 or 494 (Communication of Happiness)
COM	453	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 2.50 GPA
COM	453	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): minimum 2.50 GPA
COM	453	Communication Training and Development	Examines the procedures and types of communication training and development in business, industry, and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 2.50 GPA
COM	454	Rhetorical and Critical Approaches to Public Relations	An historical and contemporary account of how public relations messages build corporate identities and persuade audiences by shaping public values.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: COM 207 with C or better OR Junior standing with minimum 3.00 GPA; Credit is allowed for only COM 454 or CMN 598 (Rhetorical&Critical Approaches to Public Relations)
COM	456	Political Communication Campaigns	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): minimum 2.50 GPA
COM	456	Political Communication Campaigns	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate and image creation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 2.50 GPA
COM	457	New Media	Explores how new communication and information technologies affect communication and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 207 with C or better OR Junior standing with minimum 3.00 GPA
COM	459	Theory and Methods of Social Media Networks	A network-based perspective plays an increasingly important role in our understanding of contemporary communication process of which much has shifted from a hierarchical, densely bounded group basis to a personalized, lateral network. Especially, along with the popularity of social media, social networking has become a key term that characterizes our everyday life. Discusses the role of new media technologies in evolving networked society, and how online networks are intertwined with our offline life. Covers theories and computerized methods that help understand online network structure. Includes lectures and discussions on theoretical issues with hands-on exercises of analytic methods.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): junior standing; minimum 2.50 GPA; MAT 142 or higher with C or better; Credit is allowed for only COM 459 or COM 494 (Social Networks)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	463	Intercultural Communication in a Global Context	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Prerequisite(s): COM 308 with C or better; minimum 2.50 GPA
COM	463	Intercultural Communication in a Global Context	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3	SB & G	Prerequisite(s): COM 308 with C or better; minimum 2.50 GPA
COM	463	Intercultural Communication in a Global Context	Survey and analysis of major theories and research dealing with communication between people of different cultural backgrounds, primarily in international settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): COM 308 with C or better; minimum 2.50 GPA
COM	464	Communicative Sexualities	Grounded in the discipline of communication, provides an introduction to the qualitative research practice of semiotic phenomenology. Examines sexuality as a personal, social, historical, and cultural phenomenon, wherein communication is studied as the mediating force through which meanings are ascribed to sexuality and sexual experience. Sexuality is studied as it manifests among a wide variety of people, practices, and contexts. U.S. American culture provides the primary cultural context. Addresses basic questions including: How do we understand sexuality? How have we come to know what we know about sexuality? How do we understand the relationship between sexuality as personal desire, and sexuality as social norm in specific cultural contexts.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: Junior or Senior standing; Minimum 2.50 GPA; Credit is allowed for only COM 464 or 494 (Communicative Sexualities)
COM	465	Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Minimum 2.50 GPA
COM	465	Intercultural Communication Workshop	Experientially based study of communication between members of different cultures designed to help students improve their intercultural communication skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		Pre-requisite: Minimum 2.50 GPA
COM	467	Digital Rhetoric	Critical rhetorical study of intersection of public advocacy, deliberation, argumentation and digital media. Examines a variety of digital media as they intersect with theories of rhetoric. Explores digital technology through a blending of criticism upon and creation of digital artifacts.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): COM 207 with C or better; Pre- or corequisite(s): junior or senior standing; Credit is allowed for only COM 467 or COM 494 (Digital Rhetoric)
COM	471	Global Media and Cultural Identity	Explores theory and practices of global media production, dissemination and consumption. Surveys the ways in which local, regional and global sociocultural and political forces interplay to shape cultural identities and media consumption.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	Prerequisite(s): minimum 2.50 GPA; junior standing
COM	477	Sport, Culture, and Discourses	Introduces sport as a global economic and cultural force, and as a foundational discourse experienced largely through media. Facilitates the understanding of sport as a major cultural and socializing institution and, thus, as a key site for the construction of knowledge, understandings, ideologies, and identities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 2.50 GPA
COM	483	Advanced Communication and Mentoring	Students serve as peer mentors in the Communication Assessment Learning Lab (CALL) with instructional emphasis on speaker apprehension, listening, the dynamics of group communication and leadership. Through experiential learning, mentors employ ethical peer tutoring practices by coaching undergraduates in managing public speaking apprehension, speech development and organization. Further, mentors provide on-the-spot feedback to undergraduates relating to delivery techniques, style, nonverbal communication, persuasive strategies and the use of presentational material.	N	LEL	Y	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: COM 383 with C or better
COM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): Communication major; minimum 56 hours; minimum 2.50 GPA; COM 225 with C or better; COM 308 with C or better
COM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): Communication major; minimum 56 hours; minimum 2.50 GPA; COM 225 with C or better; COM 308 with C or better
COM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Pre-requisites: Communication major or Public Relations and Strategic Communication minor student; Minimum 56 hours; Minimum 2.80 GPA; COM 225 (CMN 225) with C or better; COM 308 or 309 with C or better
COM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student

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COM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Prerequisite(s): Barrett Honors student
COM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
COM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
COM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6	L	Prerequisite(s): Barrett Honors student
COM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
COM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Prerequisite(s): minimum 2.50 GPA
COM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Prerequisite(s): minimum 2.50 GPA
COM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): minimum 2.50 GPA
COM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-6		Prerequisite(s): Barrett Honors student
COM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-7		
COM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-7		
COM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-3		Pre-requisite: Minimum 2.50 GPA
COM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		Pre-requisite: Minimum 2.50 GPA
COM	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	507	Qualitative Research Methods in Communication	Qualitative research methods, including interviewing, field methods, and other nonquantitative techniques for analyzing communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Communications Graduate student; Credit is allowed for only COM 407 or 507
COM	508	Quantitative Research Methods in Communication	Empirical research designs, measurements, and statistical strategies and techniques in analyzing and evaluating experimental and descriptive research in communication.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisites: Communications Graduate student. Credit is allowed for only COM 408 or COM 508
COM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
COM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	604	Theory Construction in Communication	Review and analysis of philosophical problems inherent in communicative research and of metatheories designed to deal with these problems.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Communications PhD student
COM	607	Contemporary Rhetorical Methods	Analysis of issues in the practice of rhetorical communication research, including criticism and scholarship.	N	SEM	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	608	Multivariate Statistical Analysis of Data in Communication	Statistical analysis of communication research data. Multivariate procedures used in communication research and methods of causal analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Communications PhD student
COM	609	Advanced Qualitative Research Methods in Communication	Analysis of issues in the practice of qualitative communication research, including data gathering, fieldwork issues, analysis strategies, and reporting results.	N	LEC	N	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	3		Pre-requisite: Communications PhD student
COM	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications PhD student
COM	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisite: Communications Graduate student
COM	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Pre-requisites: Communications PhD student; COM 600 or COM 608 with B or better; COM 601 or COM 700 with B or better
COM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1		Prerequisite(s): degree- or nondegree-seeking graduate student
COM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	PRA	Y	Z2	Liberal Arts and Sciences	Hugh Downs School of Human Communication	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	100	Introduction to Construction	Introduces construction industry sectors and professionals. Additional content includes developing personal competencies required of construction professionals.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CON	101	Construction and Culture: a Built Environment	Analyzes the cultural context of construction, emphasizing its centrality in the evolution and expansion of built environments as expressions of ethical and historical value systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	HU & H	
CON	106	Introduction to Concrete Materials for the Built Environment	Effects of concrete-making materials (aggregates, cements, admixtures, etc.) on the properties of fresh and hardened concrete. Discusses concrete mixture proportioning along with the calculations and statistical analysis of strength testing.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	4	SQ	
CON	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CON	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	221	Applied Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2		Prerequisite(s): MAT 170 or higher with C or better; PHY 111 with C or better; PHY 113 with C or better
CON	223	Strength of Materials	Analyzes strength and rigidity of structural members in resisting applied forces. Stress, strain, shear, moment, deflections, combined stresses, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2		Prerequisite(s): CON 221 with C or better
CON	241	Surveying	Theory and fieldwork in construction and land surveys.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): MAT 170 or higher with C or better; Credit is allowed for only CEE 281, CNE 241 or CON 241
CON	243	Heavy Construction Equipment, Methods and Materials	Emphasizes Horizontal construction. Fleet operations, maintenance programs, methods, and procedures to construct tunnels, roads, dams, and the excavation of buildings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Credit is allowed for only CON 243 or CNE 243
CON	244	Working Drawing Analysis	Provides the ability to read and understand architectural plans; to understand drawing symbols, dimensions, abbreviations, and terms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	2		
CON	251	Microcomputer Applications for Construction	Applies the microcomputer as a problem-solving tool for the constructor. Uses spreadsheets, information management, and multimedia software.	N	LAB	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): MAT 170 or higher with C or better
CON	252	Building Construction Methods, Materials, and Equipment	Emphasizes Vertical construction. Methods, materials, codes, and equipment used in building construction corresponding to the division of the CSI Master Format.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		
CON	271	Construction Safety	Safety procedures and equipment. OSHA requirements for construction. Biological aspects of construction safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; Credit is allowed for only CNE 271 or CON 271
CON	273	Electrical Construction Fundamentals and Project Management	Electrical construction, design, estimating, scheduling and project management. Electrical safety, blueprints and symbols, theory, sequence of installation. National Electrical Code (NEC).	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		
CON	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	296	Field Internship	Participation as interns on construction projects to observe and experience the daily activities.	N	PRA	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CON 271 or CNE 271; Credit is allowed for only CON 296 or CNE 296
CON	310	Testing of Materials for Construction	Structural and behavioral characteristics, engineering properties, measurements, and application of construction materials. Not open to engineering students.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4		Prerequisite(s): Construction Management BS major; CON 221 with C or better; CON 223 with C or better
CON	345	Mechanical Systems	Design parameters and equipment related to heating and cooling systems for mechanical construction. Biorelated aspects of mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS major; CON 221 with C or better; CON 252 with C or better; PHY 111 or 121 with C or better; PHY 113 or 122 with C or better
CON	377	Residential Construction Production Procedures	Process used in residential construction. How a house is built: design, permits, scheduling, codes, contracting, site management, mechanical/electrical.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: Construction BS or Design BSD student; CON 221 with C or better; CON 252

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CON	383	Construction Estimating	Analyzes construction drawings and specifications. Utilizes advanced technical and ethical practices in estimating process. Quantity surveying techniques for CSI divisions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	4		Prerequisite(s): Construction Management BS major; CON 243 and CON 252 OR Construction Engineering BSE major; CNE 243 or CON 243; Credit is allowed for only CNE 383 or CON 383
CON	384	Environmental Aspects of Heavy Construction	Methods, measures and analysis related to control of erosion, dust generation and storm water discharge during projects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): BS Construction Management major. Pre- or corequisite(s): CON 243. Credit is allowed for only CON 384 or CON 394 (Environmental Aspects of Heavy Construction)
CON	389	Construction Cost Accounting and Control	Nature of construction cost. Depreciation and tax theory and variable equipment costs. Cash flow theory, investment models, profitability, and analysis. Computer applications. Funding sources and arrangements. Builder's insurance.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	CS	Pre-requisite: Engineering and Design BS or BSD student; CON 221 with C or better; CON 251, or Construction Engineering student
CON	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Pre-requisite: Engineering BS or BSE student
CON	424	Structural Design	Economic use of concrete, steel, and wood in building and engineered structures. Design of beams, columns, concrete formwork, and connections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS major; CON 223 with C or better; Pre- or corequisite(s): CON 310
CON	430	Facilities Operations and Maintenance	Operations, maintenance and energy management requirements of various types of facilities and built environments. Ethical practices.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): minimum junior standing; Credit is allowed for only CON 430 or CON 494 (Facilities Management/Operations & Maintenance) or CON 530 or CON 598 (Facilities Management/Operations & Maintenance)
CON	441	Public Works Capital Construction	Practices and policies employed in delivering capital construction projects by government agencies at various levels. The full lifecycle of the typical public works capital construction project from planning, through design and construction, to operations and maintenance. Additional lecture topics include sustainability, strategic planning, risk management and safety.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): junior or senior Construction Engineering or Construction Management major; Credit is allowed for only for CON 441 or CON 541 or CEE 494/CON 494 (Public Works Capital Construction) or CEE 598/CON 598 (Public Works Capital Construction)
CON	446	Marketing for Construction	Provides key marketing practices to include strategic planning, marketing collateral, networking, business development, and interview preparation for project pursuits. Covers all aspects of service-based marketing topics and practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): COM 225; CON 221 with C or better
CON	448	Sustainable Construction	Studies the principles associated with sustainable construction: problem definition, definition of sustainability, measures of sustainability, examination of current industry practices, financial and resource impacts of sustainable construction, independent student investigation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Construction BS or Civil (Sustainable Engineering) student; Senior standing; Credit is allowed for only CON 448, CON 494 or CON 598 (Sustainability in Construction)
CON	450	Geotechnical Applications for Construction	Soil formation, engineering properties and use as building materials. Soil's influence on construction of built environment, including specifications and biological aspects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS major; CON 223 with C or better; CON 310; Credit is allowed for only CNE 450 or CON 450

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CON	453	Construction Project Management I	Building information modeling, including current computer programs and LEED methodologies for advanced project deliveries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CON 271 or CNE 271 with C or better; CON 383 or CNE 383; Pre-or Corequisite(s): CON 495 or CNE 495; Credit is allowed for only CON 453 or CNE 453
CON	454	Trenchless Construction Methods	Theory and practice of trenchless construction methods. Types of equipment, roles of site personnel, engineering design, contractual issues and safety. Lecture, class projects, and site visits. Knowledge of heavy construction equipment, methods and materials required to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; Pre- or corequisite(s): CNE 243 or CON 243; Credit is allowed for only CON 454 or CON 494 (Trenchless Construction Mth) or CON 554
CON	455	Construction Project Management II	Advanced topics in administrative procedures, planning processes, and coordination required to successfully complete construction projects on time and budget.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CNE 453 or CON 453; Pre- or corequisite(s): CNE 495 or CON 495; Credit is allowed for only CNE 455 or CON 455
CON	457	Principles of Leadership for Project Managers	Individual, organizational and process/structure leadership in project setting. Four-step leadership transformational model for project leaders. Project leadership tools and applications to motivation, conflict management, team building and delegation of risk.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: BS Construction Management or BSE Construction Engineering major; Pre/Co-requisite(s): CON 243; Credit is allowed for only CON 457, 494 (Prin Lead & Management), 557 or 598 (Prin Lead and Mgmt)
CON	465	Deductive Logic, Leadership and Industry Structure	Simple, logical explanations of construction and other industries. State-of-the-art supply chain, profit maximizing and efficient practices.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): junior or senior standing; Credit is allowed for only CON 465 or CON 565
CON	467	Advanced Procurement Systems	Development of multicriteria decision procurement model for selecting the performing contractor.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): junior or senior standing; Credit is allowed for only CON 467 or CON 567 or CON 494 (Advanced Procurement Systems)
CON	471	Mechanical and Electrical Project Management	Specialty contracts and agreements, scheduling, material handling, labor unit analysis, and job costing for mechanical and electrical construction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite: Construction BS student; CON 453 with C or better
CON	472	Development Feasibility Reports	Integrates economic location theory, development cost data, market research data, and financial analysis into a feasibility report.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	L	Pre-requisite: Construction BS or Design BSD student; REA 380
CON	477	Residential Construction Business Practices	Topics addressed include development, marketing, financing, legal issues, and sales.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Engineering BS or Design BSD student; MKT 382 or MKT 395 with D or better OR CON 446 with C or better; CON 377 with C or better; CON 389 with C or better
CON	483	Advanced Building Estimating	Concepts of pricing and markup, development of historic costs, life cycle costing, change order and conceptual estimating.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Construction BS student; CON 383 with C or better
CON	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): Construction Management BS major with CON 296 or CNE 296 OR Construction Engineering BSE major with CON 271 or CNE 271; Credit is allowed for only CON 484 or CNE 484

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CON	486	Heavy Construction Estimating	Methods analysis and cost estimation for construction of highways, bridges, tunnels, dams, and other engineering works.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction BS major and CON 383 with C or better, or Construction Engineering BSE major
CON	487	Heavy Construction Project Management	Studies methods used to manage large magnitude heavy construction projects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): BS Construction Management major; CON 243 (or CNE 243) with C or better; Credit is allowed for only CON 487 or 494 (Heavy Const Proj Mgmt)
CON	488	Heavy Construction Earthworks	Geotechnical issues with respect to foundation grading, forming and location for various types of infrastructure and transportation projects. Also includes streets, highway and embankment developments, retaining wall system, mechanically stabilized earth walls, and required quality control methods for these activities.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction Management BS or Construction Engineering BSE major; Pre- or corequisite(s): CON 243; Credit is allowed for only CON 488 or CON 494 (Heavy Construction Earthworks)
CON	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6		Prerequisite(s): Barrett Honors student
CON	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-6	L	Prerequisite(s): Barrett Honors student
CON	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		
CON	495	Construction Planning and Scheduling	Various network methods of project scheduling, such as AOA, AON Pert, bar-charting, line-of-balance, and VPM techniques. Microcomputers used for scheduling, resource allocation, and time/cost analysis.	N	LEL	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	CS	Prerequisite(s): Construction Management BS major or Construction Engineering BSE major; CON 383 or CNE 383; Credit is allowed for only CON 495 or CNE 495
CON	496	Construction Contract Administration	Surveys administrative procedures of general and subcontractors. Studies documentation, claims, arbitration, litigation, bonding, insurance, and indemnification. Discusses ethical practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3	L	Prerequisite(s): Construction Management BS or Construction Engineering BSE major; CNE 453 or CON 453; Credit is allowed for only CNE 496 or CON 496
CON	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-7		
CON	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-3		
CON	501	Construction Research Methods	Data collection methodologies, applied parametric and nonparametric statistics, data analysis techniques, technical writing, and data presentation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Construction Graduate student
CON	530	Facilities Operations and Maintenance	Operations, maintenance and energy management requirements of various types of facilities and built environments. Ethical practices	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CON 430, 494 (Facilities Management/Operations & Maintenance), 530 or 598 (Facilities Management/Operations & Maintenance)
CON	531	Facility Management: Building Energy Management	Understand and learn energy management techniques in facilities management. Identifying and performing efficiency evaluations on various types of heating, ventilation and air conditioning systems in typical buildings. Concepts and methods of managing, adjusting and balancing equipment and systems for maximum facility performance. Facilities organizations best practices to maximize energy savings and performance, such as insulation usage, lighting optimization, energy management systems and commissioning procedures. Identification of ancillary benefits to energy-efficient building systems such as indoor air quality, sustainability and energy audits.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CON 531 or CON 598 (Facility Management Building)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CON	532	Facilities Project Management	Understand and learn project management techniques in facilities management. Stakeholder analysis, including roles, responsibilities and risk considerations. Asset owner and manager considerations within project components and deliverables. Development of project scope, requirements, schedules, budgets and communication plans from a facility manager's perspective. Best practices of facilities organizations for managing contract types, contract governance and performance management.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only CON 532 or CON 598 (Facility Project Management)
CON	540	Construction Productivity	Productivity concepts. Data collection. Analysis of productivity data and factors affecting productivity. Means for improving production and study of productivity improvement programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction MS or Construction Engineering MSE major
CON	541	Public Works Capital Construction	Practices and policies employed in delivering capital construction projects by government agencies at various levels. The full lifecycle of the typical public works capital construction project from planning, through design and construction, to operations and maintenance. Additional lecture topics include sustainability, strategic planning, risk management and safety.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): graduate Construction Engineering or Construction Management student; Credit is allowed for only for CON 441 or CON 541 or CEE 494/CON 494 (Public Works Capital Construction) or CEE 598/CON 598 (Public Works Capital Construction)
CON	545	Construction Project Management	Theory and practice of construction project management. Roles of designer, owner, general contractor, and construction manager.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): Construction or Construction Engineering graduate student
CON	551	Alternative Project Delivery Methods	Design/construction interaction; conceptual estimation and scheduling; the RFQ/RFP process; legal, insurance, risk allocation issues; procurement and selection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	554	Trenchless Construction Methods	Theory and practice of trenchless construction methods. Types of equipment, roles of site personnel, engineering design, contractual issues, and safety. Lecture, class projects, and site visits. Knowledge of heavy construction equipment, methods, and materials required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Construction Graduate student
CON	557	Principles of Leadership for Project Managers	Individual, organizational and process/structure leadership in project setting. Four-step leadership transformational model for project leaders. Project leadership tools and applications to motivation, conflict management, team building and delegation of risk.	N	LEC	N	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisites: MS or PhD Construction Management or MSE Construction Engineering major. Pre/Corequisites: CON 243; Credit is allowed for only CON 457, 494 (Prin Lead & Management), 557 or 598 (Prin Lead and Mgmt)
CON	561	International Construction	Investigation of the cultural, social, economic, political, and management issues related to construction in foreign countries and remote regions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Engineering Graduate student
CON	565	Deductive Logic, Leadership and Industry Structure	Simple, logical explanations of construction and other industries. State-of-the-art supply chain, profit maximizing, and efficient practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking). Credit is allowed for only CON 465 or CON 565
CON	567	Advanced Procurement Systems	Development of multicriteria decision procurement model for selecting the performing contractor.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CON 467, 567 or 494 (Advanced Procurement Systems)
CON	570	Introduction to Advanced Technology Facilities	Introduces advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. The constructor's viewpoint, including: planning, structures, mechanical, and tool installation. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	571	Construction of Advanced Technology Facilities	Construction issues for advanced technology facilities such as cleanrooms, data centers, research labs, and hospitals. Issues include scheduling, cost estimating, project management, mechanical, safety, commissioning and tool hookup. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: CON 570 with C or better
CON	575	Information Technology in Construction	Uses virtual construction methodologies to improve the construction enterprise using communications, facility modeling, and decision making. Site visits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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CON	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	589	Construction Company Financial Control	Financial accounting and cost control at the company level in construction companies. Accounting systems. Construction project profit calculations. Financial analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	3		Pre-requisite: Engineering MS, MSE or PHD student
CON	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisite: Construction Masters student
CON	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	Y	IND	Y	Z3	Ira A. Fulton Engineering	Del E. Webb Construction	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, <u>highly specialized courses responding to unique student demand.</u>	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-4		Prerequisite(s): Construction graduate student
CON	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Pre-requisite: Construction Masters student
CON	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	700	Research Methods	Course on research methods in a specific discipline.	N	RSC	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	Y	GNA	Ira A. Fulton Engineering	Del E. Webb Construction	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		Pre-requisite: Construction Doctoral student
CON	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	N	RSC	Y	Z3	Ira A. Fulton Engineering	Del E. Webb Construction	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CON	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Del E. Webb Construction	1-15		Pre-requisite: Construction Doctoral student
CPI	101	Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	
CPI	101	Introduction to Informatics	Concepts, tools, techniques, and applications of informatics. Includes overview of programming, data management, visualization, modeling, and social implications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3	CS	

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CPI	111	Game Development I	Introduces video game design, art theory, and concepts as they apply to video game development. Basic art principles used in game development. Covers the fundamental video game art principles of 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets. Also includes game design, game production, asset production, and game programming. Hands-on experience by creating 2-D game prototypes belonging to different video game genres and evaluating the techniques.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3	CS	
CPI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	200	Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s) with C or better: MAT 242 (or MAT 342 or 343); 243
CPI	200	Mathematical Foundations of Informatics	Practical introduction to the mathematics necessary for studies in informatics. Topics include discrete math, analytic geometry, calculus, and linear algebra.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3	MA	Prerequisite(s) with C or better: MAT 242 (or MAT 342 or 343); 243
CPI	211	Game Development II	Introduces the basics of 3D game development by using a game engine. Focuses on the pipeline of 3D game development including environment and contents creation, scripting to control components, and graphics user interfaces development. Develops several 3D games for multi platforms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 111 with C or better
CPI	220	Applied Data Structures and Algorithms	Thorough grounding in applied knowledge and skills related to algorithms and data structures used in the development of software designed to solve complex problems. Overview of computational and critical thinking skills that can be called upon to analyze and solve complex problems in multiple domains.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s): CSE 205 with C or better
CPI	221	Advanced Object-Oriented Principles Using Java	Advanced object-oriented programming using the Java language. Design concepts and problem solving.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s): CPI 220 with C or better
CPI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	310	Web-Based Information Management Systems	Relational database design, entity-relationship modeling, relational algebra, SQL, database access through Web, Web data management, introduction to XML, fundamentals of Web application development, Web server architectures, lecture, in-class lab activities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CSE 205 with C or better
CPI	311	Game Engine Development	State-of-the-art techniques for computer game design and programming with an emphasis on 3-D graphics and interaction. Focuses on a practical, example-driven approach to learning the unique art of 3-D game development. Topics include graphics game engines, textures, shader programming, artificial intelligence, physics, modeling, sound effects, and techniques for user interfaces.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 211 with C or better
CPI	321	Fundamentals of Game Art	Introduces art theory and concepts as they apply to video game development. Covers 2-D and 3-D composition, color theory, modeling, and lighting techniques. Demonstrates practical application of these art fundamentals in establishing style guides, concept art, storyboards, and in-game assets.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 211 with C or better
CPI	350	Evaluation of Informatics Systems	Methods for evaluation of informatics systems, including design of computational and human experiments, ethnography, and analytic techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s) with C or better: GCU 495 (or IEE 380 or STP 226 or 231 or 420); BS Informatics major
CPI	360	Decision Making and Problem Solving	Practical use of database systems, computer graphics, and modeling to inform decision making.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CSE 205 with C or better
CPI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	400	Scientific Computing and Visualization	Introduces scientific computing and visualization, supported by data acquisition, geometric modeling, and computer graphics. Covers the necessary mathematical foundations, data structures, and algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 101 with C or better; CPI 200 with C or better
CPI	411	Graphics for Games	Examines real-time rendering of high-quality interactive graphics. Studies advances in graphics hardware and algorithms that make this possible. Examples of techniques and topics include nonphotorealistic rendering, occlusion culling, level of detail, terrain rendering, shadow generation, image-based rendering, and physical simulation. Helps students add graphics-related features to the game architecture developed in CPI 311.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s): CPI 311 or CSE 470 with C or better
CPI	412	Cognitive Systems and Intelligent Agents	Advanced concepts and techniques of rule-based programming and agent architectures, incorporating ideas from artificial intelligence, cognitive psychology, and linguistics, along with their use in creating intelligent synthetic characters for interactive games and other virtual environments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 311 with C or better
CPI	421	3-D Modeling and Texturing	Provides working knowledge of 3-D modeling, texture mapping, and paint concepts for the creation of 3-D video games art assets. Students work on concepts such as 3-D lighting, high polygon mesh rendering, and various third-party software and how to integrate them into the asset production pipeline.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s): CPI 211 with C or better

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CPI	422	3-D Animation and Rigging for Video Games	3-D rigging, skinning, and 3-D animation techniques for video game development. Includes rotoscoping for character animation, animation loops, and integration of motion capture data, as well as prop animation. Covers operation of 3-D cameras and 3-D rendering.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CPI 321 with C or better
CPI	441	Gaming Capstone	Industry-oriented course emphasizing the video game development process, technical skills, teamwork and communication among the students enrolled in the gaming certificate. Students partner with local industry involved in game development, visual art, and educational gaming and solve real-world problems by working in a team comprised of students from the three tracks available within the certificate	N	LEL	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Prerequisite(s): BS Informatics or BIS (Computer Gaming) or Computer Gaming certificate; senior standing
CPI	460	Intelligent Interactive Instructional Systems	Intelligent interactive instructional systems serve as tutors, as learning companions or both. Covers their design, the technology that powers them, the learning theories that motivate them and results from experimental evaluations. Emphasizes intelligent tutoring systems, as they are a more mature technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3		Pre-requisite: CSE 205 with C or better; Credit is allowed for only CPI 460 or CSE 494 (Intelligent Instr Sys)
CPI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-12		
CPI	485	Informatics Capstone I	Team-based design of an informatics system; working with clients; development of requirements, use cases, class/object diagrams, and plans for quality assurance and other evaluations; technical communication; teamwork.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	3	L	Prerequisite(s): Informatics BS major; CPI 350 with C or better; CSE 463 with C or better
CPI	486	Informatics Capstone II	Implementation of the informatics system designed during CPI 485; work processes; keeping designs consistent with implementations; conducting QA and other evaluations; technical communication; teamwork.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	4	L	Pre-requisite: Informatics BS student; CPI 485 with C or better
CPI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-6		Prerequisite(s): Barrett Honors student
CPI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-6	L	Prerequisite(s): Barrett Honors student
CPI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		
CPI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computing and Informatics Program	1-3		
CPI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computing and Informatics Program	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
CPP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-4		
CPP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-4		
CPP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-4		
CPP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-4		
CPP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-7	L	
CPP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-3		
CPP	510	Hazards Governance	Examines how hazards are managed by both community- and national-level policymaking and administrative systems, with a particular focus on understanding how policies and management practices are related to risk reduction and resilience capacity promotion. Explores what governance means in practice and presents existing research, including policy reports, cases studies and quantitative analyses of community-level and national-level hazards management programs and related public policies--and how their integration is relevant to hazards governance. Emphasizes understanding the nature of public goods production processes, including how inter-sector integration (i.e., between, public, private and nonprofit organizations) and extant community vulnerability profiles matter to the specific risk reduction efforts, and what those same efforts yield in terms of aggregate community resilience outcomes.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CPP 510 or CPP 591 (Hazards Governance)

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CPP	520	Program Evaluation for Emergency Management and Homeland Security	Examines core concepts and techniques of program evaluation and policy analysis and applies them to specific challenges in the domains of emergency management and homeland security. Develops knowledge and expertise in the practice of evaluating public sector programs, policies and other agency actions related to hazards issues--both natural and human-made. Develops students' knowledge, skill and ability in identifying appropriate research designs for particular evaluation and policy analysis problems; in managing data and focusing reports based on project objectives; and in appropriately characterizing and presenting empirical those data gathered for program evaluation and policy research projects. Provides an opportunity to learn about conducting evaluation and policy research in a way that is relevant to solving policy and management challenges germane to emergency management and homeland security agencies.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	3		Prerequisite(s): CRJ 511; Credit is allowed for only CPP 520 or CPP 591 (Program Evaluation in EMHS)
CPP	530	Leadership for Innovation in Public Fire Services	Provides current and future fire service leaders with an understanding and the skills necessary to manage creativity and foster a culture of innovation in public fire and emergency services. The approach is to treat the fire officer as an entrepreneur who identifies ideas and opportunities, then builds a business case for innovation.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPP	540	Foundations of Emergency Medical Services	Examines the operational structure of emergency medical services in the United States, including the current organization, delivery and financing of these systems. Discusses strengths, weaknesses and future challenges of EMS with consideration for creating systems better integrated with the overall health care delivery system.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPP	550	Community Paramedicine: Mobile Integrated Health Care	Explores mobile integrated health care and community paramedic programs and how health care professionals and community partners can work together to identify community health needs, foster partnerships and overcome hurdles in MIH/CP program development. Discusses examples of successful MIH/CP programs.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPP	560	Emergency Services Operations Analysis and Planning	Applies common data analysis tools and techniques appropriate to risk assessment, deployment analysis and performance measurement to evaluate an organization's abilities to respond to community risk.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic or writing a literature review of a topic.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		
CPP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		
CPP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		
CPP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	College of Public Service and Community Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or Post-Baccalaureate Undergraduate)
CPY	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	623	Counseling At-Risk Youth	Examines the behaviors that place adolescents at risk for not achieving career goals and interventions to address these behaviors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	644	Psychology of Careers	Advanced career counseling, including theory, research, and practice.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or Post-Baccalaureate Undergraduate; CED 577)
CPY	645	Professional Issues and Ethics	Ethical, legal, and professional issues of concern to practitioners and researchers functioning in a variety of settings.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	650	Counseling Latinos	Survey course addressing mental health concerns and perspectives for individuals and families of Latino, Spanish-speaking origin.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: CED 522
CPY	651	Personality Assessment	Training in the use of major objective personality instruments to assess psychological symptoms; emphasizes MMPI-2 and MCMI-III.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: CED 523

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CPY	660	Prevention and Consultation	Community focus with emphasis on outreach, prevention, psychoeducation, consulting, and advocacy from a systematic multicultural perspective.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Counseling MC or MED student OR Counseling Psychology PhD student
CPY	668	Grant Writing and Grant Makers: The Washington Context	Develops successful proposals for educational research projects. Students gain experience writing for federal agencies, reviewing, and being evaluated on grant proposals.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CPY or HED 668
CPY	670	Individual Differences	Focuses on definitions and assessment of ways humans vary on psychological constructs.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	671	Multicultural Counseling	Provides awareness of the influence of sociocultural variables on human development and explores implications for counseling minority populations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	674	Counseling Women	Explores women's development and its implications for counseling. Sexism in mental health, sex differences in diagnosis and psychopathology, and women's particular treatment needs.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	675	Health and Wellness Counseling	Theory, research, and practice in health and wellness counseling.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CED 577 with C or better
CPY	676	Social Bases of Behavior	In-depth examination of contemporary research and theory in selected areas of social psychology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	677	Advanced Counseling	Advanced topics in counseling theory, research, and practice.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate
CPY	678	Supervision Theory	Models of therapist development and clinical supervision.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	679	History and Systems of Psychology	Examines the development and differentiation of the discipline of psychology from its origins in philosophy to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	694	Substance Abuse: Therapy and Psychoeducation	Develops knowledge and skills for conducting psychotherapeutic and educational interventions to address substance use disorders and associated concerns.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CPY	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CPY	701	Science and Practice of Counseling Psychology	Directed experiences involving the integration of theory, research, and practice in counseling psychology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	702	Research Methods in Counseling Psychology	Applies experimental and/or quasi-experimental methods to theory construction and treatment evaluation in counseling psychology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: COE 502
CPY	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CPY	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post-Baccalaureate Undergraduate
CRD	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		Pre-requisite: Maximum 25 hours; Credit is allowed for only CRD, PRM or TDM 191
CRD	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CRD	210	Community Services and Professions	Introduces the system of public, nonprofit and private sector resources and services comprising contemporary communities. Organized into three modular units with emphasis on the delivery of services in the community sports, parks and recreation, tourism, and nonprofit professions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre- or corequisite(s): NLM 160 or PRM 120 with C or better if completed
CRD	235	Leadership and Ethics	Examines ethical questions faced by emerging leaders. Focuses on helping students develop emotional intelligence, current professional issues, and the refinement of a professional philosophy and comprehensive set of competences that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only CRD 235 or NLM 235
CRD	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CRD	302	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	C	Pre-requisites: ENG 102 with a C or better; MAT 142 or higher with a C or better; NLM 160 (or PRM 120) with a C or better; 2.50 GPA; 45 earned hours; Credit is allowed for only CRD, NLM, PRM or TDM 302
CRD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CRD	403	Leadership and Professional Development	Examines leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: CRD, NLM, PRM or TDM 210 with C or better; CRD, NLM, PRM or TDM 301 with C or better; senior standing; 2.50 GPA; Credit is allowed for only CRD, NLM, PRM or TDM 403
CRD	435	Service Learning for Community Development	Applies youth and adult development theories through community service immersion in collaboration with local nonprofit partners.	N	REC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): Minimum 45 hours. Credit is allowed for only CRD 435 or NLM 435
CRD	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
CRD	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
CRD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CRD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
CRD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	502	Statistical and Data Analysis	Introduces descriptive and inferential methods used in community development, with an emphasis on nonprofit, tourism, and recreation sciences. Students gain experience using statistical software.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
CRD	530	Community Services Management	Examines and applies organizational behavior, leadership, human resources, development, planning, and risk management to profession.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	552	Critical Issues	Examines critical research issues in the leisure, recreation and tourism fields.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	555	Theoretical Perspectives in Community Development	Reviews theoretical and empirical literature in community development with an emphasis on nonprofit, tourism, and recreation sciences.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
CRD	563	Advocacy in Therapeutic Recreation	Explores issues facing therapeutic recreation professionals and advocacy practices integral to therapeutic recreation service delivery. Investigates a variety of topics and community-engaged experiences facilitate the development of competencies needed to effectively lead therapeutic recreation programs.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CRD 563 or CRD 598 (Advocacy in Therapeutic Recreation)
CRD	569	Advanced Tourism and Recreation Studies	Advanced study of tourism with an emphasis on relevant practices, theories, and concepts.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	570	Social Aspects of Outdoor Recreation Management	Analyzes the social aspects of natural resource science, policy, and management.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CRD	572	Community and Social Innovations	Considers community innovation and development from the perspective of achieving balance among economic, environmental, social, physical and political realms as a framework of sustainability.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CRD, NLM 572 or NLM 598 (Community & Social Innovations)
CRD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		
CRD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CRD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
CRD	610	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability. Considers issues at different scales, ranging from urban to rural, local to global, historical to contemporary. Critically examines the role of public, private, and nonprofit institutions in promoting quality of life.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	620	Community Research Methods	Introduces community research methods, with emphasis on methodological questions and techniques relevant to contemporary community-based research.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	640	Research Seminar in Community Resources and Development I	A seminar designed to explore issues related to advancing a career as a researcher in the fields associated with community resources and development (i.e., non-profit, recreation and parks, tourism). Critical to this study is an understanding of the conduct of high quality research, an understanding of issues that arise in professional settings (e.g., expediency vs. effectiveness), and ethical principles and processes that undergird research.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Doctoral student in Community Resources and Development
CRD	650	Research Seminar II	Helps prepare doctoral students to become productive and successful social scientists in community resources and development. Covers a wide range of topics under the broader conceptual umbrella of research, teaching, and service.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Doctoral student in Community Resources and Development
CRD	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CRD	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		
CRD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CRD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CRJ	100	Introduction to Criminal Justice	History and current practice of the criminal justice system. Roles of law enforcement agencies, courts and correctional agencies.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	SB	
CRJ	201	Criminal Justice Crime Control Policies and Practices	Dimensions and causes of crime. Criminal justice system responses.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	203	Courts and Sentencing	Structure and operation of criminal court system.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	204	Juvenile Justice	History and development of the juvenile court and the juvenile justice system.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	210	Introduction to Criminal Investigations	Studies the basic principles of criminal investigation including the analysis of investigative techniques, criminal patterns and modus operandi, interviewing and interrogation strategies, collection and management of evidence, surveillance, and crime scene investigation. Covers theories, philosophies and concepts related to suppression of crime.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 100
CRJ	211	Documenting the Crime Scene	Practical approach to evidence identification; documentation of the location of evidence; crime scene sketching; and the collection and handling of evidence from the crime scene, to the crime laboratory, and to presentation in court. Includes lab exercises designed to reinforce important investigative skills.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 100
CRJ	225	Introduction to Criminology	Theoretical explanations for criminal behavior.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	SB	Credit is allowed for only CRJ 225 or 294 (Introduction to Criminology)
CRJ	230	Introduction to Policing	History of police. Contemporary police work. Problems in policing.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	240	Introduction to Corrections	Structure and operation of corrections system.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	260	Substantive Criminal Law	Statutory elements of crimes and defenses. Historical development of criminal law. Public policy implications.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		
CRJ	270	Community Justice	Collaborative and evidence-based approach to reducing crime, incorporating offenders, victims, the community and criminal justice agencies.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	SB	
CRJ	284	Professional Growth in Criminal Justice	Targeted field practice with criminal justice agencies. Prerequisite for internship.	N	LEC	N	YGB	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 100 with C or better
CRJ	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-4		
CRJ	300	Oral and Written Communication for Criminology and Criminal Justice	Develops critical oral and written communication skills with emphasis on locating, analyzing, properly citing, and persuasively using primary and secondary sources in criminology and criminal justice.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
CRJ	302	Research Methods	Validity and reliability of research designs and data collection.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	L	Prerequisite(s): CRJ 100 with C or better; CRJ 201 with C or better; MAT 117, 119, 142, 170, 210, or 270 with C or better
CRJ	303	Statistical Analysis	Fundamentals and application of descriptive and inferential statistics.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	CS	Prerequisite(s): CRJ 100 with C or better; CRJ 201 with C or better; MAT 117, 119, 142, 170, 210, or 270 with C or better
CRJ	305	Gender, Crime, and Criminal Justice	Women as offenders, victims and professionals in the criminal justice system.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	C	Prerequisite(s): CRJ 100 with C or better; CRJ 201 with C or better; junior or senior standing

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CRJ	306	Race, Ethnicity, Crime, and Criminal Justice	Minority issues in the criminal justice system.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	C	Prerequisite(s): CRJ 100 with C or better; CRJ 201 with C or better; junior or senior standing
CRJ	308	Advanced Criminological Theory	Critical assessment of criminological thought using original readings.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 100 with C or better; CRJ 201 with C or better; CRJ 225 with C or better; junior or senior standing
CRJ	315	Police Organization and Management	Structure, processes and behavior of police organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 100, CRJ 301, JUS 100, JUS 105, or JUS 305 with a C or better; CRJ 230 with C or better
CRJ	321	Imperatives of Proof	Problems and means of establishing identity and fact in relation to arrest, detention, adjudication, sentencing, and correctional case management.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	350	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	SB	Pre-requisite: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-4		
CRJ	403	Victims and the Criminal Justice System	Victimization theories. Nature and extent of victimization. Interactions among victims, the criminal justice system and society. Victim rights and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 403 or CRJ 494 (Victimology) or CRJ 494 (Victims and the Criminal Justice System)
CRJ	404	Juvenile Delinquency	Causes, correlations and strategies to reduce juvenile delinquency.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 404 or CRJ 494 (Juvenile Delinquency)
CRJ	405	Neighborhoods and Crime	Variation in crime across neighborhoods from ecology of crime and urban sociology perspectives. Influence of social institutions on community crime patterns.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 405 or CRJ 494 (Neighborhoods and Crime)
CRJ	406	Sex Crimes	Prevalence, nature and etiology of sex crimes. Response of criminal justice system to victims and perpetrators of sex crimes.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 406 or CRJ 494 (Sex Offenders and Sex Crimes)
CRJ	408	Drugs and Crime	Patterns of illegal drug use. Problems, practices and policies associated with drugs, crime and drug policy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	409	Police Accountability	Command and control systems. Managing police culture. Community policing and accountability to the community. Police training.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 409 or CRJ 494 (Police Accountability)
CRJ	410	Procedural Criminal Law	Criminal procedures mandated by the U.S. Constitution.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	412	International Terrorism	Structural, organizational, political and legal characteristics of international terrorism.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 412 or CRJ 494 (Homeland Security) or CRJ 494 (International Terrorism)
CRJ	413	Forensics	Overview of contemporary forensic science. Application of principles of chemistry, biology, physics and other disciplines to analysis of physical evidence.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 413 or CRJ 494 (Forensics)
CRJ	417	Cyber Terrorism	Terrorism perpetuated online. Terrorism and technology.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	419	Domestic Terrorism	Evolution of domestic terrorism in the United States. History and future of domestic security. Public policy responses. Internal and external political implications.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 419 or CRJ 494 (Domestic Terrorism)
CRJ	422	Violence in America	Theories, patterns, prevention and policy responses to violence in the United States. Varieties of violence including domestic, gang-related, hate crimes, school violence and sex crimes.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303; Credit is allowed for only CRJ 422 or CRJ 494 (Violence in America)

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CRJ	433	Death Investigations: Principles of Forensic Medicine	Medico-legal investigation of death via postmortem examinations. Identification, thanatology, thanato-etiology of unexpected natural deaths, accidental deaths, suicides and homicides. Forensic examination of living people following sexual assault, traffic offenses, child abuse and drug crimes.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Investigations certificate students: CRJ 100 OR Criminal Justice and Criminology majors: CRJ 302; CRJ 303
CRJ	434	Drugs of Abuse	Pharmacological and toxicological characteristics of commonly abused drugs such as alcohol, barbiturates, amphetamines, narcotics, stimulants and hallucinogens. Forensic toxicology. Acute and long-term effects of drug abuse.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Investigations certificate students: CRJ 100 OR Criminal Justice and Criminology majors: CRJ 302; CRJ 303
CRJ	435	Crime and Forensic Mental Health	Clinical assessment of people under court jurisdiction. Topics include psychological paradigms, nomenclature of mental disorders, forensic clinical assessment, mental disorders and crime, legal standards governing mentally disordered criminal offenders.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Investigations certificate students: CRJ 100 OR Criminal Justice and Criminology majors: CRJ 302; CRJ 303; Credit is allowed for only CRJ 435 or CRJ 494 (Crime and Mental Illness)
CRJ	443	Community Corrections	Probation and parole. Types of community corrections programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	450	Crime Analysis	Tactical, strategic and administrative aspects of crime analysis and crime mapping as practiced in everyday policing. Environmental criminology.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	455	Police and International Terrorism	Suicide bomber interdiction, jihadism, and anti-terrorism intelligence gathering. History of prior attacks and policy responses.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 201 with C or better; minimum junior standing; Credit is allowed for only CRJ 455 or CRJ 555 or CRJ 494 (Police and Int'l Terrorism-Israel)
CRJ	456	Etiology of Martyrdom	Development of a jihadist mindset. Social support for beliefs that lionize martyrdom.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 201 with C or better; minimum junior standing; Credit is allowed for only CRJ 456 or CRJ 556 or CRJ 494 (Etiology of Martyrdom)
CRJ	461	Domestic Violence	Legal, historical, theoretical, and treatment aspects of domestic violence, including child abuse, woman battering, incest, and marital rape.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	462	Gangs	History and development of gangs. Criminal justice system responses. <u>Nature of gangs and gang members.</u>	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	463	White Collar Crime	Business, professional and official lawbreaking including consumer fraud, securities violations, unethical behavior and political corruption.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	464	Organized Crime	Nature and history of organized crime. Theories of containment. Criminal justice agency responses.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): CRJ 302; CRJ 303
CRJ	470	Discretionary Justice	Use and abuse of discretion in the criminal justice system. Theoretical and empirical links between discretion and discrimination based on race, ethnicity and gender.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3	L or SB	Prerequisite(s): CRJ 302; CRJ 303
CRJ	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): CRJ 201 with C or better; CRJ 284 with Y grade if completed
CRJ	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-6		Prerequisite(s): Barrett Honors student; CRJ 302; CRJ 303
CRJ	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-6	L	Prerequisite(s): Barrett Honors student; CRJ 302 with C or better; CRJ 303 with C or better
CRJ	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-4		Prerequisite(s): CRJ 302; CRJ 303
CRJ	496	Directed Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to contribute to a specific project such as a report or publication. Tasks may include data collection and coding, data analysis, literature reviews and producing research reports. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the faculty member with whom the student will work and the director of the school offering the course.	N	RSC	Y	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-3		Prerequisite(s): CRJ 302 with C or better; junior or senior standing

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CRJ	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-3		Pre-requisites: CRJ 100 with C or better; CRJ 201 with C or better; Junior or Senior standing
CRJ	501	Seminar in Criminal Justice	Overview of the American criminal justice system, with emphasis on policy issues in police, courts, sentencing, corrections.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	502	Seminar in Criminology	Theory and research on the nature, causes, and prediction of criminal careers and events.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	503	Research Methods	Introduces data analysis; overview of research methods used in social science research, including experimental design, survey research, field research, and evaluation research.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	504	Statistical Tools for Criminology and Criminal Justice	Focuses on essential statistical analysis that can be used in criminal justice and related agencies.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	505	Theory and Practice in Criminal Justice	Capstone course for the MA in Criminal Justice; provides a synthesis of the criminal justice system.	N	RSC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	510	Criminal Justice Planning and Program Evaluation	Examines the application of alternative models of strategic planning to the criminal justice system. Covers methods of evaluating criminal justice policies and practices.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	511	Applied Data Analysis in Criminal Justice	Examines a variety of tools used in the analysis of criminal justice data, including GIS mapping.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Emergency Management and Homeland Security MA or Criminology & Criminal Justice MS or Criminology & Criminal Justice PhD student
CRJ	512	Seminar in Policing	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	513	Seminar in Courts and Sentencing	Overview of the nature, proposed principles, and theoretical doctrine of the courts and sentencing policies in criminal justice.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

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CRJ	514	Seminar in Corrections	Theory, research, and policy issues regarding community-based and institutional correction programs.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	515	Seminar in Women and Crime	Introduces students to issues regarding women and the criminal justice system, focusing on their roles as offenders, victims and professionals.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	516	Seminar in Criminal Justice Organization and Management	Graduate-level review of policing and police organizations. Seminar examines research on police strategies and practices designed to address crime.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	517	Seminar on Juvenile Delinquency and Juvenile Justice	Examines patterns and correlates of delinquency within the context of theories of delinquency. Reviews the response of the juvenile justice system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	518	Seminar on Race/Ethnicity, Crime, and Justice	Theoretical perspectives and research on the overrepresentation of racial minorities as victims, offenders, and defendants in the criminal justice system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	519	Seminar on Victimization	Examines theory and research concerning victimization and consequences for victims, society, and the justice system. Also examines effective responses to victims' post-crime needs.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	520	Seminar on Violent Crime	Examines patterns and correlates of violent crime, as well as prevention strategies and policy implications.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	521	Seminar on the Nature of Crime	Examines patterns and correlates of crime at individual, situational, and aggregate levels. Topics include defining crime, offender typographies, and criminal careers.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	522	Seminar on Gangs and Crime	Theoretical perspectives and research on gangs and crime, and on the role of the community and the criminal justice system in causes and control.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	524	Seminar on Punishment and Society	Examines the fundamental philosophical principles of justice and punishment. Includes a comparative and historical perspective.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	525	Seminar on Life-Course Criminology	Provides an intensive examination of life-course explanations of crime, the life-course perspective and a theoretical orientation, and research methods used in life-course research.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students

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CRJ	526	Theories of Crime Causation		N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Criminology and Criminal Justice MS or PhD major; Credit is allowed for only CRJ 526 or 598 (Theories of Crime Causation)
CRJ	527	Police Accountability	Examines the great authority of police, the various and most common ways that police abuse that authority, the consequences of those abuses, and accountability mechanisms that can prevent those abuses from occurring.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: MA in Criminal Justice or MS in Criminology and Criminal Justice or PhD in Criminology and Criminal Justice major; Credit is allowed for only CRJ 527 or 598 (Police Accountability)
CRJ	528	Prison and Jail Administration	Overview of prison and jail administrative practices, with emphasis on policy and management issues in modern correctional institutions.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminal Justice MA or Criminology and Criminal Justice MS or Criminology and Criminal Science PhD student
CRJ	529	Community Corrections	Provides a review of theory, research and policy focusing primarily on correctional strategies and programs that take place within the community setting, as well as the function of community corrections within the larger correctional system. Gives particular attention to the purpose and goals of community-based corrections; the historical development of probation and parole practices; and contemporary community corrections programs and strategies such as evidence-based practices, risk assessment, offender reentry, sex offender management, diversion, restitution, community service programs and other emerging alternatives to traditional incarceration.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: MA in Criminal Justice or MS in Criminology and Criminal Justice or PhD in Criminology and Criminal Science student
CRJ	530	Seminar in Forensics	Explores recent and sometimes controversial developments in forensic science. Includes topics such as quality assurance, the CSI effect and the National Academy of Sciences' report entitled "Strengthening Forensic Science in the United States: A Path Forward."	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Criminology and Criminal Justice MS or Criminology and Criminal Justice PhD student; Credit is allowed for only CRJ 530 or CRJ 598 (Seminar in Forensics)
CRJ	531	Crime Mapping	Examines the applied research methodology and conceptual framework used to conduct spatial analysis within the crime analysis profession.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Criminology and Criminal Justice MS or Criminology and Criminal Justice PhD student; Credit is allowed for only CRJ 531 or CRJ 598 (Crime Mapping)
CRJ	532	Sex Crimes	Not only discusses the distinctions among types of offenders, but also applies theory, analyzes public policy, examines the effect of sex offenses on victims, and discusses how we've legislated sexual behavior over human history.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Criminology and Criminal Justice MS or Criminology and Criminal Justice PhD student; Credit is allowed for only CRJ 532 or CRJ 598 (Sex Offenders & Sex Crimes)
CRJ	553	Terrorism and Weapons of Mass Destruction	Historical evolution of terrorism and weapons of mass destruction. Analyzes current theories and mitigation, preparedness, and response tactics.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): degree- or nondegree-seeking graduate student
CRJ	554	Homeland Security	Presents skills necessary to develop policies, strategies, programs, and organizational structure of an all hazards/all risk homeland security program.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Emergency Management and Homeland Security MA or Criminology & Criminal Justice MS or Criminology & Criminal Justice PhD student; Credit is allowed for only PAF 461 or CRJ 554
CRJ	555	Police and International Terrorism	Suicide bomber interdiction, jihadism and anti-terrorism intelligence gathering. History of prior attacks and policy responses.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Criminology and Criminal Justice MS or Criminology and Criminal Justice PhD student; Credit is allowed for only CRJ 445 or CRJ 555 or CRJ 598 (Police and Int'l Terrorism-Israel)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CRJ	556	Etiology of Martyrdom	Development of a jihadist mindset. Social support for beliefs that lionize martyrdom.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Prerequisite(s): Criminal Justice MA or Criminology and Criminal Justice MS or Criminology and Criminal Justice PhD students; Credit is allowed for only CRJ 456 or CRJ 556 or CRJ 598 (Etiology of Martyrdom)
CRJ	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CRJ	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-4		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): Master of Arts in Criminal Justice or Master of Science in Criminology & Criminal Justice or PhD in Criminology & Criminal Justice students
CRJ	601	Seminar on Criminological Theory	Examines historical and contemporary criminological theories.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	602	Seminar on Criminal Justice Policies and Practices	Analyzes responses to crime and the operation of criminal justice system, with emphasis on theory and research on effectiveness of policies and practices of the system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	603	Advanced Research Design	Exposes students to advanced topics in research design and methodology in preparation for writing the doctoral dissertation.	N	RSC	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student

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CRJ	604	Advanced Statistical Analysis	Use and application of advanced statistical techniques and multivariate analysis of data.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	605	Topics in Quantitative Methods	Explores advanced techniques of statistical analysis within the field of criminal justice.	N	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	606	Advanced Topics in Theoretical Criminology	Focuses on criminological theory construction, historical and contemporary theoretical debates within criminology, theory testing, empirical support for theories, and theoretical integration.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	607	Advanced Topics in Policing	Covers the major issues related to policing and police organizations in the United States. Principal focus on policing and police organizations in large cities, with a focus on police organizational structure, police culture, police organizational environment, police decision making and change in the police organization.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	608	Advanced Topics in Courts and Sentencing	Focuses on recent research on charging, plea bargaining, bail decision making, jury decision making and sentencing, as well as the impact of recent reforms directed at the criminal court system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	609	Advanced Topics in Corrections	Provides a critical examination of the theoretical framework underpinning current correctional policy (institutional and community based), as well as advanced, in-depth analyses of contemporary issues surrounding corrections.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	610	Advanced Topics in Juvenile Justice	Examines the meaning of the concept of juvenile delinquency as a separate entity in the criminal justice system. Considers the relationship between social attitudes and definitions of youthful law violation, and reviews studies on various forms of delinquency, such as drug offenses, sex delinquency, and status offenders. Also focuses on the internal workings of the juvenile justice system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	611	Advanced Topics in Crime and Victimization	Examines research on criminal offending and victimization, focusing on the correlates of offending and victimization, risk and protective factors, and policies designed to reduce the impact of crime on victims.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	612	Advanced Topics in Race, Gender, and the Criminal Justice System	Examines the interrelationships among race and ethnicity, gender, crime and the criminal justice system. Focuses on theoretical perspectives and empirical research on racial minorities and women as victims, offenders, and criminal justice professionals.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	613	Qualitative Methods	Provides students with an examination of the design, execution, and write-up of qualitative research. Discusses methods of data collection, including participant-observation, ethnography, and interviewing.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	3		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CRJ	792	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1		Pre-requisite: Criminology and Criminal Justice PhD student
CRJ	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Col of Pub Serv & Comm Solutns	School of Criminology and Criminal Justice	1-15		Pre-requisite: Criminology and Criminal Justice PhD student
CSE	100	Principles of Programming with C++	Principles of problem solving using C++, algorithm design, structured programming, fundamental algorithms and techniques, and computer systems concepts. Social and ethical responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	CS	
CSE	110	Principles of Programming	Concepts of problem solving using an object-oriented programming language, algorithm design, structured programming, fundamental algorithms and techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	CS	
CSE	120	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): degree-seeking student; Credit is allowed for only CSE 120 or EEE 120
CSE	180	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	
CSE	180	Computer Literacy	Students gain fluency in integrating technology to efficiently and effectively solve problems using computational thinking.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	CS	
CSE	182	Applied Problem Solving with C#.Net	Introduces object oriented programming, problem solving, fundamental algorithms and techniques, computer systems concepts, and implementation of programs using Visual C#.Net platform.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		
CSE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	205	Object-Oriented Programming and Data Structures	Problem solving by programming with an object-oriented programming language. Introduces data structures. Overview of computer science topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	CS	Pre-requisite: CSE 110 with C or better. Credit is allowed for only ACO 102 or CSE 205 or CST 200

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CSE	220	Programming for Computer Engineering	Introduction to C/C++, systems programming, and concurrency.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: CSE 120 or EEE 120 with C or better; CSE 205 with C or better
CSE	230	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming. Exception/interrupt handling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): degree-seeking student; CSE 100, 110, or 200; CSE 120 or EEE 120 OR graduate Computer Science and Engineering student; Credit is allowed for only CSE 230 or EEE 230
CSE	240	Introduction to Programming Languages	Introduces the procedural (C/C++/Python), applicative (LISP/Scheme) and declarative (Prolog) languages.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s) with C or better: CSE 205 or Applied Computing major with ACO 102 or Geographic Information Science major with GIS 321; Credit is allowed for only ACO 240 or CSE 240
CSE	259	Logic in Computer Science	Logic has been called the calculus of computer science. The argument is that logic plays a fundamental role in computer science, similar to that played by calculus in physical sciences and other engineering disciplines. Indeed, logic plays an important role in computer architecture (Boolean logic, digital gates, hardware verification); software engineering (specification, verification); programming languages (semantics, type theory, logic programming); databases (relational algebra, database query language); artificial intelligence (automated theorem proving, knowledge representation); algorithms and theory of computation (complexity, computability, expressiveness). This course is a mathematically solid introduction to propositional logic, first order logic, logic programming, and their applications in computer science.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): CSE 205 with C or better; Credit is allowed for only CSE 259 or CSE 294 (Logic in Computer Science)
CSE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		Prerequisite(s): Barrett Honors student
CSE	301	Computing Ethics	Ethics for computing majors: history of computing, intellectual property, privacy, ethical frameworks, professional ethical responsibilities, and risks of computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 205 with C or better; FSE 100 with C or better
CSE	310	Data Structures and Algorithms	Advanced data structures and algorithms, including stacks, queues, trees (B, B+, AVL), and graphs. Searching for graphs, hashing, external sorting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s) with C or better: CSE 220 or 240; MAT 243 (or 300 for CMS); Computational Math Sci (CMS), Computer Science, Computer Systems Engineering, Digital Culture (Media Proc), Engineering Management, Geo Info Sci or Informatics or BMI/CSE grad
CSE	320	Design and Synthesis of Digital Hardware	Design and synthesis of digital hardware with hardware description language, computer-aided design tools, and programmable devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Systems Engineer BSE or Computer Science BS major; CSE 220 with C or better; CSE 230 or EEE 230 with C or better
CSE	325	Embedded Microprocessor Systems	System-level programming and analysis of embedded microprocessors systems. Fundamental concepts of digital system design for embedded system applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 220 with C or better; CSE 230 or EEE 230 with C or better
CSE	330	Operating Systems	Operating system structure and services, processor scheduling, concurrent processes, synchronization techniques, memory management, virtual memory, input/output, storage management, and file systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; CSE 230 or EEE 230 with C or better; CSE 310 with C or better OR CSE Graduate student

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CSE	335	Principles of Mobile Application Development	Covers topics pertaining to fundamental concepts of mobile application development principles including design patterns; data persistence; interfacing with services and devices; location and incorporation of existing frameworks; user interface and experience; context awareness; utilization of built-in tools for software profiling, testing, and version control; and security/privacy issues.	N	LEL	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Informatics BS or Computer Systems Engineering BSE major; CSE 220 or 240 with C or better; Credit is allowed for only CSE 335 or CSE 394 (Principles of Mobile Application)
CSE	340	Principles of Programming Languages	Formal syntactic and semantic descriptions, compilation and implementation issues, and theoretical foundations for several programming paradigms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Systems Engineer BSE or Computer Science BS major; CSE 310 with C or better; CSE 230 or EEE 230 with C or better OR CSE graduate student
CSE	355	Introduction to Theoretical Computer Science	Introduces formal language theory and automata, Turing machines, decidability/undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Systems Engineering BSE or Computer Science BS major; CSE 310 with C or better OR CSE graduate student
CSE	360	Introduction to Software Engineering	Software life cycle models; project management, team development environments and methodologies; software architectures; quality assurance and standards; legal, ethical issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): CSE 220 or 240 with C or better; Biomedical Informatics BS or Computer Science BS or Digital Culture (Media Processing) BA or Geographic Information Science BS or Computer Systems BSE or Engineering Mgmt BSE, or Computer Science graduate
CSE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
CSE	408	Multimedia Information Systems	Design, use, and applications of multimedia systems. Introduces acquisition, compression, storage, retrieval, and presentation of data from different media such as images, text, voice, and alphanumeric.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student
CSE	412	Database Management	Introduces DBMS concepts. Data models and languages. Relational database theory. Database security/integrity and concurrency.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Biomedical Informatics BS or Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student; Credit allowed for only ACO 220 or ACO 320 or CSE 412 or CST 433
CSE	414	Advanced Database Concepts	Object-oriented data modeling, advanced relational features, JDBC and Web access to databases, XML and databases, object-oriented databases, and object-relational databases.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 412 with C or better OR Computer Science and Engineering graduate student
CSE	420	Computer Architecture I	Computer architecture. Performance versus cost tradeoffs. Instruction set design. Basic processor implementation and pipelining.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 230 or EEE 230 with C or better; CSE 310 with C or better OR graduate Computer Engineering student; Credit is allowed for only CSE 420 or CSE 520

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CSE	423	Systems Capstone Project I	Development process: specification, design, implementation, evaluation, and testing with economic, social, and safety considerations. Technical communication and team skills enrichment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Prerequisite(s): Computer Systems Engineering BSE major; CSE 320 with C or better; CSE 325 with C or better; CSE 330 with C or better; CSE 360 with C or better; senior standing or postbaccalaureate; Credit is allowed for only CSE 423 or CSE 485
CSE	424	Systems Capstone Project II	Continuation of capstone project started in CSE 423.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Prerequisite(s): Computer Systems Engineering BSE major; CSE 423 with C or better; senior standing or postbaccalaureate
CSE	432	Operating System Internals	IPC, exception and interrupt processing, memory and thread management, user-level device drivers, and OS servers in a modern microkernel-based OS.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 430 with C or better OR Computer Science and Engineering graduate student
CSE	434	Computer Networks	Network architecture and protocols, principles of network applications, socket programming, flow and congestion control, switching and routing, link-layer technologies, traffic capture and analysis, security.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 230 or EEE 230 with C or better; CSE 310 with C or better OR Computer Science and Engineering graduate student; Credit is allowed for only ACO 330 or CSE 434
CSE	438	Embedded Systems Programming	Development of embedded system software, I/O handlers, and multiple threaded programs. Scheduling algorithms. Embedded software structures. Real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 325 with C or better OR Computer Science and Engineering graduate student
CSE	440	Compiler Construction I	Introduces programming language implementation. Implementation strategies such as compilation, interpretation, and translation. Major compilation phases such as lexical analysis, semantic analysis, optimization, and code generation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Systems Engineering BSE or Computer Science BS major; CSE 310 with C or better OR Computer Engineering graduate student
CSE	445	Distributed Software Development	Distributed system architectures and design, service-oriented computing, and frameworks for development of distributed applications and software components.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 360 with C or better OR Computer Science and Engineering graduate student
CSE	446	Software Integration and Engineering	Software development using architecture design, composition, workflow, services, data resources, data representations, data management, and development tools.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engr BSE major; Pre- or corequisite(s): CSE 445 with C or better if completed OR Computer Science and Engr grad student; Credit allowed for only CSE 446 or 598 (Software Integration & Engineering)
CSE	450	Design and Analysis of Algorithms	Design and analysis of computer algorithms using analytical and empirical methods; complexity measures, design methodologies, and survey of important algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Engineering graduate student; Credit is allowed for only CSE 450 or CSE 551

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CSE	457	Theory of Formal Languages	Theory of grammar, methods of syntactic analysis and specification, types of artificial languages, relationship between formal languages, and automata.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 355 with C or better OR Computer Science and Engineering graduate student
CSE	459	Logic for Computing Scientists	Propositional logic, syntax and semantics, proof theory versus model theory, soundness, consistency and completeness, first order logic, logical theories, automated theorem proving, ground resolution, pattern matching unification and resolution, Dijkstras logic, proof obligations, and program proving.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 355 with C or better OR Computer Science and Engineering graduate student
CSE	460	Software Analysis and Design	Object-oriented and structured analysis and design; software architecture and design patterns; component-based development; software safety and reliability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Geographic Information Science BS or Computer Systems Engineering BSE major; CSE 360 with C or better OR Computer Science and Engineering graduate student
CSE	463	Introduction to Human Computer Interaction	Design, evaluate, and implement interactive software intended for human use.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Comp Syst Engr BSE or Geographic Info Sci BS major; CSE 310 with C or better OR Digital Culture (Media Processing) BA or Informatics BS major; CPI 310 with C or better OR Computer Science and Engineering graduate student
CSE	464	Software Quality Assurance and Testing	Software quality assurance (SQA), software quality metrics, software configuration management, software verification and validation, reviews, inspections, understanding software testing process, functional testing, structural testing, model-based testing, integration, system, and regression testing techniques, software life cycle models and software testing, testing distributed software, bug management, and use of testing tools.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 360 with C or better OR Computer Science and Engineering graduate student; Credit is allowed for only CSE 464 or CSE 494 or 598 (Software Quality Assurance and Testing)
CSE	465	Information Assurance	Concepts of information assurance (IA); basic IA techniques, policies, risk management, administration, legal and ethics issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Info Sys BS or Computer Science BS or Computer Sys Engr BSE or Industrial Engr BSE major; CIS 300 or CSE 310 or IEE 305 with C or better OR Computer Science and Engr grad student; Credit is allowed for only CSE 465 or CSE 543
CSE	466	Computer Systems Security	Countermeasures to attacks to computer systems from miscreants (or hackers) and basic topics of cryptography and network security.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student
CSE	467	Data and Information Security	Basic concepts of security and privacy, data and database security, access controls, trust models, watermarking, and private information retrieval.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student
CSE	468	Computer Network Security	Practical network security exposure and hands-on experience about basic concepts, case studies, and useful tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Engineering graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CSE	469	Computer and Network Forensics	Identification, extraction, documentation, interpretation, and preservation of computer media for evidentiary purposes, file system forensics, and network forensics.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): CSE 310 with C or better OR Computer Science and Engineering graduate student; Credit is allowed for only CSE 469 or CSE 598 (Computer and Network Forensics)
CSE	470	Computer Graphics	Introduces basic concepts of interactive computer graphics, realistic rendering, and 3-D viewing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Digital Culture (Media Processing) BA, Computer Science BS, Geographic Information Science BS, or Computer Systems Engineering BSE major; CSE 310 with C or better; MAT 342 or 343 OR Computer Science and Engineering graduate student
CSE	471	Introduction to Artificial Intelligence	State space search, heuristic search, games, knowledge representation techniques, expert systems, and automated reasoning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS, Geographic Information Science BS, or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student
CSE	472	Social Media Mining	Network measures, social network analysis, network models, random graphs, small-world model, power laws, data mining, influence and homophily, information diffusion, epidemics, behavioral analysis, recommendation in social media, community detection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre- or corequisite(s) with C or better if completed: Computer Science BS or Computer Systems Engr BSE major; CSE 310; IEE 380; MAT 343 OR Computer Science and Engr graduate student; Credit is allowed for only CSE 472 or CSE 494 (Social Media Mining)
CSE	476	Introduction to Natural Language Processing	Principles of computational linguistics, formal syntax, and semantics, as applied to the design of software with natural (human) language I/O.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; CSE 310 with C or better OR Computer Science and Engineering graduate student
CSE	477	Introduction to Computer-Aided Geometric Design	Introduces basic concepts of 3-D computer geometry, including curves, surfaces, meshes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science BS or Computer Systems Engineering BSE major; MAT 342 or 343 with C or better OR Computer Science and Engineering graduate student
CSE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	YGB	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): junior or senior standing
CSE	485	Computer Science Capstone Project I	First course in capstone sequence for computer science majors emphasizing development process, technical skills, teamwork, and communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Prerequisite(s): Computer Science BS major; senior standing or postbaccalaureate; CSE 330 with C or better; CSE 340 with C or better; CSE 355 with C or better; CSE 360 with C or better; Credit is allowed for only CSE 423 or CSE 485
CSE	486	Computer Science Capstone Project II	Second course in capstone sequence for computer science majors continuing the development process, technical skills, teamwork, and communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3	L	Prerequisite(s): Computer Science BS major; CSE 485 with C or better; senior standing or postbaccalaureate
CSE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6		Prerequisite(s): Barrett Honors student
CSE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student

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CSE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Pre-requisite: CSE 310 with C or better
CSE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-7		Pre-requisite: Computer Systems Engineering BSE or Computer Science BS student; Minimum cumulative GPA of 2.50 or Graduate Engineering student
CSE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-3		
CSE	509	Digital Video Processing	Concepts of digital video compression, video analysis, video indexing, browsing and retrieval, video transmission over networks, video processors, and relevant industry standards.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	510	Database Management System Implementation	Implementation of database systems. Data storage, indexing, querying, and retrieval. Query optimization and execution, concurrency control, and transaction management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	511	Semi-Structured Data Management	Addresses the data management issues for semi-structured data, which are commonly found in Web applications. Covers techniques on modeling, storing, querying and searching data without schemas, with optional confidence, and/or provenance information. Requires knowledge on relational databases and programming skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	512	Distributed Database Systems	Distributed database design, query processing, and transaction processing. Distributed database architectures and interoperability. Emerging technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	515	Multimedia and Web Databases	Data models for multimedia and Web data; query processing and optimization for inexact retrieval; advanced indexing, clustering, and search techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	520	Computer Architecture II	Computer architecture description languages, computer arithmetic, memory-hierarchy design, parallel, vector, multiprocessors, and input/output.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	522	Real-Time Embedded Systems	Development of real-time embedded systems, scheduling algorithms, embedded software structures, real-time operating system.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Science, Computer Engineering, Master of Engineering or Engineering Science (Software Engineering) Graduate student
CSE	530	Embedded Operating System Internals	Investigating Linux source including: memory management, kernel synchronization and driver design topics. Designing, coding, testing, and evaluating embedded operating system software in a Linux environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	531	Distributed and Multiprocessor Operating Systems	Distributed systems architecture, remote file access, message-based systems, object-based systems, client/server paradigms, distributed algorithms, replication and consistency, and multiprocessor operating systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	534	Advanced Computer Networks	Advanced network protocols and infrastructure, applications of high-performance networks to distributed systems, high-performance computing and multimedia domains, special features of networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	535	Mobile Computing	Mobile networking, mobile information access, adaptive applications, energy-aware systems, location-aware computing, mobile security and privacy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	536	Advanced Operating Systems	Protection and file systems. Communication, processes, synchronization, naming, fault tolerance, security, data replication, and coherence in distributed systems. Real-time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	539	Applied Cryptography	Uses cryptography for secure protocols over networked systems, including signatures, certificates, timestamps, electrons, digital cash, and other multiparty coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student

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CSE	543	Information Assurance and Security	Comprehensive understanding of information assurance and security problems with the solutions as well as hands-on experiences about applying these solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Science or Computer Engineering student; Credit is allowed for only CSE 465 or CSE 543
CSE	545	Software Security	Theories and tools for software security, including secure design, threat analysis and modeling, security testing and coding.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	546	Cloud Computing	Virtualization, cloud computing, programmable networking, performance evaluation, information assurance, distributed and parallel computing, and cloud computing-based applications. Students must have a solid background in computer architecture, operating system and computer networking to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate standing in Computer Engineering or Computer Science; Credit is allowed for only CSE 546 or CSE 591 (Cloud Computing)
CSE	548	Advanced Computer Network Security	Comprehensive understanding of network security and corresponding solutions, including cryptography, access control, secure Web transactions, e-mail security, and viruses.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Engineering or Computer Science student; Pre- or corequisite(s): CSE 539
CSE	550	Combinatorial Algorithms and Intractability	Combinatorial algorithms, nondeterministic algorithms, classes P and NP, NP-hard and NP-complete problems, and intractability. Design techniques for fast combinatorial algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	551	Foundations of Algorithms	Advanced topics in formal algorithm design and analysis, including advanced shortest-paths algorithms, amortized analysis, network flows, NP-completeness and selected topics in computational geometry, distributed/parallel, randomized, and approximation algorithms.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Engineering or Computer Science student; Credit is allowed for only CSE 450 or CSE 551
CSE	552	Randomized and Approximation Algorithms	Introduces two important areas of algorithm design for graduate students. A randomized algorithm is allowed to rely on the outcome of a random experiment in deciding on its next step. In many applications, randomized algorithms are simpler than any deterministic algorithms known, but in several cases, they are in fact more powerful or more efficient than any deterministic algorithms. Covers basic paradigms for randomized algorithm design and analysis, as well as for derandomization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	555	Theory of Computation	Rigorous treatment of regular languages, context-free languages, Turing machines and decidability, reducibility, and other advanced topics in computability theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	556	Game Theory with Applications to Networks	Strategic conflict as matrix games, notions of equilibrium, definition and existence of Nash equilibrium, zero-sum games, extensive-form games, Bayes Nash equilibrium, potential games, routing games, algorithmic game theory, computation of Nash equilibrium, incentives and pricing in communication networks, application of game theory in wireless networks. Knowledge of calculus, discrete mathematics, probability theory and algorithms is necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student; Credit is allowed for only CSE 556 or CSE 591 (Game Theory with Applications to Networks)
CSE	561	Modeling and Simulation Theory and Application	Modeling theories, simulation protocols, object-oriented modeling, model design, simulation analysis, network-based systems, discrete-event modeling, continuous modeling, hybrid modeling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	563	Software Requirements and Specification	Examines the definitional stage of software development; analysis of specification representations, formal methods, and techniques emphasizing important application issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Engineering or Computer Science or Software Engineering student
CSE	564	Software Design	Examines software design issues and techniques. Includes a survey of design representations and a comparison of design methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Engineering or Computer Science or Software Engineering student
CSE	565	Software Verification, Validation, and Testing	Test planning, requirements-based and code-based testing techniques, tools, reliability models, and statistical testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Engineering or Computer Science or Software Engineering student
CSE	566	Software Project, Process, and Quality Management	Project management, risk management, configuration management, quality management, and simulated project management experiences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Engineering or Computer Science or Software Engineering student

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CSE	569	Fundamentals of Statistical Learning and Pattern Recognition	Concepts of statistical pattern recognition, Bayesian decision theory, parameter estimation, discriminant analysis, basics of artificial neural networks, basics of data clustering. Knowledge of college-level calculus, linear algebra, basic probability theory and proficiency in computer programming is necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Engineering or Computer Science Graduate student; Credit is allowed for only CSE 569 or 591 (Statistical Learning and Pattern Recognition)
CSE	570	Advanced Computer Graphics I	Hidden surface algorithms, lighting models, and shading techniques. User interface design. Animation techniques. Fractals and stochastic models. Raster algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	571	Artificial Intelligence	Definitions of intelligence, computer problem solving, game playing, pattern recognition, theorem proving, and semantic information processing; evolutionary systems; heuristic programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	572	Data Mining	Advanced data mining techniques: classification, clustering, association, preprocessing; performance evaluation; information assurance, Web mining, security and privacy issues, and other applications. Students must have a solid background in database management systems, search, learning, and statistics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	573	Semantic Web Mining	Data mining techniques for structuring and organizing unstructured sources such as text and Web data into meaningful machine-processable information; computational aspects of information extraction and data linkage; discovery and prediction tasks where text serves as data such as detecting events, measuring public opinion and making recommendations. A background in databases, algorithms and theory of computation is necessary to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate standing in Computer Engineering or Computer Science; Credit is allowed for only CSE 573 or CSE 591 (Semantic Web Mining)
CSE	574	Planning and Learning Methods in AI	Reasoning about time and action, plan synthesis and execution, improving planning performance, applications to manufacturing intelligent agents.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	575	Statistical Machine Learning	Spectral clustering, regression, classification, semi-supervised learning, feature reduction, manifold learning, ranking, kernel learning and multitask learning.	N	LEC	N	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Science or Computer Engineering MCS, MS, or PhD major; Credit is allowed for only CSE 575 or 591 (Machine Learning)
CSE	576	Topics in Natural Language Processing	Comparative parsing strategies, scoping and reference problems, nonfirst-order logical semantic representations, and discourse structure.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	577	Advanced Geometric Modeling I	Advanced concepts of geometric modeling: rectangular and triangular surfaces, triangle meshes, Voronoi diagrams, discrete and continuous shape measures, volumes and volume visualization. Students must have a solid background in linear algebra, calculus, and basic 3D graphics to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	578	Data Visualization	Amidst the information flood in which we are currently immersed, visualizations can be a well-placed treetop. The rise of big data has the potential to inform decisions, and visual representations can play a crucial intermediate role in our daily information consumption. Covers techniques and algorithms for creating effective visualizations based on principles from graphic design, visual art, perceptual psychology and cognitive science to enhance the understanding of complex data.	N	SEM	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Prerequisite(s): graduate Computer Engineering or Computer Science student
CSE	579	Knowledge Representation and Reasoning	Covers knowledge representation and reasoning algorithms in artificial intelligence, shows how they can be used in practice, and provides an overview of current research trends.	N	LEC	N	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	3		Pre-requisite: Computer Science or Computer Engineering Graduate student; Credit is allowed for only CSE 579 or 591 (Knowledge, Represent/Reasoning)
CSE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	GNA	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): Computer Science or Computer Engineering graduate student

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CSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		
CSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		Prerequisite(s): Computer Science or Computer Engineering graduate student
CSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Computer Science and Engineering Program	1		Prerequisite(s): degree- or nondegree-seeking graduate student
CSE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
CSM	201	Introduction to Community Sports	Examines the role of community sports at the local, national and international levels.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only CSM 201 or PRM 201
CSM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CSM	303	Program Planning	Effective program planning in varied leisure delivery systems.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only CSM or PRM 303
CSM	305	Sports Facility Operations and Management	Overview of the management and operations of sports facilities.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: Community Sports Management major; CRD 210 (or NLM/PRM/TDM 210) with C or better; MAT 142 or higher; minimum 2.50 cumulative GPA; minimum 45 hours
CSM	335	Sports and Recreation for Youth Development	Provides an overview of definitions, statistics, theories and models, and types of programs surrounding youth development in relation to sports, recreation and leisure services. Addresses current trends related to youth development and collaborative partnerships in sports, recreation and leisure services at various levels within local, state, national and/or international systems.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only CSM 335 or PRM 335
CSM	350	Tourism, Recreation and Sports Marketing	Critical examination of marketing principles in leisure and related industries in diverse settings, including local, national, and international.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or CSM 201 or TDM 205; ENG 102 with C or better; MAT 142 or higher with C or better; minimum 45 hours; Credit is allowed for only CSM 350 or PRM 350 or TDM 350

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CSM	401	Managing Leisure Enterprises	Analyzes administrative function, structure, and policies. Successful application in administrative situations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or PRM 210; TDM 372 or CSM 303 or PRM 303; minimum 2.50 cumulative GPA; Credit is allowed for only CSM 401 or PRM 401
CSM	402	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CSM 401, NLM 410, PRM 401, or TDM 401 with C or better. Credit is allowed for only CSM 402, NLM 402, PRM 402 or TDM 402
CSM	407	Ethics and Legal Issues in Sports	Comprehensive look at ethical decision making from many perspectives in the sports environment. Presents legal issues as they relate to history, present society and future trends.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: CSM 201
CSM	463	Senior Internship	Supervised guided experience in selected agencies.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	6-12		Prerequisite(s) with C or better: CRD 403 or PRM 413; CSM 402 or NLM 402 or PRM 402 or TDM 402. Credit is allowed for only CSM 463 or NLM 463 or PRM 463 or TDM 463
CSM	483	Sports Tourism	Examines the relationship between sports and tourism, and the role of recreation and amateur sports as an economic and community development strategy. Also considers the motives, behaviors and experiences of sport tourists; the impacts of sport tourism; and trends in sports tourism.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): Minimum 45 hours. Credit is allowed for only CSM 483 or TDM 483
CSM	485	Sports Events	Expands the basic concepts of recreation, leisure or tourism program planning and leadership as they are specifically related to sport events management.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only CSM 485 or PRM 485
CSM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
CST	111	Introduction to Game Development	Introduces fundamental video game development concepts and techniques prevalent in video game industry. Provides opportunity to understand these techniques and learn how they are applied during the production of a video game. Includes game design, game production, asset production, game programming, game art and animation. Hands-on experience by writing 2D game prototypes while learning different game mechanics and features. Intended to serve as an introduction into the game production cycle, breaking down the complex process of game creation into a simple step-by-step program. No programming knowledge is required; however, some degree of computer proficiency is desirable.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Credit is allowed for only CST 111 or 194 (Intro to Game Development)
CST	150	Computer Systems Fundamentals I	Logic design, number systems and arithmetic, boolean algebra; digital systems components, and hardware description languages.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3	CS	Pre- or corequisite(s): CST 100 or SER 100 or SER 101; MAT 117, 170, 171, 210, 251, 265, or 270 with C or better if completed or Mathematics Placement Test score of 50% or higher; Credit is allowed for only CST 150 or SER 232
CST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-3		
CST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
CST	200	Core Data Structures with Object Oriented Programming	Design, implementation and use of core data structures; object-oriented software development: design, analysis and programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 100 (or 211) with C or better; Credit is allowed for only ACO 102, CSE 205 or CST 200
CST	201	Object-Oriented Software Development II Lab	Hands-on development and programming using objects, inheritance, and polymorphism; GUI programming; introduction to software engineering concepts, UML tools.	N	LAB	N	OPT	Ira A. Fulton Engineering	Software Engineering	1		Pre/Co-requisite: CST 200

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
CST	211	Intermediate Game Development	Introduces multiplayer games, artificial intelligence, and tile-based worlds using a scripted programming environment. Uses game scripting to automate, repeat, change, anticipate, and govern the action of games from a simple word game to a complicated multiplayer game like pool. Introduces gaming terminology and basic genres, enhancements such as fine-tuning graphics, creating optimal soundtracks, and using high score lists, as well as creating and modifying online chat files. Introduces video game scripting to the student. Scripting skills are essential in every aspect of game development and are used by designers, programmers, and artists in the game industry. Students learn the core scripting skills required to implement game features and apply those to enhance the prototype created in the introductory course.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 111; Credit is allowed for only CST 211 or 294 (Intermediate Game Development)
CST	220	Programming Languages and Their Execution Environment	Introduces the fundamental programming language concepts of data, type, control, abstraction, and structure; software development and execution environments; programming language paradigms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 200 or SER 200 with C or better; Credit is allowed for only CST 220 or SER 221
CST	230	Design and Analysis of Data Structures and Algorithms	Data structures and related algorithms for their specification, complexity analysis, implementation and application. Sorting and searching. Professional responsibilities that are part of program development, documentation and testing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 200 or SER 200 with C or better; MAT 243 with C or better; Credit is allowed for only CST 230 or SER 222
CST	251	Microcomputer Architecture and Programming Laboratory	Hands-on experience in assembly language programming and debugging. May be taken concurrently with, or subsequent to, CST 250.	N	LAB	N	OPT	Ira A. Fulton Engineering	Software Engineering	1		Pre-requisite: EGR 101 (or CST 100), or CST 150; Pre/Co-requisite: CST 250
CST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
CST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student
CST	335	Applications of Computer Theory	Introduces and applies formal language theory and automata, Turing machines, decidability, undecidability, recursive function theory, and complexity theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 230; MAT 243
CST	350	Digital Design with Hardware Description Languages	Digital system design using Verilog. Structural and behavioral modeling. Design examples include finite-state machines, RISC CPUs, and UARTs. Requires design projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	4		Prerequisite(s): CST 150 or SER 232 or Fulton Polytechnic School graduate student
CST	386	Operating Systems Principles	Fundamentals of operating systems, process management, scheduling and synchronization techniques, memory and file management, protection and security issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 200 (or SER 222) and CST 250 (or CST 251)
CST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
CST	420	Principles of Distributed Software Systems	Design and implementation of distributed software components; process and memory management underlying software applications; sockets, protocols, threads, XML, serialization, reflection, security, and events.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 222 with C or better; Pre- or corequisite(s): SER 334 (or SER 234) with C or better if completed; Credit is allowed for only CST 420 or SER 321
CST	425	Server Software Programming	Design and implementation of software servers, threaded socket servers, servers for distributed Web-based applications; security for the Web.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 420 with C or better
CST	427	Distributed Object Systems	Distributed applications with Web services, NET, RMI, CORBA; concepts and frameworks for managing, registering, locating, and securing distributed object applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 420 with C or better
CST	428	Web-Client User Interface Programming	Client-server model for window interfaces. Java Swing, Applets, mark-up and scripting languages; Web tools and related technologies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 420 with C or better
CST	441	Software Development for Mobile Devices	Mobile computing using Java's K, Virtual Machine, MIDP for wireless applications; user interfaces, persistent data storage, and networking.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 420 with C or better
CST	452	Digital Systems Synthesis with Hardware Description Languages	Uses a hardware description language to synthesize components of computers and digital systems as FPGAs. Emphasizes optimization and satisfying performance constraints of system scale designs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 350
CST	458	Digital Computer Networks	Network hardware and software, topologies, protocols, OSI model, LANs, WANs, Internet; basic concepts of packet switching, routing, error controlling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 250; CST 251 or IFT 201 or BAS student
CST	460	Computer Graphics with Applications	Hands-on course introduces 2D and 3D computer graphics programming and some of the applications related to the topic in a studio-style learning environment. Uses data structures for computer graphics, and a graphics API such as OpenGL taught with industry examples. Intended for upper-division (senior) students in CST programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: CST 100 (or EGR 102); CST 230 (or SER 221)
CST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		
CST	490	Reading and Conference		N	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
CST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student

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CST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Software Engineering	1-6	L	Prerequisite(s): Barrett Honors student
CST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		Prerequisite(s): Fulton Schools of Engineering undergraduate student; Min GPA 2.25; OR Fulton Schools of Engineering graduate student
CST	496	Ethics and Professionalism in Computing	Studies major social and ethical issues in computing, including impact of computing on society, ethical behavior, and social responsibility.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	1		Pre-requisite: Junior or Senior standing
CST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student
CST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-7		Prerequisite(s): Fulton Schools of Engineering undergraduate student; Min GPA 2.25; OR Fulton Schools of Engineering graduate student
CST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-3		
DAH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DAH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DAH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): Barrett Honors student
DAH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Prerequisite(s): Barrett Honors student
DAH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DAH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
DAH	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DAH	598	Special Topics	Typical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
DAN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DBA	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DBA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	701	Macroeconomic Policies in a Global Environment	Provides the framework for policy makers when facing macroeconomic situations, the tools in analyzing the costs and benefits of alternative policy options, and the knowledge necessary for making recommendations to policy makers and business leaders. Students learn knowledge and skills about global economy and risks that help facilitate dissertation research.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	702	Global Financial Systems: Markets and Institutions	Examines the overall architecture of the global financial system, its major components, and their functions in the macro economy.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	703	Global Financial Systems- Institutional Investing	A large fraction of investors around the world invest in securities markets indirectly, viz. through mutual funds or separate accounts established with investment managers, whether they be endowments, foundations, pension plans or sovereign funds. Exposes students to the global marketplace for such portfolios.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	704	Design of Knowledge Base Organizations for Performance and Innovation	Covers various issues on executive compensation and management pay structure with a particular emphasis on aligning business strategy, organization design to the choice of performance standards and pay structure for managers.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	705	Global Corporate Strategy	Demonstrates that decisions affecting the international expansion of a firm are neither obvious nor totally determined by the technological or economic forces generally associated with globalization. Addresses the most transcendental decisions that multinational firms face in the course of conducting business across borders.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	706	Strategic Visioning, Leadership and Change Management	Addresses the interrelationship among organizational culture, leadership, and the management of change in order to promote continuous improvement of the organization's market position. Addresses the role of strategy, how strategy explicates vision, and how effective strategies are created.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	707	Risk Management : An Enterprise Perspective	Provides an understanding of the broad set of risks an enterprise faces; their origin, characteristics and potential impact on business; and how they can be efficiently managed at the enterprise level.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student

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DBA	708	Challenges of Corporate Finance and Governance	Helps students understand the link between finance and corporate strategies, as well as examine ways to establish and reform the practices of corporate governance in China.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	709	Finance and Law	Helps students learn about the philosophy of law, various legal systems, the relationships among law and economics and finance, the practice of law in a global context.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	710	Financial Decision Making	Provides a framework of conceptual knowledge and enables students to understand what the literature on financial theory is trying to do and how it all fits together. Also provides an in-depth experience with the subject of finance and equips students for their future development as a practicing executive.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	711	Finanacial Innovations	Focuses on how financial innovations influence the evolution of finance. Discusses many of the major financial innovations in recent history, the forces driving these innovations, their impact on the financial system and the real economy and the risks they bring.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	712	Advanced Topics in Global Economy and Finance: Domestic Module	Addresses many critical topics facing China today on its quest of globalization, the need for transforming its economic structure, capital markets and corporate control, and its monetary policies.	N	LEC	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	713	Advanced Topics in Strategy and Management: Domestic	Reexamines many popular best practices through panel discussion and speaker series on why some of those practices failed to work in China, and how firms have creatively modified their strategic undertakings to fit its environment.	N	LEL	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	714	Current Trends in Global Economy, Finance and Management: US Module	Provides first-hand experiences on the world class practices by the multinationals and interactions with the leading experts on the emerging topics of interest on globalization, financial regulations, and managerial innovations.	N	LEL	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	4		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	715	Current Trends in Global Economy, Finance and Management: Europe Module	Provides direct exposure to European markets, firms, and institutions, their history, current status, and future directions.	N	LEL	N	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	4		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	721	Research Seminar I- Research in Action	Provides needed skills for research and thesis work. 1. Focuses mainly on research design and fundamental statistical/survey and field study methods. The key objective is to provide students with the needed required skills and concepts of the scientific method, the philosophy of science, and research design with an emphasis to solve specific problems. This course is spread out during the first year of the program.	N	SEM	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	722	Research Seminar II- Research in Action II	Focuses on the process of research "in actions" through faculty presentation and research workshops. Faculty with diverse research interest and methodologies present up-to-date research works. Through interaction, students gain first-hand experience on learning the process of how faculty, with diverse research interests, are able to identify specific research topic, choosing the right research methodology to address their research questions. The presentation and research workshop are scheduled at the beginning of the second year and throughout the entire year, allowing the program to leverage faculty availability during their course delivery while enabling students to seek out their faculty mentors for future dissertation engagement.	N	SEM	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	723	Research Seminar III- Research in Action III	Provides students with opportunities to present their own research proposal/ thesis ideas while allowing the participating faculty and fellow students to offer constructive comments.	N	SEM	Y	GNA	W.P. Carey School of Business	Dean, W.P. Carey School of Business	3		Pre-requisite: W. P. Carey DBA degree seeking graduate student
DBA	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		
DBA	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DBA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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DBA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Dean, W.P. Carey School of Business	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	100	Introduction to Dance	Overview of dance as a cultural and performative practice, exploring history and theory, philosophy, and movement practices, with reference to key pioneers in the field from around the world.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	
DCE	110	Argentine Tango I	Introduces basic movement elements, explores various contexts shaping Argentine Tango, and emphasizes social tango with exposure to vals and milonga timing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	111	Raqs Sharqi I	Familiarize students with the ancient art of Middle Eastern dance. Covers posture, styling, basic body isolations, rhythm patterns, footwork, as well as the social significance and history of the dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	112	Capoeira I	Introduces the Afro-Brazilian martial art and movement form capoeira. Molds elements of self-defense, dance, music, song, language, culture and philosophy into the course.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	113	Dances of Africa I	Introduces basic elements of West and Central African dance styles, including the traditional rhythms and cultural context.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	114	Dances of India I	Introduces Indian folk dances with an emphasis on the history and various movement elements of an ancient South Indian classical dance form, known as Bharata Natyam.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	115	Yoga I	Introduces a basic physical and philosophical understanding of yoga. Designed by a certified Yoga instructor.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	116	T'ai Chi Chuan I	Introduces an ancient Chinese internal martial art form. The structure includes the beginner level of Tai Chi Chuan theory and movement practice.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	117	Feldenkrais I	The Feldenkrais method is an approach to enhance awareness of the body, improve functional actions, and expand one's repertoire of movements.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	118	Yoga/Pilates	Provides a basic physical and philosophical understanding of yoga and Pilates mat practices.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	120	Modern Dance I	Introduces modern dance and its basic principles, including alignment, core muscular strength, and spatial exploration.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	121	Ballet I	Introduces principles of ballet and development of basic technical skills, including dynamic alignment, functional rotation, and musicality.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	122	Jazz I	Provides students with beginning-level technique class in different jazz styles. Focuses on alignment, technique, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	123	Hip Hop I	Equips student with understanding of hip hop dance history, culture and music through studio work on various hip-hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	124	Latin/Swing/Ballroom I	Introduces major Latin and ballroom dances and focuses on a system of elements that are found in all partnership dances, including movement components, rhythmic patterns, dance positions, and unique characteristics used to better define each dance.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	125	Latin/Salsa I	Introduces Latin dancing. Instruction focuses on salsa, cha-cha, merengue, and rumba.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	126	Country-Western	Initiates the student into the rhythm two-step, progressive two-step, night club two-step, country cha-cha, country waltz, triple swing and a multitude of line dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	130	First-Year Movement Practices I	Introduces diverse somatic movement principles and practices through exploration of movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance major
DCE	131	First-Year Movement Practices II	Modular structure enables a series of short intensive studies including movement, context, theory, and personal reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance student; DCE 130 with C or better
DCE	133	Urban Movement Practices I	Designed as an introduction to dance, history, culture, and music in urban movement styles.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors, BA Performance and Movement, BIS-Dance, Dance minor; Credit is allowed for only DCE 133, 194 (Intro to Urban Mvt. Practices) or 494 (Urban Movement Practices)
DCE	134	Postmodern Contemporary I	Introduces postmodern contemporary dance technique and theory. Designed to enhance the dancer's technical and artistic proficiency by using movement that is athletically challenging, nuanced, and rhythmically complex.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	135	Contemporary Ballet I	Introduces contemporary view of ballet technique and theory with attention to enhancing student's dynamic alignment.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	136	Somatic Practices I	Survey course offers a practical and theoretical introduction to some of the major somatic practices evolving out of the 20th century. Guest practitioners and teachers of various embodied practices share theory, practice and context. Explores movement and the integration of the body and mind through a variety of somatic lenses (e.g., the Alexander Technique, Authentic Movement, and experiential anatomy).	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Credit is allowed for only DCE 136 or 194 (Intro Movemnt Language Sources)

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DCE	137	African and Diaspora Movement Practices I	Foundational course in the African and the Diaspora movement practices curriculum.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance BFA, BIS-Dance concentration or Dance minor; Credit is allowed for only DCE 137, 194 (Mvt Practice: Africa/Diaspora), 294 (Mvt Practice: Africa/Diaspora) or 494 (African & Diaspora Mvt Prac)
DCE	160	First-Year Creative Practices I	Explores creativity and creative processes with reference to some key historical practices and influential artists. Seeks to encourage and develop students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	161	First-Year Creative Practices II	Explores creativity and creative processes with reference to some key historical practices and influential artists. Encourage and develops students' awareness of their own imagination and creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance BFA student; DCE 160 with C or better
DCE	170	First-Year Seminar I	Orientation to the university learning environment and profession of dance with emphasis on developing tools and processes for reflection and critical thinking.	N	LEC	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major
DCE	171	First-Year Seminar II	Continuation of First-Year Seminar I. Focuses on orientation to the larger field of contemporary dance practice with an emphasis on developing tools and processes for reflection, synthesis, and critical thinking. Requires participation in School of Dance "Dance Matters."	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance majors
DCE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
DCE	201	Dance, Culture, and Global Contexts	Introduces the study of dance as culture in diverse global contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	
DCE	202	Dance in U.S. Popular Culture	Investigates vital cultural heritages that have shaped dance in U.S. American popular culture from 20th century to the present. Emphasizes dance as a producer of social space and cultural identity as well as a reflection of diverse social realities and dynamics of power. Following required reading and videos, the course surveys time periods of dance from the late 1800s through the 20th century to the present day.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & C	Credit is allowed for only DCE 202 or 294 (Dance in US Popular Culture)
DCE	203	Walk this Way	Addresses walking as a key component in movement studies and further brings the study of bodily movements center stage as a means to address the dynamic between self and society. Designed for nonmajors. Not eligible for majors credit.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre/Co-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only DCE 203 or 294 (Walk this Way)
DCE	210	Argentine Tango II	Builds upon concepts, figures, and elements of the Argentine Tango introduced in level one.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 110 or DAN/DCE 194 (Argentine Tango I)
DCE	211	Raqs Sharqi II	Focuses on refining beginning technique, advanced movements, layering and musical interpretation. Uses choreography and improvisation to encourage mind-body awareness.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 111 or DAN 194 (Raqs Sharqi I)
DCE	216	T'ai Chi Ch'uan II	Intermediate-level study of the ancient Chinese martial art of rounded, fluid, balanced movements. Teaches the sets of long form Yang style of Tai Chi Ch'uan in a slow and relaxed manner.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 116 or DAN 194 (T'ai Chi Ch'uan I)
DCE	220	Modern Dance II	Explores modern dance practices, including somatic techniques, stylistic versatility, and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Credit is allowed for only DAN 130 (Modern II) or DCE 220
DCE	221	Ballet II	Explores contemporary and classical ballet practices, focusing on whole body integration and performance strategies.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	222	Jazz II	Explores intermediate level of jazz dance techniques.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 122 or DAN 130 (Jazz I)
DCE	223	Hip Hop II	Intermediate-level class that provides the knowledge of hip hop dance history, culture and music through studio work on various hip hop dance styles.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 123 or DAN 194 (Hip Hop I)
DCE	224	Latin/Swing/Ballroom II	Continues development of level one Latin/Swing/Ballroom dances to prepare student to have command of the complex rhythmic patterns and figures used in major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 124 or DAN 194 (Latin/Swing/Ballroom I)
DCE	225	Latin/Salsa II	Reviews and reinforces the basics introduced in Latin/Salsa I and builds upon more complicated concepts and figures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 125 or DAN 194 (Latin/Salsa I)
DCE	230	Second-Year Movement Practices I	Investigates selected movement forms in the second-year movement practices. New movement forms include but are not limited to contact improvisation, Alexander technique, Feldenkrais, Body Mind Centering (BMC), taekwando, aikido, wushu, LMA, yoga, or somatic bodywork.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors; DCE 131 with C or better
DCE	231	Second-Year Movement Practices II	This course is set up in two modules. In module one, students will investigate a movement form, include but are not limited to contact improvisation, Alexander technique, Feldenkrais, Body Mind Centering (BMC), taekwando, aikido, wushu, LMA, yoga, or somatic bodywork. Module two expands the practice of rhythmic awareness through exploration and investigation of the close relation between thought and act, the kinesthetic and the verbal, the text and the beat, as well as the breath and the word.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors; DCE 230 with C or better

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DCE	233	Urban Movement Practices II	A practical and theoretical investigation of the urban movement forms and practices developed over recent years in urban centers around the world. Addresses the evolution of hip hop/urban movement dance through the study of House style.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Prerequisite(s): DCE 133 with B+ or better
DCE	234	Postmodern Contemporary II	Investigation and practices of postmodern contemporary dance technique. Development of movement quality and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Prerequisite(s): Performance and Movement BA or Dance BFA major; DCE 134 with C or better
DCE	235	Contemporary Ballet II	Explores the possibilities of contemporary ballet technique and theory with awareness of student's individual anatomical differences.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Prerequisite(s): Performance and Movement BA or Dance BFA major; DCE 135 with C or better
DCE	236	Somatic Practices II	Laboratory for somatic education that explores the foundations of movement, voice, expression and spatial awareness. Open to nonmajors, the class welcomes and encourages the participation of students from a wide variety of disciplines. Taught through the principles of specific somatic lenses (e.g., the Alexander Technique, Bartenieff Fundamentals, and Body Mind Centering), the course highlights how embodied awareness affects artistic process and choice making, as well as enhancing physical capacities, kinesthetic intelligence, and the refinement of performance and technical skills. Emphasizes developing a holistic perception of ourselves, our relation to one another, and to the environment.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		
DCE	240	Media for Dance	Computer applications for human movement modeling, digital video design and creation, sound composition, and the incorporation of multimedia design elements into online environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	CS	
DCE	260	Second-Year Creative Practices I	Explores concepts introduced in the first year of creative practice and further expands into the themes of analysis and investigation. Year two experience involves the investigation of learning to compose and construct choreographic material through individual, collaborative, improvisational, and group exploration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance major; DCE 161 with C or better
DCE	261	Second-Year Creative Practices II	Continues developing students' awareness of their own creative process through individual and group projects involving problem solving, creative tasks, and reflection.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance major; DCE 260 with C or better
DCE	262	Rhythmic Theory for Dance I	Elements of music, music structures, and their relationship to dance. Emphasis on rhythmic analysis and dance accompaniment.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	270	Second-Year Seminar I	Continues developing tools and processes for reflection and critical thinking by identifying individual goals and objectives related to the students' current and future academic and professional careers	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major; DCE 171
DCE	271	Second-Year Seminar II	Provides basic understanding of costume design, sound production, and interactive performance for dance.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major; DCE 270 with a Y
DCE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DCE	300	Moving Histories	In-depth study of the history of Western dance in Europe and America. Students learn about various ways of conducting research into dance history, including interviewing, researching using primary resources and performing scholarship.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Pre-requisite: ENG 101, 105 or 107 with C or better
DCE	301	Meaning in Motion	Critical inquiry into the nature of dance through the lens of dance theory. Covers philosophical and theoretical issues raised by the study of dance in relation to specific historical and global contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better
DCE	303	The Body Condition(ed)	Examines contemporary practices of conditioning the body from a triangulation of perspectives: physical, social, and experiential. Enhances the ability to obtain a holistic understanding of how the self/social dynamic operates within the context of body conditioning. Designed for Non-Majors. Not Eligible for Dance Major Requirements.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	SB	Pre/Co-requisite: ENG 102, ENG 105 or ENG 108
DCE	324	Latin/Swing/Ballroom III	Refines dances learned in the intermediate level of Latin and ballroom dances, including foxtrot, waltz, salsa, cha cha, rumba, samba, west coast swing, bolero, tango, and swing. Prepares students to have a more advanced command of the complex rhythms and figures used in the major partnership dances.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: DCE 224 or DAN 294 (Latin/Swing/Ballroom II)
DCE	330	Third-Year Movement Practices I	Focuses on the application of diverse movement forms and somatic studies in a range of performance contexts. These contexts may include live and mediated performance, community-based projects, pedagogy, analysis of movement forms in relation to musical compositions or the creation of new movement languages.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance major; DCE 231
DCE	331	Third-Year Movement Practices II	Student will focus on the integration of diverse movement forms and somatic practices, as well as developing an in-depth understanding of a range of performance contexts practically and theoretically.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors; DCE 330 with C or better
DCE	333	Urban Movement Practices III	A practical and theoretical integration of the urban movement forms that have been investigated and practiced in the urban movement practices curriculum.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): DCE 233 with B+ or better

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DCE	334	Postmodern Contemporary III	Integrates dance theory and practices of postmodern contemporary dance technique. Refines movement quality and performance skills.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Performance and Movement BA or Dance BFA major; DCE 234 with C or better
DCE	335	Contemporary Ballet III	Expansion of student's technical skills and theoretical knowledge through utilization of a hybridized ballet movement vocabulary.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: BA Performance and Movement or BFA Dance major
DCE	336	Somatic Practices III	Laboratory for somatic education that explores the foundations of movement, voice, expression and spatial awareness. Open to nonmajors, the class welcomes and encourages the participation of students from a wide variety of disciplines. Taught through the principles of specific somatic lenses (e.g., the Alexander Technique, Bartenieff Fundamentals, and Body Mind Centering), the course highlights how embodied awareness affects artistic process and choice making, as well as enhancing physical capacities, kinesthetic intelligence, and the refinement of performance and technical skills. Emphasizes developing a holistic perception of ourselves, our relation to one another, and to the environment.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): minimum 45 hours
DCE	338	Urban Movement Practices Ensemble	Focuses on building a cooperative practice among artists. The ensemble of dancers and musicians explore the connections between urban musical praxis and urban movement forms in a live, improvisatory setting. Places special emphasis on hybridization, or the blending of musical and gestic traits from two or more genres. Participants are expected to experiment in a cross-disciplinary manner throughout the semester. Course serves as an "experiment lab" for students enrolled in DCE 333 as well as other music and dance students.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): minimum 45 hours; Corequisite(s): DCE 333; Credit is allowed for only DCE 338 or DCE 294 (Urban Movement Practices Ensemble)
DCE	350	Dance in the Classroom: Learning Through Movement	Explores theories of learning, thought development, and knowledge construction through aesthetic movement experiences. Students look to theories from the fields of aesthetics, phenomenology (study of lived experiences), somatics (study of the soma or body/mind), sociology and epistemology (theory of knowledge) to understand how the intertwined relationship of human thought development and movement patterning can affect children's learning and development.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Junior standing
DCE	354	Creative Approaches to Teaching Dance I	Explores creative strategies and methodologies for teaching dance to a variety of populations in diverse settings.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance BFA student
DCE	356	Creative Approaches to Teaching Dance II	Explores creative strategies and methodologies for teaching dance to a variety of populations in diverse settings.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance major
DCE	360	Third-Year Creative Practices I	Provides an orientation to the field of community dance practice. Students investigate foundational theories pertaining to the development of community dance worldwide, are exposed to leaders in community dance practice, and have in-depth applied experiences interacting with different populations in a variety of community dance contexts.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance BFA student; DCE 261 with C or better
DCE	361	Third-Year Creative Practices II	Historical survey of music and compositional elements relative to dance. Emphasis on analysis of choreography from a musical standpoint.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance major; DCE 360 with C or better
DCE	370	Third-Year Seminar I	Provides an orientation to the field of community dance practice. Over two consecutive semesters, students investigate foundational theories pertaining to the development of community dance worldwide, are exposed to leaders in community dance practice, and have in-depth applied experiences interacting with different populations in a variety of community dance contexts.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major; DCE 271 with a Y
DCE	371	Third-Year Seminar II	Hones skills in collaborative approaches, teaching, leading, and facilitation through partnerships with community organizations in the Phoenix metropolitan area. Students study community dance practices covering a range of creative process and community building tools that can be used in diverse settings. Applies research methods, such as data collection, analysis, and reflection, to measure the efficacy of community arts practices.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance major; DCE 370 with a Y.
DCE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DCE	402	Ethnography of Dance Practices	Examines the field of ethnochoreology, ethnographic methods, and interpretive research practices. Develops critical writing, thinking, and viewing skills for comparative dance study.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L	Pre-requisite: DCE 201 with C or better; ENG 102, 105, or ENG 108 with C or better
DCE	404	Dance and Ethics	Examines ethical issues as they relate to the field of dance, including the following: the ethical treatment of dancers within educational and professional institutions; the ethical creation of dances sensitive to copyright/appropriation concerns as well as issues of form and content; the ethical engagement of the arts by the state; the ethical use of dance in trauma recovery and community building.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Junior standing; ENG 102, ENG 105 or ENG 108 with C or better

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DCE	405	Rhetorical Moves	Addresses creative practice from the perspective of the embodied creative artist. Embodiment is theorized using a conflation of interdisciplinary concepts to analyze the complex and fluid nexus that occurs as the artist creates. Students theorize the creative artist as a rhetor and the creative practice as a rhetorical situation to understand the deconstructive interaction of the creative act. Explores ways to utilize this new theorization of embodiment for interdisciplinary research into creative practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Prerequisite(s): minimum 45 hours
DCE	438	Dance Theatre Performance/Production	Performance or technical theatre work in designated dance productions. 3 hours a week per semester hour.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance BFA, Dance minor or BIS Dance concentration
DCE	460	Transition Project I	Original choreography for group performance with analysis and critique of problems encountered in production.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance BFA student
DCE	461	Transition Project II	Original research that integrates dance and a related field of interest. Includes production of written document and public presentation. Fall semester must be completed before spring registration. May be repeated for a total of 4 semester hours.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance students; DCE 460 with C or better
DCE	470	Fourth-Year Seminar	Explores and investigates the larger world of dance as it pertains to transitioning out of the university environment into professional lives. Discussion revolves around career opportunities, options and finding potential work synergies that will parlay into meaningful and exciting lives.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisites: BFA Dance major; DCE 371; Credit is allowed for only DCE 470 or 494 (4th-Yr Seminar)
DCE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
DCE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): Barrett Honors student
DCE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Prerequisite(s): Barrett Honors student
DCE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
DCE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-7		
DCE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
DCE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	501	Philosophy of Dance	Analyzes traditional and contemporary theories of dance with regard to issues of expression, form, and meaning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	502	Cultural Concepts of Dance	Examines the close connections among culture, dance, and movement through writings in cultural theory, dance ethnology, and philosophy.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	504	Dance and Ethics	Examination of ethical issues as they relate to the field of dance, including the following: the ethical treatment of dancers within educational and professional institutions; the ethical creation of dances sensitive to copyright/appropriation concerns as well as issues of form and content; the ethical engagement of the arts by the state; the ethical use of dance in trauma recovery and community building.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Dance MFA student
DCE	505	Rhetorical Moves	Addresses creative practice from the perspective of the embodied creative artist. Embodiment is theorized using a conflation of interdisciplinary concepts to analyze the complex and fluid nexus that occurs as the artist creates. Students theorize the creative artist as a rhetor and the creative practice as a rhetorical situation to understand the deconstructive interaction of the creative act. Explores ways to utilize this new theorization of embodiment for interdisciplinary research into creative practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Herberger Institute of Design and the Arts graduate students
DCE	530	Graduate Movement Practices I	The four-semester sequence of graduate movement practices are a sequence of graduate-level movement studies experiences designed to emphasize in-depth psychophysical explorations of specific somatic movement practices and frameworks as well as epistemological frameworks for learning in and through the body. Addresses the integrated practices and theoretical underpinnings of Laban/Bartenieff praxis, Body Mind Centering and other somatic practices that are explored within the four-course sequence that facilitate movement exploration, movement functioning, movement performance and movement creation as well as performance and social theory constructs.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: MFA Dance student

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DCE	531	Graduate Movement Practices 2	The series of graduate movement practices courses are a sequence of two graduate-level movement studies experiences designed to emphasize in-depth psychophysical explorations of specific somatic movement practices and frameworks as well as epistemological frameworks for learning in and through the body. Classroom experiences are approached from theoretically grounded and contextualized perspectives that address through practice current somatic and epistemological thinking. The overarching frameworks for the first and fourth modules are designed as "bookends" for introducing, contextualizing, and synthesizing classroom experiences and concepts explored within the two-course sequence.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: MFA Dance student
DCE	534	Postmodern Contemporary	Preparation in the performance and comprehension of professional-level modern dance for first-year graduate students. 6 hours weekly.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance Graduate student
DCE	535	Contemporary Ballet	Graduate-level theoretical study and movement practice of contemporary ballet for contemporary dancers.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: MFA Dance student
DCE	536	Somatic Practices	Laboratory for somatic education that explores the foundations of movement, voice, expression and spatial awareness. Open to nonmajors, the class welcomes and encourages the participation of students from a wide variety of disciplines. Taught through the principles of specific somatic lenses (e.g., the Alexander Technique, Bartenieff Fundamentals, and Body Mind Centering), the course highlights how embodied awareness affects artistic process and choice making, as well as enhancing physical capacities, kinesthetic intelligence, and the refinement of performance and technical skills. Emphasizes developing a holistic perception of ourselves, our relation to one another, and to the environment. Integrated lecture/lab. Prerequisite(s): degree- or nondegree-seeking graduate.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only DCE 536 or DCE 598 (Movement Language Sources) or (Somatic Practices)
DCE	537	African and Diaspora Movement Practices	Investigates and integrates historical and cultural contexts for West, Central, and South African and Post-African (diasporic) movement practices. Engages movement and physical articulation as tools to examine specific dance cultural knowledge and demonstrate/embodiment techniques representing that cultural knowledge.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance major; Credit is allowed for only DCE 537 or DCE 598 (African Diaspora Movement Practices)
DCE	538	Dance Theatre	Performance in specially choreographed dance productions.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: MFA Dance student
DCE	540	Issues in Media for Dance	Introduces desktop multimedia as it relates to dance creation, production, education, and research.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	543	Sound Design for Dance	Audio mixing for analog/digital recording and editing.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisite: Dance majors
DCE	554	Teaching Praxis I: Postsecondary Teaching Philosophies, Foundations and Practices	Provides both the theoretical basis and practical application of principles for teaching contemporary dance disciplines in a postsecondary setting. Includes discussion, co-teaching and individual teaching projects and sessions, practical application of course readings, and guest speakers. Both dance and discussion of ideas in each class session.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Dance MFA student
DCE	560	Graduate Creative Practices I	Artistic research through the practices of improvisation, choreographic choice making, and interdisciplinary collaboration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	561	Graduate Creative Practices II	Explores a variety of contemplative practices designed to cultivate awareness and serve as stimuli for generating choreography and creative approaches in interdisciplinary collaborations.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance Graduate student; DCE 560
DCE	563	Rhythmic Awareness	This course focuses on the kinesthetic aspects of weight, space, and time. It is opportunity for individual exploration as well as an ensemble experience, a chance to come together as a group through the communicative nature of sound, movement, and visual patterns.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Dance MFA student
DCE	570	Graduate First-Year Seminar I	Part of a four-semester sequence that offers a cohort experience to increase awareness of current global dance practices, present opportunities for dialoguing about topics significant to fulfilling degree requirements and that promote success in the dance program as well as to facilitate transition into the professional world. Seminar.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Dance Graduate student; Credit is allowed for only DCE 570 or DCE 591 (1st Year Graduate Seminar)
DCE	571	Graduate First-Yr Seminar II	Part of a four-semester sequence that offers a cohort experience to increase awareness of current global dance practices; present opportunities for dialoguing about topics significant to fulfilling degree requirements and that promote success in the dance program as well as to facilitate transition into the professional world.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): Dance MFA student
DCE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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DCE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, <u>highly specialized courses responding to unique student demand.</u>	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	634	Postmodern Contemporary	Preparation in the performance and comprehension of professional-level modern dance for second-year graduate students. 6 hours weekly.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Dance Graduate student
DCE	654	Teaching Praxis II: Theories, Contexts, Populations, Psychomotor Development and Curriculum Design	Applies current learning theories and psychomotor development approaches to teaching practices and curriculum design for a variety of contexts and populations ranging from early childhood to late adulthood and community to institutional settings. Students develop and implement pedagogical praxis frameworks that stem from their developing teaching perspectives, values and objectives. Course experiences are designed to help students effectually integrate pedagogical theory and practice toward successful and meaningful ends.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): DCE 554; Credit is allowed for only DCE 654 or DCE 598 (Apprenticeship)
DCE	656	Teaching Praxis III: Secondary Practices and Teacher Preparation Course Development/Implementation	Prepares students to teach in secondary dance education settings; to develop and teach higher education dance pedagogy, curriculum development, and teacher prep courses that meet professional teaching standards, state and national learning standards and requirements and institutional benchmarks. Participants develop specific teaching strategies and frameworks, as well as gain practical experience, within the settings of secondary dance education and university teacher preparation courses. Utilizes Laban Movement Analysis and other social somatic frameworks as inroads into teaching, curricular design and student assessment. Students help instruct and mentor undergraduate dance majors in a secondary dance teaching methods course. Illuminates current sociocultural and educational issues that influence teaching and learning in secondary dance classrooms, and addresses strategies and requirements for pre-service teacher preparation courses.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	4		Prerequisite(s): DCE 554; Credit is allowed for only DCE 656 or DCE 680 (Secondary Teaching Praxis and Teacher Training Frameworks)
DCE	657	Pedagogical Research and Fieldwork	Provides a theoretical and practical foundation for students to engage in pedagogical research and fieldwork. Places primary emphasis on investigating and applying qualitative methods to processes of pedagogical inquiry and research. Students are mentored through processes of gathering information, focusing, designing, implementing and assessing an educational research project through fieldwork in a context of their choosing. The outcomes of students' fieldwork projects are documented and articulated in the forms of a scholarly research paper and live research presentation.	N	RSC	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Prerequisite(s): DCE 554
DCE	660	Graduate Creative Practices III	Artistic research through the practices of choreographic choice making, exploration, and experimentation of integrated environments and interdisciplinary collaboration.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	661	Graduate Creative Practices IV	Culmination of a four-semester Creative Practices sequence, focusing on articulating individual creative practices and identifying the needs of each student relative to their Applied Projects. Students are also responsible for understanding the content and requirements for the <u>selected modules of this course.</u>	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Dance student
DCE	670	Graduate Second-Year Seminar I	Part of a four semester sequence that offers a cohort experience to increase awareness of current global dance practices, presents opportunities for dialoguing about topics significant to fulfilling degree requirements and promotes success in the dance program as well as to facilitate transition into the professional world. Reflection is a key component of the School of Dance curriculum; develops ability and skills in analysis, but more importantly builds awareness of intuitive and habitual patterns of response to new stimuli. The Seminar is a key moment each week to develop a community of inquiry amongst peers.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: MFA Dance student; Credit is allowed for only DCE 591 (2nd Yr Seminar) or DCE 670
DCE	671	Graduate Second-Year Seminar II	The Second-Year Graduate Seminar is part of a four semester sequence that offers a cohort experience to increase awareness of current global dance practices, present opportunities for dialoguing about topics significant to fulfilling degree requirements and that promote success in the dance program as well as to facilitate transition into the professional world.	N	SEM	N	YGB	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): Dance MFA student

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DCE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DCI	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
DCI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
DCI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
DCI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
DCI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
DCI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
DCI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
DCI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
DCI	510	Teacher as Researcher	Introduces teacher research as a new research genre; offers teachers guidance on planning and conducting research on their practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: COE 501 or DCI 510 with B or better
DCI	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student

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DCI	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCI	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	701	Curriculum Theory and Practice	Curriculum theory and practice as a field of study. Its current orientations and applications, modes of inquiry, and community of scholars and practitioners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	702	Interdisciplinary Research Seminar	Core research course for students in the interdisciplinary PhD in Curriculum and Instruction program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DCI	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DCI	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DCI	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Post Baccalaureate Undergraduate student
DNP	601	Theoretical Foundations for Advance Practice Nursing	Examines philosophical foundations of advanced nursing practice by analyzing interrelationships among theory, philosophy, practice, and research.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	602	Evaluating Research for Practice	Provides opportunities for graduate students to develop the knowledge and skills to critically analyze scientific literature and research for application to practice.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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DNP	603	Health Equity and Social Justice	Focuses on the application of theories related to social justice and knowledge of social determinants of health to the role of the graduate prepared nurse for the purpose of advocating for health equity and creating innovative methods of addressing social injustices to improve health outcomes.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to graduate Nursing program
DNP	604	Advanced Human Pathophysiology Across Lifespan	Core course focuses on human pathophysiology and concepts of genetics for advance practice nursing.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology or Fam Psy MentHlth or Family NP or Women's Hlth NP or Neonatal NP or Pediatric NP) major or Family Nurse Practitioner or Family Psychiatric and Mental Health Nurse Practitioner certificate
DNP	605	Advanced Health Assessment Across Lifespan	Advanced health assessment skills, including history-taking strategies and physical, functional, developmental, and psychosocial assessment.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: DNP Adv Nursing Practice major or Family Nurse Practitioner or Family Psychiatric and Mental Health Nurse Practitioner certificate
DNP	608	Advanced Pharmacotherapeutics Across Lifespan	For advanced practice nurses, expands theoretical and evidence-based knowledge and promotes synthesis of pharmacotherapeutic concepts and principles across the lifespan.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: DNP Adv Nursing Practice major or Family Nurse Practitioner or Family Psychiatric and Mental Health Nurse Practitioner certificate
DNP	609	Advanced Practice Nursing Role	Focuses on the examination and implementation of the advanced practice nursing (APN) role. Presents historical and contemporary social and political influences on the development and implementation of the APN role and the circumstances prompting the movement of education for advanced practice to the doctoral level. Emphasizes the analysis of the role the APN and the Doctor of Nursing Practice prepared provider within the greater health care system. Explores issues and challenges related to advanced practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): Doctor of Nursing Practice student
DNP	610	Advanced Practice Nursing Role II	Focuses on the ethical and professional role of the DNP, negotiation strategies, and preparation of a professional portfolio.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Pre-requisite: DNP 609 with B or better
DNP	613	Women's Health Promotion I	Didactic course focuses on theories of health behavior, health promotion, disease prevention and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 614
DNP	614	Women's Health Practicum I	Clinical assessment and education of women across the lifespan for the purposes of health promotion and disease prevention.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 613
DNP	615	Management of Common Problems in Women's Health	Focuses on management of nursing care for high-risk perinatal women and women with common health problems.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 616
DNP	616	Advanced Women's Health Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 615
DNP	617	Management of Complex and Chronic Disease in Women	Didactic course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health status across the lifespan and patient education.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 618
DNP	618	Advanced Women's Health Practicum III	Clinical course focused on using current evidence-based research as the context for the assessment and management of complex and chronic reproductive and gynecologic health states across the lifespan and patient education.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Women's Health student; Co-requisite: DNP 617
DNP	621	Health Assessment Skills	Skill-based course focuses on advanced clinical skills including suturing, splinting, x-ray, ECG and advanced lab interpretation.	N	LEL	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): DNP 605
DNP	623	Adult-Gerontology Health Promotion	Introduces health promotion and disease prevention for adults across the lifespan emphasizing principles of evidence-based practice in clinical and community settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 624
DNP	624	Adult-Gerontology Health Promotion Practicum	Clinical practicum designed to apply principles of evidence-based practice in health promotion and disease prevention in clinical and community settings.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 623
DNP	625	Management of Common Health Problems in Adults Across the Lifespan	Includes theory and research that guides the management and maintenance of adults across the lifespan with common health alterations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 626

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DNP	626	Management of Common Health Problems/Adults Across the Lifespan Practicum	Diagnosis, management, and application of advanced knowledge and skills in caring for adults across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 625
DNP	627	Management of Complex Health Alterations in Adults Across the Lifespan	Focuses on application of EBP in care of adults of all ages with complex health alterations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 628
DNP	628	Management of Adults Across the Lifespan w/Complex Health Alterations Practicum	Clinical practicum designed to apply principles of evidence-based practice in primary care management of adults across the lifespan with complex health alterations.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Prerequisite(s): DNP Advanced Nursing Practice (Adult-Gerontology Nurse Practitioner) major. Corequisite(s): DNP 627
DNP	633	Family Health Promotion	Focuses on concepts and strategies to promote, manage, and maintain health of children, adults, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 634
DNP	634	Family Health Promotion Practicum	Clinical application of theories, concepts, and principles in the care of children,	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: Advanced Nursing Practice (Family Nurse Practitioner) major; Co-requisite: DNP 633
DNP	635	Management of Common Health Problems in Children, Adults and Families	Didactic course that integrates research into clinical decision making as the context for the assessment and management of acute and common health problems in family practice across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 636
DNP	636	Management of Common Health Problems in Children, Adults, and Families Practicum	Clinical application of theories, concepts, and research related to the management of acute and common problems in family practice across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 635
DNP	637	Management of Complex and Chronic Health Problems in Children, Adults and Families	Didactic course that integrates research into clinical decision making as the context for the assessment and management of complex and chronic problems in family practice across the lifespan.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 638
DNP	638	Management of Complex and Chronic Health Problems in Children, Adults, and Families Practicum	Clinical application of theories, concepts, and research related to the management of complex and chronic problems in family practice across the life span for Family Nurse Practitioner role specialty.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Family Nurse Practitioner); Co-requisite: DNP 637
DNP	640	Advanced Human Pathophysiology Pediatrics	Didactic course for pediatric nurse practitioner students focuses on applying concepts of human pathophysiology and genetics in pediatric patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner)
DNP	641	Advanced Health Assessment Pediatrics	Skills-based advanced health assessment course that includes history-taking strategies and physical, functional, developmental, psychosocial health assessment of children (birth-21).	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Advanced Nursing Practice DNP (Pediatric Nurse Practitioner)
DNP	642	Applied Pharmacotherapeutics for Pediatrics	Applies evidence-based pharmacotherapeutic principles to disease treatment and health promotion and maintenance for pediatric patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner)
DNP	643	Developmentally Based Care of the Well Child	Offers information for theory-based developmental care of well children. Includes anticipatory guidance for parents and/or children/teens.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 644
DNP	644	Well Child Advanced Practicum	Clinical application of theories, concepts and principles as they relate to the developmentally based care of the well child.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 643
DNP	645	Management of Common Problems in Pediatric Primary Care	Provides health promotion and disease prevention strategies for the advanced nursing care of all children and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 646
DNP	646	Management of Common Problems in Pediatric Primary Care Practicum	Facilitates development of advanced clinical skills in the assessment and management of child health, health surveillance and promotion.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 645

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DNP	647	Management of Complex and Chronic Health Problems in Pediatric Primary Care	Third pediatric didactic course focuses on assessment and management of childhood complex and chronic health problems and special health conditions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 648
DNP	648	Management of Complex & Chronic Problems Pediatric Primary Care Practicum	Clinical course assists students in developing advanced clinical skills in decision making with chronically ill or special needs pediatric patients.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Pediatric Nurse Practitioner); Co-requisite: DNP 647
DNP	650	Advanced Human Pathophysiology Neonates	Didactic course for neonatal nurse practitioner students focuses on applying concepts of human pathophysiology and genetics in neonatal patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	651	Advanced Health Assessment of Neonates	Skill-based course focuses on advanced health assessment skills, including history-taking strategies and the physical, functional, genetic, developmental, and psychosocial/cultural health assessment of neonates.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Advanced Nursing Practice (Neonatal Nurse Practitioner) DNP
DNP	652	Applied Pharmacotherapeutics for Neonates	Focuses on the application of knowledge of pharmacological principles in the treatment of diseases and promotion of health for neonates and their families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	653	Advanced Development and Family Health Promotion: Neonatal Theory I	Concepts, theories, interventions, and research related to the promotion, management, and maintenance of physical, behavioral, and developmental needs of at-risk newborns and infants and their families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 654
DNP	654	Neonatal Practicum I	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 653
DNP	655	Management of Common Neonatal Problems	Proactive neonatal theory course focusing on the concepts, theories, and research related to acute and chronic health deviations of neonates and infants.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner) Co-requisite: DNP 656
DNP	656	Neonatal Practicum II	Clinical application of theories, concepts, and principles in area of concentration.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 655
DNP	657	Management of Complex Problems in Neonates	Examines the application of knowledge of complex, multi-system alterations in neonatal health from a theoretical and research perspective in preparation for clinical practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner)
DNP	658	Neonatal Practicum III: Management of Complex Problems in Neonates	Develops and applies advanced neonatal assessment, clinical decision making, and management skills to complex health alterations in at-risk neonates to include cultural, ethical, legal, and advocacy issues.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Advanced Nursing Practice (Neonatal Nurse Practitioner); Co-requisite: DNP 657
DNP	659	Embryology and Genetics	Prepares advanced practice nurses to use embryology, genetics, and physiology concepts within the nursing process in the care of pediatric and neonatal patients.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Adv Advanced Nursing Practice (Neonatal, Pediatric or Family Nurse Practitioner)
DNP	660	Advanced Neuropsychopathology Lifespan	Manifestations of altered neurophysiology and psychopathology over the lifespan. Uses evidence-based support for theoretical views of psychiatric disorders to analyze the relationships of neuropsychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Child and Adolescent Mental Health Intervention or Family Psychiatric and Mental Health Nurse Practitioner
DNP	671	Advanced Mental Health Assessment Across the Lifespan	Focuses on comprehensive mental health assessment of psychiatric disorders occurring in children, adolescents, and families.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DNP	672	Psychopharmacology Across the Lifespan	Focuses on evidence-based use of medications for mental health disorders across the lifespan.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner
DNP	673	Mental Health Promotion Across the Lifespan	Focuses on evidence-based interventions to promote mental health across the lifespan.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner. Co-requisite: DNP 674
DNP	674	Mental Health Promotion Across the Lifespan Practicum	Clinical experiences to become skilled in assessment and evidence-based individual intervention of mental health disorders across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) Family Psychiatric and Mental Health Nurse Practitioner; Co-requisite: DNP 673
DNP	675	Management of Common Mental Health Disorders Across the Lifespan	Emphasizes the assessment and evidence-based management of common mental health disorders across the lifespan.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner Co-requisite: DNP 676
DNP	676	Management of Common Mental Health Disorders Across the Lifespan Practicum	Clinical experiences necessary to become skilled in the assessment and evidence-based management of the most common mental health disorders across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner; Corequisite: DNP 673
DNP	677	Management of Complex & Chronic Mental Health Disorders Across the Lifespan	Focuses on modalities of evidence-based treatment with children, adolescents, adults, and families with complex and/or chronic psychopathology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner; Co-requisite: DNP 678
DNP	678	Management of Complex & Chronic MH Disorders Across the Lifespan Practicum	Clinical experiences in the assessment and evidence-based management of the most complex and chronic mental health disorders across the lifespan.	N	PRA	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2-6		Pre-requisite: DNP Adv Nurse Pract (Family Psych & Mental Health Nurse Practitioner) or (Adult Psych Mental Health Nurse Practitioner) or Family Psychiatric and Mental Health Nurse Practitioner; Co- requisite: DNP 677
DNP	679	Biostatistics: Principles of Statistical Inference	Examines principles of statistical inference and their application to the analysis and interpretation of epidemiological, psychosocial, medical, <u>nursing, and healthcare data.</u>	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing graduate student
DNP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	682	Geriatric Health Promotion	Examines theoretical perspectives in aging and cultural and contextual approaches for health promotion in older adults.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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DNP	688	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
DNP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
DNP	703	Innovation in Communication-Scholarly and Professional Writing	Provides a review of principles of scholarly and professional writing, plagiarism and APA 6th edition format.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): Doctor of Nursing Practice student
DNP	704	Principles of Evidenced-Based Care in Advanced Practice	Foundational course focuses on the evidence-based process and understanding of evidence-based practice principles assist advanced practice nurses and other healthcare professionals in clinical decision making in order to provide best care.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: Doctor of Nursing Practice student
DNP	705	Healthcare Outcomes Management	Outcomes management methodology supports implementation of evidence-based practice and measurement of both patient and healthcare system outcomes attributed to adoption of best practices.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: Doctor of Nursing Practice student; DNP 704
DNP	706	Implementing Sustainable Change toward Evidence-Based Practice	Facilitates student learning about striving for and evaluating sustainable change that hinges on active improvement of practices through implementing evidence-based practice (EBP). Students engage strategies designed to facilitate advanced practice nurses' leadership of this change. Students analyze the success of their evidence-based applied clinical project that is implemented in their clinical residency course. Students evaluate the impact of their doctorally prepared evidence-based advanced practice nurse role on shifting culture to best practice. Students explore the use of adult learning, ethical, and mentorship principles to facilitate understanding of EBP in their workplace.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: Doctor of Nursing Practice major; DNP 704; DNP 705; Co-requisite: DNP 712
DNP	707	Disseminating Evidence to Advance Best Practice in Healthcare and Health Policy	Focuses on methods for dissemination of evidence to advance best practice within local, regional, and/or national settings, as well as advancement of EBP in health policy and the media.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): Doctor of Nursing Practice major; DNP 704, 705 or 706. Corequisite(s): DNP 712
DNP	708	Systems Thinking in a Complex Healthcare Environment	Studies basic and advanced systems principles as they relate innovation to the American healthcare system.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Doctor of Nursing Practice student
DNP	709	Individual and Innovation Leadership in Healthcare Practice	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Doctor of Nursing Practice student
DNP	710	Innovation in Communication and Information Systems in Nursing and Health	Examines principles of effective communication and information systems with a focus on evaluating and using emerging technologies as they relate to nursing and health care.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre-requisites: Doctor of Nursing Practice major
DNP	711	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy with emphasis on strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Doctor of Nursing Practice student
DNP	712	Clinical Residency and Management	Demonstrates DNP competencies through portfolio documentation of clinical learning experiences and implementation of the DNP Evidence-Based Clinical Applied Project. Doctoral students submit the DNP Portfolio in partial fulfillment of the degree.	N	PRA	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisite: Doctor of Nursing Practice student
DNP	713	Analysis of Organizational Cultures in Healthcare	Analyzes culture, organizational implications and relationships to change and innovation in healthcare.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Advanced Nursing Practice (Innovation Leadership) major
DNP	714	Professional Relationships in Healthcare	Analyzes professional relationships within healthcare organizations and evidence-based strategies to improve communication, coordination, and collaboration.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Advanced Nursing Practice (Innovation Leadership) major
DNP	715	Dynamics and Principles of Information in Health Care	Analyzes and applies multiple sources of information for health care leaders across the continuum of evidence including research, evidence-based practice, translational research, improvement science and quality improvement.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Advanced Nursing Practice DNP student
DNP	716	Leadership of Innovation in Healthcare	Analyzes leadership theories in the creation of complex healthcare system innovation.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisite: Doctor of Nursing Practice concentrations major
DNP	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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DSC	100	ASU Design Experience	Covers ASU's mission as the New American University, the importance and benefits of an entrepreneurial approach to problem solving, solutions to sustainability challenges, and the importance of social embeddedness. Additionally, through various course discussions and assignments, students examine the concept of academic integrity and its potential impact on their future, gain awareness of the value of engaging in research activities, and learn about taking an interdisciplinary perspective.	N	REC	N	GNA	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): BS, BSD or BSLA Design School major. Credit is allowed for only DSC 100 or 194 (ASU Design Experience)
DSC	101	Design Awareness	Surveys cultural, global, and historical context for the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & G	
DSC	102	Introduction to Design	Introduces design, with an emphasis on understanding the process and principles by which design shapes our world.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		
DSC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
DSC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
DSC	236	Introduction to Computer Modeling	Computers in design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	The Design School	3	CS	Pre-requisite: Industrial Design student; Passed Milestone
DSC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
DSC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
DSC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
DSC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
DSC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
DSC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
DSC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
DSC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
DSC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Master of Science in Design or PhD in Environmental Design & Planning student
DSC	501	Qualitative Research in Design	Theory and application of qualitative research. Emphasizes using ethnography to identify and specify innovative concepts and strategies.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Master of Industrial Design or Master of Science in Design major
DSC	520	Contemporary Design Issues	Issues influencing contemporary design such as sustainability, globalization, education, gender, collaboration and emotion.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	558	Daylighting	Daylighting as a design determinant; concepts, techniques, methodology, experiments, and case studies.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Herberger Institute of Design and the Arts graduate student
DSC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Master of Science in Design student
DSC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD or Design (Inter Design) MSD student
DSC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
DSC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): Master of Industrial Design, Master of Interior Architecture, Master of Science in Design, or Master of Visual Communication Design major
DSC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Design (Graphic Design) MSD, Design (Indus Design) MSD, or Design (Inter Design) MSD student
DSC	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
DSC	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EAC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
ECD	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
ECD	211	The Developing Child: Theory into Practice, Prenatal-Grade 3	Examines process of physical, social, emotional, cognitive, language, and literacy development of young children; includes observation, practical application, fieldwork.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	
ECD	220	Introduction to Nutrition, Health and Safety	Emphasizes providing proper nutrition, promoting a safe but challenging learning environment, and becoming knowledgeable of a child's health status. Also covers practical applications for assisting young children to develop good habits and attitudes and to assume lifelong responsibility for their own well-being.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
ECD	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
ECD	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
ECD	302	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	312	Social/Emotional Foundations of Learning	Foundations of early social development and evidence-based practices for promoting social-emotional development; young children's understanding, interactions, and relationships to the social world.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	313	Technology in Early Childhood Education	Evaluates technology and technological learning tools for early childhood classrooms; integrates technology and its tools into students' learning. Lecture, discussion, active participation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECD	315	Classroom Organization and Guidance of Young Children	Theories and strategies to guide children's development toward becoming self governing; typical and atypical behaviors; implementing age-appropriate classroom management techniques that foster individual, social, and academic competence.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	316	Teacher Research: Studying Children in Context	Introduces designing, conducting, interpreting, and reporting teacher research; methods of research and fieldwork with children to improve teaching practices and child outcomes.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	321	Emerging Language and Literacy	Language and literacy development; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical observation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	323	Building Home, School, and Community Partnerships	Knowledge and skills to facilitate positive and continuous family-school partnerships; family background, social context, family involvement, and current research on family-school interaction and academic success.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	Prerequisite(s): admission to the Professional Program
ECD	324	Social Studies and Creative Arts Curriculum, Instruction and Assessment	Social studies and creative arts standards, curriculum, and instructional and assessment strategies in an integrated social studies and creative expression curriculum for children birth through grade 3.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	341	Administration/Evaluation of EC Programs	Administration and evaluation of early childhood programs. Emphasizes planning and evaluation; regulations; health, nutrition, and safety; operations, budgeting, and supervision of personnel.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
ECD	396	Student Teaching: Early Childhood (Ages Birth-5)	Student teaching in early childhood education classrooms ages birth to 5: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): admission to the Professional Program
ECD	406	Assessment: Birth-Grade 3	Examines assessments appropriate to birth - grade 3 instruction to align curriculum with learner needs. Focuses on test design, interpretation, lesson design, and aspects related to multiple classroom and formal assessments.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	416	Social and Educational Policies Affecting Children and Families	Social policies at the national and state levels; values and assumptions of policies; political factors shaping policy and implementation; links between policy, educational practice, schools, and family functioning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	418	Instructional Methods for Young Children: Integrating Digital Media	Develops integrated experiences with children's literature for facilitating development in reading, writing, speaking, and listening. Further develops educational strategies for promoting growth in the social studies and creative arts curriculum, and instructional/assessment strategies for preprimary- and primary-level children; developmentally appropriate methods and strategies for effective instruction.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECD	477	Student Teaching: Birth to Pre-K	Supervised practicum in a birth to pre-K program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	4-6		Prerequisite(s): admission to the Professional Program
ECD	478	Student Teaching: Early Childhood (Grades K-3)	Student teaching in early childhood education classrooms grades K-3: synthesized experience in curriculum, instruction, assessment and classroom management.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-9		Prerequisite(s): admission to the Professional Program
ECD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): admission to the Professional Program
ECD	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
ECD	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
ECD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
ECD	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
ECD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
ECD	503	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
ECD	504	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	505	Foundations of Early Childhood Education	Foundational basis of the early childhood field, including historical roots, current practices, ethics, models of teaching, and application in early childhood settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECD	520	Child Guidance and Management: Child, Family, Community, and Culture	Introductory exploration of a variety of techniques for developing a positive classroom environment. Includes overview of several classroom and school management programs and possible effects of implementation. Focuses on observations made during the students' classroom and field experiences. Provides the catalyst for introducing students to the program's professional portfolio requirement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
ECD	525	Emergent Literacy	Examines research on oral language and literacy development and effective strategies for teaching language and literacy in birth to grade 1, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	526	Integrated Literacy for the Young Learner	Surveys appropriate teaching and assessment methodologies to support integrated and balanced literacy approaches K-3.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	527	Mathematics in Early Childhood Education	Theory and practice in the use of manipulative materials for teaching mathematics to preschool and primary grade children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	541	Assessment of Young Children	Assessment principles, techniques, and issues related to guiding learning for children birth through eight years. Test construction, interpretation and communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	549	Foundations of Diversity, Human Development, and the Young Child	Historical foundations and theories of child development as examined with a concern for diversity, multidirectional human change, and cultural embeddedness.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
ECD	565	Appropriate Instructional Methodologies for Young Children	Surveys appropriate teaching methodologies for young children across the curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
ECD	567	Clinical Experience: Early Childhood (Ages Birth-5)	Applies course content in early childhood education preschool classrooms birth to age 5: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	0-2		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	576	Clinical Experience: Early Childhood (Grades K-3)	Applies course content in early childhood education classrooms grades K-3: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	0-2		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	577	Practicum: Early Childhood (Ages Birth-5)	Student teaching in early childhood education classrooms ages birth to 5: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	578	Student Teaching: Early Childhood (Grades K-3)	Student teaching in early childhood education classrooms grades K-3: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ECD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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ECD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments, report, or publication. Assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student
ECD	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
ECD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements	
ECD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student	
ECD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student	
ECD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student	
ECD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student	
ECD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student	
ECN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-3			
ECN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-4			
ECN	211	Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		SB	
ECN	211	Macroeconomic Principles	Basic macroeconomic analysis. Economic institutions and factors determining income levels, price levels, and employment levels.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		SB	
ECN	212	Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		SB	
ECN	212	Microeconomic Principles	Basic microeconomic analysis. Theory of exchange and production, including the theory of the firm.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		SB	
ECN	213	Honors Macroeconomics	Introduces modern macroeconomic analysis. Theory of national income, unemployment, inflation, and economic growth and its application to economic policy. Not open to students with credit in ECN 313.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		SB	Pre-requisites: Barrett Honors student; MAT 210, 211, 270 or 271 with C or better
ECN	214	Honors Microeconomics	Introduces modern microeconomic analysis. Theories of consumer behavior, production and cost. Output and price determination in a variety of market settings.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		SB	Prerequisite(s): Barrett Honors student; Pre- or corequisite(s): MAT 211 or 271 with C or better if completed; Credit is allowed for only ECN 214 or ECN 312
ECN	221	Business Statistics	Methods of statistical description. Applies probability theory and statistical inference in business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		CS	Prerequisite(s): MAT 211, 266, or 271 with C or better
ECN	231	Honors Business Statistics	Applies statistical methods used in business and economic modeling and research. Emphasizes regression analysis and modeling.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		CS	Pre-requisites: Barrett Honors student; MAT 211 or 271 with C or better
ECN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-4			Pre-requisites: Barrett Honors student; Pre/Co-requisite: MAT 210, 211, 270, 271 or 272 with C or better if completed
ECN	303	Honors Managerial Economics	Develops a basic platform for managerial decision making. Applies basic economic concepts and models to actual business practices.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3			Pre-requisites: Barrett Honors student; ECN 214 or 312/314 with C or better
ECN	306	Survey of International Economics	Surveys international trade issues, commercial policy, trade theory, customs unions, and international monetary topics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		SB & G	Pre-requisites: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271 with C or better
ECN	312	Intermediate Microeconomic Theory	Role of the price system in organizing economic activity under varying degrees of competition.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		SB	Prerequisite(s): ECN 211 or 213 with C or better; ECN 212 or 214 with C or better; MAT 211, 266 or 271 with C or better
ECN	313	Intermediate Macroeconomic Theory	Determinants of aggregate levels of employment, output, and income of an economy.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		SB	Pre-requisites: ECN 214 or ECN 312/314 with C or better.

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ECN	315	Money & Banking	Functions of money. Monetary systems, credit functions, banking practices, and central banking policy.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	331	Economics of the European Economic Union	Examines broad economic policies seeking to influence individuals' decisions, the history of European economic development and policies, as well as institutions and social systems.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	335	South Asia and the World Economy	Develops and discusses alternative theories of trade, development, and growth in the context of south Asia and the world economy.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Prerequisites: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271 with C or better
ECN	345	Survey of Environmental and Resource Economics	Economic principles applied to private and public policy decisions involving environmental resources, natural resource management, and policy analyses. Focuses on how economic methods can contribute to making better environmental decisions.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 211 or 213; ECN 212 or 214; MAT 211 or 271 with C or better.
ECN	355	Economics of Healthcare	Uses economic tools and models to discuss and evaluate the American healthcare system. Applies standard concepts in microeconomics, macroeconomics, and public choice economics to the study of the evolution and the current state of the healthcare system and to the study of proposals for change. Focuses on the promise and problems of using economic tools in a historical, ethical, and cultural context to understand the current healthcare system.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisites: ECN 211 or 213; ECN 212 or 214 and MAT 211 or 271 with C or better.
ECN	360	Economic Development	Theories of economic growth and development. Role of capital formation, technological innovation, population, and resource development in economic growth.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	365	Economics of Russia and Eastern Europe	Origins and analysis of contemporary institutions. Comparative development and differentiation in the 20th century.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	382	Managerial Economics	Applies economic analysis to managerial decision making. Market analysis in the context of the socio-legal environment. Does not satisfy Economics major requirements.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: Not open to Economics or Business majors. Minimum 2.0 ASU cumulative GPA and minimum of 56 total earned hours OR Non-degree student with minimum 2.0 ASU cum GPA OR Graduate student.
ECN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-4		Pre-requisites: ECN 211 or 213, ECN 212 or 214, and MAT 211 or 271 with C or better
ECN	404	History of Economic Thought	Development of economic doctrines, theories of mercantilism, physiocracy, classicism, neoclassicism, Marxism, and contemporary economics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Pre-requisites: ECN 214 or 314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	410	Applied Regression Analysis and Forecasting	Applies regression techniques to forecasting in business and institutional environments.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 221 (or ECN 231 or IEE 380 or STP 226) with C or better; ECN 214 or ECN 312 with C or better
ECN	413	Advanced Honors Macroeconomics	Develops and uses various macroeconomic models to evaluate important economic policies. Emphasizes honing students' policy evaluation skills.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: Barrett Honors student; ECN 213 or 313 with C or better; ECN 214 or 312/314 with C or better
ECN	414	Advanced Honors Microeconomics	Develops and uses various microeconomic models to evaluate important economic issues. Emphasizes the economics of uncertainty and information.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): Barrett Honors student; ECN 214 or 312 with C or better; Pre- or corequisite(s): ECN 213 or 313 with C or better if completed
ECN	416	Game Theory and Economic Behavior	Introduces game theory and its application to various economic situations under conditions of complete and incomplete information.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-reqs: ECN 214 or ECN 312/314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	421	Labor Economics	Labor supply and demand, unemployment, determinants of wages, earnings inequality, labor unions and the structure of labor contracts.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Pre-requisites: ECN 214 or 312 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	423	Economics of Education	Focuses on educational decisions, including individual choices, institutional strategies and government policies. Topics include measuring the costs and returns of education, the relationship between education and inequality, and the role of K-12 and postsecondary institutions in economic growth.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): ECN 214 or 312 with C or better; Pre- or corequisite(s): ECN 213 or 313; Credit is allowed for only ECN 423 or 494 (Economics of Education)

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ECN	425	Introduction to Econometrics	Elements of regression analysis: estimation, hypothesis tests, prediction. Emphasizes use of econometric results in assessment of economic theories.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 221 (or ECN 231 or IEE 380 or STP 226) with C or better; ECN 214 or ECN 312 with C or better
ECN	436	International Trade Theory	Comparative-advantage doctrine, including practices under varying commercial policy approaches. Economic impact of international disequilibrium.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Pre-reqs: ECN 214 or ECN 312/314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	438	International Monetary Economics	History, theory, and policy of international monetary economics. Balance of payments and exchange rates. International financial markets, including Eurocurrency markets.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB & G	Prerequisite(s): ECN 214 or ECN 312/314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	441	Public Economics	Public goods, externalities, voting models, public expenditures, taxation, and budget formation with emphasis on the federal government.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	SB	Pre-reqs: ECN 214 or ECN 312/314 with C or greater; Pre/Co-requisite: ECN 213 or 313
ECN	445	Environmental Economics	Advanced topics in environmental economics with quantitative methods for developing information that is used for environmental policy making.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisites: ECN 214 or 312 or 314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	450	Law and Economics	Economics of the legal system, including analysis of property, contracts, torts, commercial law, and other topics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-reqs: ECN 214 or ECN 312/314 with C or better
ECN	453	Industrial Organization and Competition Policy	Development of public policies toward business. Antitrust activity. Economic effects of government policies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-reqs: ECN 214 or ECN 312/314 with C or better
ECN	455	Health Economics	Focuses on health care decisions, including individual and government policies. Topics include demand for and supply of health care, payment for health care, the impact of health care reform and the techniques economists use to evaluate health care interventions.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): ECN 214 (or ECN 312) with C or better. Pre- or corequisite(s): ECN 213 (or ECN 313); Credit is allowed for only ECN 455 or 494 (Health Economics)
ECN	470	Mathematical Economics	Integrates economic analysis and mathematical methods into a comprehensive body of knowledge within contemporary economic theory.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3		Pre-reqs: ECN 214 or ECN 312/314 with C or better
ECN	475	Capstone in Economics	Capstone course integrating several areas of economics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	3	L	Pre-reqs: ECN 213 or 313 with C or better; ECN 214 or ECN 312/314 with C or better; Senior standing.
ECN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Minimum 3.0 ASU cum GPA; ECN 213 or 313 with C or better; ECN 214 or 312/314 with C or better
ECN	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-6		Pre-requisites: Barrett Honors W. P. Carey undergraduate student; ECN 213 or 313 with C or better; ECN 214 or 314 with C or better
ECN	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Pre-requisites: Barrett Honors W. P. Carey BS or BA student; ECN 213 or 313 with C or better; ECN 214 or 314 with C or better
ECN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Economics	1-4		Pre-reqs: ECN 214 or ECN 312/314 with C or better; Pre/Co-requisite: ECN 213 or 313
ECN	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	GNA	W.P. Carey School of Business	Department of Economics	1-7		Pre-requisites: ECN 313 and 314 with C or better
ECN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		
ECN	502	Decisions, Market Structure and Games: Managerial Economics	Applies microeconomic analysis to managerial decision making in areas of demand, production, cost, and pricing. Evaluates competitive strategies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Economics	2-4		Prerequisite(s): MBA degree program student
ECN	503	Global Business Environment	Macroeconomic analysis of issues related to economic growth, inflation, interest rates behavior, unemployment, exchange rate determination, and global competitiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	1-4		Prerequisite(s): MBA degree program student
ECN	510	Microeconomic Theory and Applications	Applies economic theory to production, consumer demand, exchange, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	2-4		Pre-requisites: W.P. Carey degree seeking graduate student

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ECN	525	Applied Regression Models	Simple linear regression, multiple regression, indicator variables, and logistic regression. Emphasizes business and economic applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	527	Categorical Data Analysis	Discrete data analysis in business research. Multidimensional contingency tables and other discrete models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: ECN 525
ECN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Prerequisite(s): W.P. Carey degree seeking graduate student; ECN 712 and 714 with C or better
ECN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	711	Macroeconomic Analysis I	Current theories of output, employment, inflation, and asset prices as well as major aggregates. Introduces dynamic optimization techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	712	Microeconomic Analysis I	Theory of production, consumer demand, resource use, and pricing in a market economy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	713	Macroeconomic Analysis II	Focuses on growth theory, dynamic general equilibrium models, monetary theory, open-economy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	714	Microeconomic Analysis II	General equilibrium, welfare economics, production, and capital theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student

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ECN	715	Advanced Macroeconomic Analysis	Focuses on current research areas in macroeconomics and monetary theory with emphasis on methods in economic dynamics and numerical techniques.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 711 with C or better; ECN 713 with C+ or better
ECN	716	Advanced Economic Theory I	Economic behavior under uncertainty; markets and contracts under asymmetric information; the theory of games with incomplete information and applications.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 714 with C or better; ECN 712 with C+ or better
ECN	717	International Macroeconomics	Intertemporal approach to the current account, international business cycles, international risksharing and home bias, models of exchange rate determination, balance of payment crises, sovereign debt and default.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	721	Labor Economics I	Develops basic theoretical models for analyzing labor market issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 713 and 714 with C or better
ECN	722	Labor Economics II	Extensions/criticisms of labor market theories. Applications to a variety of policy issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 721 with C or better
ECN	725	Econometrics I	Problems in the formulation of econometric models. Emphasizes estimation, hypothesis testing, and forecast of general linear models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	726	Econometrics II	Estimation and inference of qualitative and limited dependent variable models as well as general multiple equation models.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 725 with C+ or better
ECN	727	Quantitative Methods in Economics	Generalized method of moment estimation, estimation with censored and truncated samples, nonlinear models, panel-data models, econometrics of nonstationarities.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 713 and 714 with C or better
ECN	736	International Trade Theory	Theories of comparative advantage and their empirical verification. Theory and political economy of commercial policy. Resource transfers and the role of the multinational corporation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 713 and 714 with C or better
ECN	741	Public Economics	Economics of collective action, public spending, taxation, and politics. Impact of central governmental activity on resource allocation and income distribution.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey Graduate degree-seeking students only; ECN 712 with B or better; Co-requisite: ECN 714
ECN	753	Industrial Organization	Analyzes structure, conduct, and performance in industrial markets; the economics of organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 713 and 714 with C or better
ECN	760	Economics of Growth and Development	Economic problems, issues, and policy decisions facing the developing nations of the world.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student; ECN 711 and 712 with C+ or better; Co-requisite: ECN 713 and 714
ECN	770	Mathematics for Economists	Surveys mathematical ideas encountered in economics and econometrics. Topics include measure theory, probability theory, and mathematical statistics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	784	Internship		Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey degree seeking graduate student
ECN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ECN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ECN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ECS	310	Foundations in Typical / Atypical Child Development	Examines the process of typical and atypical physical, social, emotional, cognitive, and language development of young children with or at risk for delay.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	312	Social and Emotional Development of the Young Child	Examines genetic, environmental and biological influences on typical and atypical social and emotional developmental processes through current research, current issues, as well as connections to practice.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	Prerequisite(s): admission to Professional Teacher Preparation Program OR enrolled in Educational Studies program with minimum junior standing OR enrolled in Early Childhood minor
ECS	315	Classroom Organization and Child Guidance	Develops and implements analysis, intervention, and consultation strategies for effective management of classroom behavior for students with and without disabilities. Age-appropriate techniques addressing individual, social, and academic competence.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	316	Assessment/Evidence-based Practice	Examines assessments appropriate to birth - grade 3 instruction to align curriculum with learner needs. Focuses on test design, interpretation, lesson design, and aspects related to multiple classroom and formal assessments. Introduces designing, conducting, interpreting, and reporting teacher research; methods of research and fieldwork with children to improve teaching practices and child outcomes.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	321	Communication, Language Development, and Emergent Literacy	Language and literacy development; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical observation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
ECS	397	Student Teaching: Inclusive Early Childhood (Ages Birth-5)	Student teaching in early childhood education inclusive classrooms ages birth to 5: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): admission to the Professional Program
ECS	411	Instructional Methodologies for Young Children: STEM	Explores, applies and integrates STEM (Science, Technology, Engineering and Math) content, project-enhanced instructional strategies and assessments.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECS	412	Mathematics Curriculum, Instruction and Assessment	Focuses on math content, methods, skills, and attitudes to be considered in teaching young children. Examines the theoretical foundation for young children's inquiry and learning. Methods focus on practical application of theory in classroom practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECS	413	Literacy Curriculum, Instruction and Assessment	Extends ECD 321; language and literacy development in K-3 classrooms; language acquisition; methods of facilitating oral language in relation to emergent reading and writing; methods of facilitating early literacy development; clinical experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Prerequisite(s): admission to the Professional Program
ECS	420	Evaluation and Intervention Strategies for Infants, Toddlers and Preschoolers with Disabilities	Students will learn to screen, assess and provide services to young children with special needs using norm-referenced, criterion-referenced, and formative assessments to determine special education eligibility, plan individualized family service programs, and monitor progress for eligible students.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
ECS	430	Systems, Policy, and Advocacy in Early Childhood/Special Education	Social policies at the national and state levels; values and assumptions of policies; political factors shaping policy and implementation; links among policy, educational practice, schools, and family functioning that have a direct impact on both typical and special needs children in early childhood programs.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
ECS	431	Family, Community and Professional Support Systems	Covers methods and issues in cooperative teaching for special education students in general education classrooms, with an emphasis on collaborative communication skills for working with a variety of school professionals and families.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Professional Teacher Preparation Program or enrolled in Educational Studies program or enrolled in Early Childhood minor
ECS	478	Student Teaching: Special Education (Grades K-3)	Student teaching in early childhood education inclusive classrooms grades K-3: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): admission to the Professional Program
ECS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
ECT	479	Capstone Seminar in ECT	Reflective, experience-based integration of theory and practice; professional development for preschool through grade 3 teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program

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EDA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
EDA	501	Competency/Performance in Educational Administration	Nature of educational administration and the concept of competency as it applies to educational administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	505	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	511	School Law	Interpreting state and federal law and policy in school settings. Includes statutory authority for administrators, liability, constitutional rights, law, and ethics.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	514	Leadership in Curriculum and Assessment	Curriculum and assessment responsibilities of school administrators.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	526	Instructional Supervision	Administering curriculum improvement, in-service education, evaluating, and improving teaching competence; administrative instructional responsibilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	548	School, Family, and Community Connections	Administrative factors of primary importance in developing community involvement in public schools. Emphasizes theory and skill of school system and individual communication.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	572	School Finance and Human Resources	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and school financial affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	578	Critical Issues in Educational Leadership	Explores current critical issues in school leadership, including student support and relationships with governmental agencies and the community.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	611	Educational Policy and the Law	Emphasizes policy analysis and application of federal and state law to policy evaluation and development in public schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	634	Instructional Leadership	Theory, practice, and issues in school change and reform with a focus on leading change efforts at the school site.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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EDA	676	The School Superintendency	Critical examination of the school superintendency and the primary functions of this educational position. Includes the duties, responsibilities, activities, and problems of the school superintendent. Examines the unique leadership role of the school superintendent.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	679	Administration of Special Programs in Education	For personnel administering special education and federal programs; responsibilities of principals, supervisors, counselors, and directors for special education and federally funded programs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	685	Education in Global Contexts	Global perspectives on education in contemporary society with emphasis on social, political, and economic factors that affect access and equity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-6		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	701	Advanced Quantitative Methods	Data collection, analysis, interpretation in studies using quantitative methods of inquiry situated in action research, evaluation and data-informed decision making.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Leadership and Innovation EdD student; Credit is allowed for only EDA 701 or TEL 701
EDA	702	Dynamic Contexts of Education	Explores current ethical issues influencing leadership decisions with a focus on real problems in the educational setting.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Leadership and Innovation EdD student; Credit is allowed for only EDA 702 or TEL 702
EDA	703	Innovation in Teaching and Learning	Development and psychological processes of human cognition, motivation, and performance applied to cognitively diverse, English language learners, adult professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Leadership and Innovation EdD student; Credit is allowed for only EDA 703 or TEL 703
EDA	704	Leadership for Organizational Change	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Leadership and Innovation EdD student; Credit is allowed for only EDA 704 or TEL 704
EDA	772	School District Human Resources and Business Management	Effective ethical models and strategies for organizing and administering the conduct of school site human resources administration and business affairs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	773	The Superintendency and School District Leadership Roles and Responsibilities	Examines management roles and responsibilities of public school district superintendents and other leaders in identifying and addressing critical issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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EDA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDP	302	Assessment and Evaluation in Education	Applies assessment and evaluation principles to education contexts, using a case format.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1		
EDP	310	Educational Psychology for Non-Teachers	Human behavior in educational situations. Individual differences, factors affecting learning, behavioral and cognitive learning, motivation, testing, and assessment.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	SB	
EDP	311	Educational Psychology for Future Teachers	Planning and conducting effective instruction based on learning theories and principles.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3	SB	Prerequisite(s): Teachers College major, minor or certificate student
EDP	313	Childhood and Adolescence	Principles underlying total development of pre- and early-adolescent children. Emphasizes physical, intellectual, social, and emotional development with practical implications for teachers. Meets ADE requirement for one course in early adolescent psychology for middle grade endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	
EDP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDP	454	Statistical Data Analysis in Education	Role of data analysis in research and decision making. Elements of exploratory data analysis, descriptive indexes, and statistical inference.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	CS	
EDP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
EDP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
EDP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
EDP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
EDP	502	Introduction to Data Analysis	Descriptive statistics, visual approaches, estimation, and inferential methods for univariate and bivariate educational research problems. Experience using statistical software.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	503	Introduction to Qualitative Research	Terminology, historical development, approaches (including ethnography, ethnomethodology, critical theory, grounded theory, and hermeneutics), and qualitative versus quantitative social sciences; methods of inquiry.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EDP	504	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	510	Psychology in Education	Planning and conducting effective instruction based on learning theories and principles.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	514	Psychology of the Adolescent	Cognitive, physical, and social development of adolescents in contemporary society. Impact of family, school, and workplace on adolescent development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	523	Educational Assessment	Increases teachers' and others' competence in classroom assessment, grading, and testing. Emphasizes integration of curriculum, instruction, and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	529	Lifespan Human Development	Issues and models of human development as it occurs across the lifespan.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	530	Theoretical Issues and Research in Human Development	Psychological theories, research, and methods relevant to human development, emphasizing the relations between early development and later performance.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	536	Physiology of Behavioral Disorders	Critical study of nervous system, brain function for fundamental behaviors, and system dysfunctions in mental/neurological disorders.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	540	Learning Theories and Instructional Strategies	Studies grounded instructional strategies rooted in established theories of learning to form the basis of building instruction. Explores how teaching, learning and performing can be designed via technological environments to support instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate student; Credit is allowed for only EDP 540 or LSE 540
EDP	541	Motivating Students to Learn	Examines multiple perspectives on motivation and the management of learning environments as bases for reflecting on educational practice.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
EDP	552	Multiple Regression and Correlation Methods	Educational applications of regression techniques. Quantitative and qualitative predictors, curvilinear trends, and interactions. Emphasizes analyzing data and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	554	Analysis-of-Variance Methods	Educational applications of ANOVA techniques. Between- and within-subjects designs, multiple comparisons. Emphasizes using statistical software and interpreting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	563	Consultation and Supervision	Examines consultation and supervision research relevant to school psychology practice.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
EDP	566	Advanced Psychoeducational Practice	Develops advanced knowledge and skills in psychoeducational assessment and intervention with an emphasis on case conceptualization and evidence-based methods.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDP 560 and 562 with B or better
EDP	567	School Psychological Services for Diverse Populations	Examines historical, legal, ethical, and practical issues involved in the delivery of school psychological services to diverse populations.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	568	Psychological Assessment and Intervention	Skills-building course emphasizing interventions, assessment, and outcome-based educational decisions for students experiencing emotional and/or behavioral difficulties.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
EDP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EDP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	597	Applied Research and Reflection	The dual purpose of the project is to synthesize learning from multiple areas of scholarship on teaching and learning, and to reflect on the content and process of the master's degree program. Culminating product includes a reflective paper with a corresponding project, such as a literature review, curricular model, technology product, or other project as agreed upon by the student and the student's advisor.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	651	Methods and Practices of Qualitative Research	Advanced course for students familiar with theory and extant work. Topics include data collection, analysis, reporting, and an extensive fieldwork project.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: COE 503 with C or better
EDP	652	Multivariate Procedures for Data Analysis	Educational applications of multivariate methods, including MANOVA, discriminant analysis, and exploratory factor analysis. Emphasizes analyzing data and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	654	Structural Equation Modeling in Educational Research	Educational applications of confirmatory factor analysis, path analysis, and full latent variable models. Experience in conducting analyses and reporting results.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EDP	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDP	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDP	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		Pre-requisites: Freshman standing, Maximum 25 hours
EDS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
EDS	200	Design Literacy and Communication	Builds the requisite skills for students to be able to express their ideas visually. Gives exercises to create an understanding of basic principles of design as well as design communication, principles of composition and aesthetic evaluation. Uses tools such as sketching, drawing, computer graphics and model making as a vehicle to develop an understanding of visual methods of expressing one's self.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Environmental Design or The Arts (Fashion Design) major

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EDS	201	Fundamentals of Sustainability in Design	Explores sustainability as it relates to the key disciplines that comprise environmental design. Topics range from issues affecting the preservation of the urban fabric to the development of earth-friendly materials used by interior designers and product designers to the design of sustainable buildings by architects through the use of appropriate materials and requisite energy efficiencies. Surveys the literature of sustainability, identifying critical issues on the subject today. Explores the theoretical underpinnings of the sustainability movement as it affects environmental design and related disciplines.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		
EDS	223	Design Thinking	Introduces the notion of design thinking, a concept that is gaining significant recognition in several disciplines including art, design, business, engineering and others. Design thinking can be described as a creative, multidisciplinary, human-centered approach to solving complex problems. Contemporary society faces numerous challenges, and the need for new tools and methods to tackle and solve these problems is more pressing than ever before. Offers several new techniques of design thinking and creative problem solving through engaging lectures and exciting projects.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		
EDS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
EDS	301	Contemporary Issues in Design Strategies and Innovation	Covers theories and methods needed in design, innovation and management of environmental design projects. Uses best practices and case studies related to the design of artifacts and to the design of built environments as a vehicle to develop students' understanding of different aspects of environmental design in a real-world setting. Also discusses the impact of contemporary issues such as globalization, digital tools, global connectivity on the theories and practice of environmental design.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre- or corequisite(s): EDS 200
EDS	302	Design Inquiry and Undergraduate Research	Theories and methods of design inquiry within a research environment. Prepares students for the senior-year synthesis courses. Students take on design-related research and develop and write a proposal for an integrative experience/project for an environmental design intervention and make an implementation plan to realize this intervention.	N	RSC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: EDS 301
EDS	394	Special Topics		Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
EDS	401	Environmental Design Synthesis I	First of a two-semester sequence of synthesis courses intended to be integrative, based on design research and inquiry. Serves as a culminating experience where, through the successful completion of an environmental design research project/application or experience, students demonstrate their understanding and synthesis of the knowledge and skills they have acquired in the program. Students identify a relevant research problem in environmental design and undertake the necessary literature search and reading regarding theories and methods related to the selected research question. Emphasizes the use of visual methods as a method of inquiry and research.	N	RSC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): GRA 440 with C or better
EDS	402	Environmental Design Synthesis II	Second of a two-semester sequence of synthesis courses intended to be integrative, based on design research and inquiry. Serves as a culminating experience where, through the successful completion of an environmental design research project/application or experience, students demonstrate their understanding and synthesis of the knowledge and skills they have acquired in the program. Students implement the research study identified in the first semester of the two-semester sequence. Emphasizes the use of visual methods as a method of inquiry and research.	N	RSC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: EDS 401
EDS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
EDS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
EDS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
EDS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
EDT	180	Technology Literacy: Problem Solving using Digital Technology Applications	Introducing digital technologies and their place in society. Applies 21st-century skills to problem solving using digital technology applications including spreadsheets and databases.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	CS	Credit is allowed for only EDT 180 or EDT 321

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EDT	184	Modeling, Inquiry, & Analysis Using Technology Tools	Project-based course as an overview of modeling, simulation, statistics, probability, and the role of technology in education, business and personal. Investigates exploration and presentation of emerging technology along with their acquisition, use, and implementation into society. Course includes the use of software programs and online simulations for scientific investigation, internet research, data collection, visual representation of data, probability, measures of central tendency, Action Research, 3D modeling, and Web page design.	N	LEL	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		
EDT	210	Games, Technology and Society	Introduces the role and significance of digital games in society and the process of designing games for impact in areas such as education, healthcare and social activism. Explores general theories about the relationship between technology and society, using games as examples, as well as develops a better understanding of methods that take a systemic, contextualized approach to designing games for impact.	N	LEL	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		
EDT	220	Understanding Games for Impact	Explores the nature of learning in and around games designed for entertainment as well as games designed intentionally for impact. Students gain familiarity with current research on course topics; develop a language for reflection on the cognitive, sociocultural and educational merits and drawbacks of game-centered learning environments; and gain new insights into the ways in which digital playspaces and pastimes shape how people think and learn. Develops the ability to analyze learning in games and game-related social contexts, using different theoretical perspectives and tools.	N	LEL	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
EDT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton College	Teachers Division of Teacher Preparation	1-4		
EDT	310	Games for Impact: The Full Life Cycle	Focuses on the complete life cycle of impact games, from perceived need through design to evaluating impact. Highlights ethics of game-based learning, unintended consequences of impact interventions, and how to involve stakeholders in the design process. Students collaboratively workshop an original impact game concept and publishing plan to address a key 21st-century challenge.	N	LEL	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
EDT	321	Computer Literacy: Mobile Technologies and Your World	Uses mobile technologies across disciplines for communication, collaboration, creativity and problem solving. Employs digital tools including Microsoft Office's spreadsheets and databases, Google apps, mobile apps, and a variety of other Web-based tools in problem-based environments.	N	LEC	N	OPT	MaryLouFulton College	Teachers Division of Teacher Preparation	3	CS	Pre-requisite: Minimum 45 hours; Credit is allowed for only EDT 180 or EDT 321
EDT	329	Games, Simulations, and Virtual Environments	Focuses on the use of Gaming, Simulations, and Virtual Environments (GS/VE) in education and instruction. Examines how educational professionals and other practitioners can leverage students interests in digital culture to accelerate their learning. Participants explore the foundational, social, and cultural implications of these new media and the power they hold to engage learners in new ways. Discusses historical overview of GS/VE with an emphasis on educational applications. Analyzes the distinctive features of GS/VE from different pedagogical, psychological (cognitive/emotional), social, and entertainment perspectives. Participants learn how to analyze the design of games, simulations, and virtual environments, creating evaluative criteria for the selection of products in educational environments.	N	LEL	N	OPT	MaryLouFulton College	Teachers Division of Teacher Preparation	3		
EDT	340	Designing Games for Impact	Introduces concepts, methods, techniques and issues associated with designing interactive, game-centered experiences that are developed through a lens of impact. As a cumulative project, students create and test a digital game or game-based experience that demonstrates understanding of impact models and learning science principles.	N	LEL	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
EDT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton College	Teachers Division of Teacher Preparation	1-4		
EDT	440	Creating and Marketing Mobile Apps	Focuses on conceptualizing, creating and marketing of apps for mobile devices.	N	LEC	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only EDT 440 or EDT 494 (Creating and Marketing Mobile Apps)
EDT	460	Games, Technology and Society	Education, healthcare and social activism. Explores general theories about the relationship between technology and society using games as examples, as well as develops a better understanding of methods that take a systemic, contextualized approach to designing games for impact. Students play and analyze existing impact games as well as conduct a landscape analysis for an impact game on a topic of their own choosing.	N	LEL	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Pre-requisite: Junior or Senior standing; Credit is allowed for only EDT 460 or 560

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EDT	461	Understanding Games for Impact	Explores the nature of learning in and around games designed for entertainment as well as games designed intentionally for impact. Students gain familiarity with current research on course topics; develop a language for reflection on the cognitive, sociocultural and educational merits and drawbacks of game-centered learning environments; and gain new insights into the ways in which digital playspaces and pastimes shape how people think and learn. Develops the ability to analyze learning in games and game-related social contexts, using different theoretical perspectives and tools.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
EDT	462	Designing Games for Impact	Concepts, methods, techniques and issues associated with designing interactive, game-centered experiences that are developed through a lens of impact. As a cumulative project, students create and test a digital game or game-based experience that demonstrates understanding of impact models and learning science principles.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
EDT	463	Games for Impact: The Full Life Cycle	Presents an impact game publishing methodology covering the full life cycle and key considerations for impact game design, development and publishing as well as the unique challenges in making games for impact. Applies methodology to examine an existing impact game currently in development. Students collaboratively workshop an original impact game concept and publishing plan that harnesses the power of games to address a key 21st-century challenge.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing. Credit is allowed for only EDT 463 or EDT 563
EDT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EDT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	IND	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
EDT	501	Foundations of Learning Design and Technologies	Foundations and evolution of the field of learning design and technology; examines accomplishments and issues in the field and explores possible career paths.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate
EDT	502	Design and Development of Instruction	Centers on the design and development of competency-based instructional materials, based on a variety of instructional design models, for learning in a multitude of settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate
EDT	503	Design of Effective Communications	Uses media selection, design, and production principles to prepare design specifications for solutions to instructional messages and products.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate
EDT	504	Modalities of Learning	Systematic design, development, and formative evaluation of computer-based instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate
EDT	506	Evaluation of Learning Systems	Procedures for evaluating educational programs, training systems, and new-technology applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate; Credit is allowed for only CED 525 or EDT 506
EDT	507	Performance Improvement and Leadership	Introduces the field of human performance technology. Emphasizes the analysis of performance problems, their causes, and interventions.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate
EDT	523	Distance Education Theory and Practice	Explores development of distance learning principles by examining national and international systems and applications.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	524	Principles and Issues in K-12 Online Learning	Examines current issues, policies, and trends pertaining to K-12 Web-based teaching and learning. Actively explores research related to online learning, with a focus on virtual schooling and emerging best practices for effective online instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Practicing or licensed K-12 teacher
EDT	530	Technology Integration Methods across the Curriculum	Examines a constructivist approach to technology in education. Investigates technology as a catalyst for rethinking instructional goals and practices.	Y	LEL	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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EDT	540	Creating and Marketing Mobile Apps	Focuses on conceptualizing, creating and marketing of apps for mobile devices.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only EDT 494 (Concpt, creating & mktg APPS), 540 or 594 (Concpt, creating & mktg APPS)
EDT	545	Using the Internet in Education	Explores the Internet as an educational tool for research, inquiry-based learning, and online learning communities. Incorporates constructivist theory.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	560	Games, Technology and Society	The role and significance of digital games in society and the process of designing games for impact in areas such as education, healthcare and social activism. Explores general theories about the relationship between technology and society, using games as examples, as well as develops a better understanding of methods that take a systemic, contextualized approach to designing games for impact.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only EDT 460 or EDT 560
EDT	561	Understanding Games for Impact	Explores the nature of learning in and around games designed for entertainment as well as games designed intentionally for impact. Students gain familiarity with current research on course topics; develop a language for reflection on the cognitive, sociocultural and educational merits and drawbacks of game-centered learning environments; and gain new insights into the ways in which digital playspaces and pastimes shape how people think and learn. Develops the ability to analyze learning in games and game-related social contexts, using different theoretical perspectives and tools.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only EDT 461 or EDT 561
EDT	562	Designing Games for Impact	Concepts, methods, techniques and issues associated with designing interactive, game-centered experiences that are developed through a lens of impact. As a cumulative project, students create and test a digital game or game-based experience that demonstrates understanding of impact models and learning science principles.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EDT 462 or EDT 562
EDT	563	Games for Impact: The Full Life Cycle	Focuses on the complete life cycle of impact games, from perceived need through design to evaluating impact. Highlights ethics of game-based learning, unintended consequences of impact interventions, and how to involve stakeholders in the design process. Students collaboratively workshop an original impact game concept and publishing plan to address a key 21st-century challenge.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only EDT 463 or EDT 563
EDT	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: EDT 501, 502, and 503 with C or better
EDT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: EDT 501, 502, and 503 with C or better
EDT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate

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EDT	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	701	Research in Educational Technology	Review and analysis of research studies in educational technology. Methodology for designing, conducting, and reporting educational technology research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDT 501 and 502 with C or better
EDT	704	Emerging Technologies in Education	Examines the role and impact of emerging technologies in education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only EDT 591 (Emerging Technologies in Education) or 704
EDT	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: EDT 502 with C or better
EDT	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisites: Accepted in either the MED in EDTCH, PHD in EDTECH, or the certificate in EDTECH programs
EDT	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: EDT 501, 502, and 503 with C or better
EDT	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EDT	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisites: EDT 701 with C or better
EDT	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EDT	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EED	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student

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EED	309	Environmental Education Project	Covers topics in environmental education that assist students with being able to learn about and investigate their environment in order to make intelligent and informed decisions.	Y	LEL	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): minimum 45 hours
EED	324	Social Studies in Elementary Schools	Provides strategies for integrating social studies content knowledge with other curricular areas. Addresses a variety of issues related to social studies instruction in the elementary school, with an emphasis on valuing diverse cultures and experiences within historical and geographical perspectives. Emphasizes meeting the academic and linguistic needs of all learners including English language learners. Explores instructional materials, technology tools and social studies programs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
EED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EED	396	Clinical Experience I	Applies course content in elementary education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Prerequisite(s): admission to the Professional Program
EED	397	Clinical Experience II	Applies course content in elementary education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Prerequisite(s): admission to the Professional Program
EED	411	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 411 or SCN 411
EED	412	Mathematics in Elementary Schools	Methods of teaching mathematics to all students at the K-8 level, instructional planning and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 412 or MTE 412 or SPE 410
EED	433	Language Method Management and Assessment	Theory on the social nature of oral and written language and congruent teaching, management and assessment practices. Emphasizes skills, strategies and dispositions for teaching 21st-century multimodal literacies to diverse learners including ELL with a focus on learners as creators of content, communicators, collaborators and global citizens.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
EED	478	Student Teaching: Elementary School (Grades 1-8)	Student teaching in elementary education classrooms grades 1-8: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-15		Prerequisite(s): admission to the Professional Program
EED	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
EED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
EED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
EED	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
EED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): admission to the Professional Program
EED	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	511	Curriculum Theory and Instructional Planning	Contemporary curriculum theories. Curriculum as an interrelated entity. Process for instructional planning for student understanding and achievement.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	521	Instructional Planning for the Diverse Classroom	Planning and delivering instruction; making adaptations for English language learners and students with special needs.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	524	Social Studies Methods and Assessment	Provides strategies for integrating social studies content knowledge with other curricular areas. Addresses a variety of issues related to social studies instruction in the elementary school, with an emphasis on valuing diverse cultures and experiences within historical and geographical perspectives. Emphasizes meeting the academic and linguistic needs of all learners including English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	526	Communication Arts in the Elementary School	Critical examination of school language arts teaching, focusing on theoretical assumptions regarding oral- and written-language development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	529	Science Methods and Assessment	Problems and trends of current programs. Development of a balanced and articulated science program.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	531	Teaching with Educational Technology	Focuses on using technology in K-12 classrooms. Addresses the integration of technology in all curricular areas for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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EED	537	Mathematics Methods and Assessment	Contemporary mathematics teaching. Content, materials, and approaches to instruction.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student or undergraduate postbaccalaureate student
EED	550	Elementary Methods in Content Areas	Advanced level of development of knowledge and skills of instructional planning and methods of teaching and evaluating in elementary schools.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EED 550 or SPE 504
EED	567	Clinical Experience I	Applies course content in elementary education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	576	Clinical Experience II	Applies course content in elementary education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): EED 567; degree- or nondegree-seeking graduate student
EED	578	Student Teaching: Elementary School (1-8)	Student teaching in elementary education classrooms grades 1-8: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	579	Apprentice Teaching: Elementary Education (Grades 1-8)	Apprentice teaching in elementary school classrooms. Synthesized experience in classroom management, curriculum, instruction and assessment. Must be taken four times for a total of 12 semester hours.	N	PRA	Y	YGB	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	2-3		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EED	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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EED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
EEE	101	Introduction to Engineering Design	Introduces engineering design, teaming, engineering profession; computer models and programming; communication skills; design of electrical and computer-based systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	2		
EEE	120	Digital Design Fundamentals	Number systems, conversion methods, binary and complement arithmetic, Boolean algebra, circuit minimization, ROMs, PLAs, flipflops, synchronous sequential circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): degree-seeking student; Credit is allowed for only CSE 120 or EEE 120
EEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-3		
EEE	202	Circuits I	Principles for analyzing linear and nonlinear circuits. Uses SPICE and MATLAB. Design and measurement of linear analog electrical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): degree-seeking student; Pre- or corequisite(s): MAT 274 or 275 with C or better if completed; PHY 131 with C or better if completed
EEE	203	Signals and Systems I	Introduces continuous and discrete time signal and system analysis, linear systems, Fourier, and z-transforms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): degree-seeking student; EEE 202; AND MAT 242 with C or better or Pre- or corequisite(s): MAT 342 or 343 with C or better if completed
EEE	230	Computer Organization and Assembly Language Programming	Register-level computer organization. Instruction set architecture. Assembly language. Processor organization and design. Memory organization. IO programming. Exception/interrupt handling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): degree-seeking student; CSE 100, 110, or 200; CSE 120 or EEE 120 OR graduate Computer Science and Engineering student; Credit is allowed for only CSE 230 or EEE 230
EEE	241	Fundamentals of Electromagnetics	Vector analysis, differential operators, fourier analysis, scalar, vector fields, electro/magneto statics, time-varying fields, boundary value problems, dielectric, magnetic materials, Maxwell's equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): degree-seeking student; MAT 267 or 272 with C or better; MAT 274 or 275 with C or better; PHY 131 with C or better; Pre- or corequisite(s): EEE 202
EEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-4		
EEE	304	Signals and Systems II	Communication, signal processing, control systems, continuous, discrete transforms, sampling theorem, analog, digital modulation, filter design, signal processing applications, state space.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203
EEE	307	Signal Processing for Digital Culture	Signal processing for non-majors. Digital filters, Fourier and z transform, DFT and FFT, digital signal processing computing, interdisciplinary DSP applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): non-ECEE major; MAT 210; Credit is allowed for only EEE 307 or EEE 394 (Signal Analysis for the Digital Culture)
EEE	333	Hardware Design Languages and Programmable Logic	Develops digital logic with modern practices of hardware description languages. Emphasizes usage, synthesis of digital systems for programmable logic, VLSI.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 120 or CSE 120; EEE 202

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EEE	334	Circuits II	Design of analog and digital circuits. Diodes/BJTs/Mosfets. Digital and analog circuit building blocks. Fundamentals of mixed signal circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, BHSE undergraduate student or Computer Systems Engineering or Computer Systems Engineering (Information Assurance) student; EEE 202
EEE	335	Analog and Digital Circuits	Analog, digital microelectronic circuits and systems. Amplifiers, frequency response, gate sizing, timing analysis, sequential digital circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student or Computer Systems Engineering or Computer Systems Engineering (Information Assurance) major; EEE 334
EEE	341	Engineering Electromagnetics	Time-varying electromagnetic fields, waves in homogeneous and stratified media, transmission lines, waveguides and cavity resonators, radiation and antennas.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203; EEE 241
EEE	350	Random Signal Analysis	Probabilistic and statistical analysis as applied to electrical signals and systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; MAE 317 or pre- or corequisite: EEE 203; or Fulton Engineering graduate student
EEE	352	Properties of Electronic Materials	Schrodinger's wave equation, potential barrier problems, bonds of crystals, the band theory of solids, semiconductors, superconductor dielectric, and magnetic properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; CHM 114, 115, 116 or 118; EEE 241; PHY 241 with a C or better
EEE	360	Energy Systems and Power Electronics	Conventional and alternate energy sources for power systems, three-phase analysis, AC generators, transformers, induction, DC motors, power electronic speed control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 202; Pre- or corequisite(s): EEE 241
EEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-4		
EEE	404	Real-Time DSP Systems	Digital signal processors, translating signals and systems concepts into real-time multimedia and communications applications, real-time algorithms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; CSE 230 or EEE 230; EEE 203
EEE	407	Digital Signal Processing	Time and frequency domain analysis, difference equations, z-transform, FIR and IIR digital filter design, discrete Fourier transform, FFT, and random sequences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisites: Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203; MAT 342 or 343 with C or better
EEE	425	Digital Systems and Circuits	Digital logic gate analysis and design. Propagation delay times, fan out, power dissipation, noise margins. Design of MOS and bipolar logic families, including NMOS, CMOS, standard and advanced TTL, ECL, and BiCMOS. Inverter, combinational and sequential logic circuit design, MOS memories, VLSI circuits. Computer simulations using PSPICE.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 335
EEE	433	Analog Integrated Circuits	Analysis, design, and applications of modern analog circuits using integrated bipolar and field-effect transistor technologies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 335
EEE	434	Quantum Mechanics for Engineers	Angular momentum, wave packets, Schrodinger wave equation, probability, problems in one dimension, principles of wave mechanics, scattering, tunneling, central forces, angular momentum, hydrogen atom, perturbation theory, variational techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352
EEE	435	Fundamentals of CMOS and MEMS	Introduces basic CMOS processing and fabrication tools. Covers the fundamentals of thermal oxidation, CVD, implantation, diffusion, and process integration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352
EEE	436	Fundamentals of Solid-State Devices	Semiconductor fundamentals, pn junctions, metal-semiconductor contacts, metal-oxide-semiconductor capacitors and field-effect transistors, bipolar junction transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352
EEE	437	Optoelectronics	Basic operating principles of various types of optoelectronic devices that play important roles in commercial and communication electronics; light-emitting diodes, injection lasers, and photodetectors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 436

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EEE	439	Semiconductor Facilities and Cleanroom Practices	Microcontamination, controlled environments, cleanroom layout and systems, modeling, codes and legislation, ultrapure water, production materials, personnel and operations, hazard management, advanced concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352
EEE	443	Antennas for Wireless Communications	Fundamental parameters; radiation integrals; wireless systems; wire, loop, and microstrip antennas; antenna arrays; smart antennas; ground effects; multipath.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 341
EEE	445	Microwaves	Waveguides; circuit theory for waveguiding systems; microwave devices, systems, and energy sources; striplines and microstrips; impedance matching transformers; measurements.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 341 (EEE 340)
EEE	448	Fiber Optics	Principles of fiber-optic communications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 341 (EEE 340)
EEE	455	Communication Systems	Signal analysis techniques applied to the operation of electrical communication systems. Introduction to and overview of modern digital and analog communications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 350
EEE	459	Communication Networks	Fundamentals of communication networks. Study of Seven-Layer OSI model. Focus on functionality and performance of protocols used in communication networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203; Corequisite(s): EEE 350
EEE	460	Nuclear Power Engineering	Radioactivity and decay. Radiation interactions and dose. Nuclear reaction, fission and fusion theory. Fission reactors, four factor formula, moderation. Nuclear power, TMI, Chernobyl. Nuclear fuel cycle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; CHM 114 or 116; MAT 274 or 275 with C or better; PHY 241 or 361 with C or better
EEE	463	Electrical Power Plants	Generation of electric power using fossil, nuclear, and renewable, including solar, geothermal, wind, hydroelectric, biomass and ocean, energy sources. Power plant thermal cycle analysis. Cogeneration and combined cycles. Economics, operations, and design of electric power stations. Energy storage.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; CHM 114 or 116; MAE 240 (or ECE 340) or PHY 241 with C or better; MAT 274 or 275 with C or better
EEE	465	Photovoltaic Energy Conversion	Photovoltaics for production of electricity from solar energy. The grand energy challenge. Solar radiation and utilization. Fundamentals of semiconductors for photovoltaics: crystal structures, band theory, doping, carrier statistics, optical absorption, and p-n junctions. Principles of solar cells including loss mechanisms and design principles. Current solar cell technologies. Manufacturing of silicon solar cells. Solar modules, arrays and systems. Economic analysis of solar photovoltaic systems. Terawatt-scale deployment of solar cells.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 352; Credit is allowed for only EEE 465 or 498: Solar Energy
EEE	470	Electric Power Devices	Analyzes devices used for short circuit protection, including circuit breakers, relays, and current and voltage transducers. Protection against switching and lightning over voltages. Insulation coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 360
EEE	471	Power System Analysis	Review of transmission line parameter calculation. Zero sequence impedance, symmetrical components for fault analysis, short circuit calculation, review of power flow analysis, power system stability, and power system control concepts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 360
EEE	472	Power Electronics and Power Management	Principles of switch mode power conversion, analysis, design and control of dc-dc converters, PWM rectifiers and inverters, power management, power electronics applications in information technology, renewable energy systems, motion control and lighting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203
EEE	473	Electrical Machinery	Operating principles, modeling and speed control of DC, brushless DC, and AC machines; power converters for DC and AC motors drives.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 360
EEE	480	Feedback Systems	Analysis and design of linear feedback systems. Frequency response and root locus techniques, series compensation, and state variable feedback.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203 or MAE 318 with C or better
EEE	481	Computer-Controlled Systems	Implements computer-based, embedded, control systems using MATLAB xPC Target toolbox. Small-scale, representative projects demonstrate theoretical issues and provide hands-on expertise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 203 and EEE 230/CSE 230, or MAE 318
EEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student

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EEE	488	Senior Design Laboratory I	Design process: research, concept, feasibility, simulation, specifications, benchmarking, and proposal generation. Technical communications and team skills enrichment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3	L	Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; ENG 102, 105 or 108; EEE 241; EEE 334; EEE 350; three courses from the following list: EEE 304, 333, 335, 341, 352 or 360
EEE	489	Senior Design Laboratory II	Implement, evaluate, and document EEE 488 design. Social, economic, and safety considerations. Technical communications and team skills enrichment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3	L	Prerequisite(s): Fulton ECEE, SEMTE, or BHSE senior or post-bacc undergraduate student; EEE 488
EEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-6		Prerequisite(s): Barrett Honors Electrical Engineering BSE senior
EEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	0-6	L	Prerequisite(s): Barrett Honors Electrical Engineering BSE senior
EEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-4		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student; EEE 433
EEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-7		Prerequisite(s): Fulton ECEE, SEMTE, or BHSE undergraduate student
EEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-3		Prerequisite(s): Electrical Engineering BSE senior
EEE	501	Overview of Electrical Engineering	Electromagnetic fields, electrical circuit analysis, transmission lines, communications systems, electromagnetic interference and compatibility, computational techniques and electromagnetic software	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	505	Time-Frequency Signal Processing	Joint time-frequency analysis of time-varying signals and systems; linear and quadratic time-frequency representations; applications in current areas of signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	506	Digital Spectral Analysis	Principles and applications of digital spectral analysis, least squares, random sequences, parametric, and nonparametric methods for spectral estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	507	Multidimensional Signal Processing	Processing and representation of multidimensional signals. Design of systems for processing multidimensional data. Introduces image and array processing issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	508	Digital Image and Video Processing and Compression	Fundamentals of digital image perception, representation, processing, and compression. Emphasizes image coding techniques. Signals include still pictures and motion video.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	509	DSP Algorithms and Software	Linear systems review, digital filter design, software aspects, DFT, FFT, random signals, programming aspects, applications projects, MATLAB and Java simulations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

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EEE	510	Multimedia Signal Processing	Speech/audio coding algorithms. LPC, CELP, MPEG, Cell phone, DTV, cinema, and surround sound standards. MPEG/JPEG introduction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	511	Artificial Neural Computation	Networks for computation, learning function representations from data, learning algorithms and analysis, function approximation and information representation by networks, applications in control systems and signal analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
EEE	518	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit for only MSE 518, EEE 518, MAE 518, MSE 475.
EEE	521	Low-Power Bioelectronics	Begins with fundamental theory and techniques for low-power analog circuit design especially subthreshold CMOS and BJT circuits (e.g., translinear circuits), then moves to biomedical applications and bio-inspired systems focused upon neuromorphic circuits. Also touches on concepts such as wireless challenges for implants, energy harvesting and electrochemistry. Students have the opportunity to have their final projects fabricated in a commercial CMOS process.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit is allowed for only EEE 521 or EEE 598 (Low Power Bioelectronics)
EEE	523	Advanced Analog Integrated Circuits	Analysis and design of analog integrated circuits: analog circuit blocks, reference circuits, operational-amplifier circuits, feedback, and nonlinear circuits.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Engineering graduate student
EEE	524	Communication Transceiver Circuits Design	Communication transceivers and radio frequency system design; fundamentals of transceivers circuits; RF, IF, mixers, filters, frequency synthesizers, receivers, CAD tools, and lab work on IC design stations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Engineering graduate student
EEE	525	VLSI Design	Analysis and design of Very Large Scale Integrated (VLSI) circuits. Physics of small devices, fabrication, regular structures, and system timing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Engineering graduate student
EEE	526	VLSI Architectures	High throughput and low-power VLSI architectures for signal processing. Array processor systems; data path design and optimization; memory design; high-level synthesis; low-power design at system level, algorithm level, and architecture level.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
EEE	527	Analog to Digital Converters	Detailed introduction to the design of Nyquist rate, CMOS analog to digital converters. Requires knowledge of analog integrated circuits (analog circuit blocks, reference circuits, operational-amplifier circuits, feedback, and nonlinear circuits) to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Engineering graduate student
EEE	528	Introduction to Microelectromechanical Systems	Microelectromechanical systems and devices emphasizing analytical and numerical modeling of actuation and sensing mechanisms with an overview of fabrication technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
EEE	530	Advanced Silicon Processing	Thin films, CVD, oxidation, diffusion, ion-implantation for VLSI, metallization, silicides, advanced lithography, dry etching, rapid thermal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
EEE	531	Semiconductor Device Theory I	Transport and recombination theory, pn and Schottky barrier diodes, bipolar and junction field-effect transistors, and MOS capacitors and transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
EEE	532	Semiconductor Device Theory II	Advanced MOSFETs, charge-coupled devices, solar cells, photodetectors, light-emitting diodes, microwave devices, and modulation-doped structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
EEE	533	Semiconductor Process/Device Simulation	Process simulation concepts, oxidation, ion implantation, diffusion, device simulation concepts, pn junctions, MOS devices, bipolar transistors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	534	Semiconductor Transport	Carrier transport in semiconductors. Hall effect, high electric field, Boltzmann equation, correlation functions, and carrier-carrier interactions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	535	Electron Transport in Nanostructures	Nanostructure physics and applications. 2-D electron systems, quantum wires and dots, ballistic transport, quantum interference, and single-electron tunneling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	536	Semiconductor Characterization	Measurement techniques for semiconductor materials and devices. Electrical, optical, physical, and chemical characterization methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	537	Semiconductor Optoelectronics	Electronic states in semiconductors, quantum theory of radiation, absorption processes, radiative processes, nonradiative processes, photoluminescence, and photonic devices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	538	Optoelectronic Devices	Provides graduate students with detailed theory and practical knowledge of semiconductors materials and optoelectronic devices such as light-emitting diodes, lasers, photodetectors and solar cells. Also discusses the applications of these devices. Offers not only classroom lectures but also demonstration of real-world experiments in research laboratories at ASU.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit is allowed for only EEE 538 or EEE 598 (Optoelectronic Devices)
EEE	539	Intro Solid-State Electronics	Crystal lattices, reciprocal lattices, quantum statistics, lattice dynamics, equilibrium, and nonequilibrium processes in semiconductors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	540	Fast Computational Electromagnetics	Method of moments, finite difference time-domain, finite element methods implemented using fast algorithms (wavelets, FMM, Nystrom) to gain high efficiency.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	541	Electromagnetic Fields and Guided Waves	Polarization and magnetization; dielectric, conducting, anisotropic, and semiconducting media; duality, uniqueness, and image theory; plane wave functions, waveguides, resonators, and surface guided waves.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	543	Antenna Analysis and Design	Impedances, broadband antennas, frequency independent antennas, miniaturization, aperture antennas, horns, reflectors, lens antennas, and continuous sources design techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	544	High-Resolution Radar	Fundamentals; wideband coherent design, waveforms, and processing; stepped frequency; synthetic aperture radar (SAR); inverse synthetic aperture radar (ISAR); imaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	545	Microwave Circuit Design	Analysis and design of microwave attenuators, in-phase and quadrature-phase power dividers, magic tees, directional couplers, phase shifters, DC blocks, and equalizers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	546	Advanced Fiber Optics	Theory of propagation in fibers, couplers and connectors, distribution networks, modulation, noise and detection, system design, and fiber sensors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	547	Microwave Solid-State Circuit Design I	Applies semiconductor characteristics to practical design of microwave mixers, detectors, limiters, switches, attenuators, multipliers, phase shifters, and amplifiers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	548	Coherent Optics	Diffraction, lenses, optical processing, holography, electro-optics, and lasers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	550	Transform Theory and Applications	Introduces abstract integration, function spaces, and complex analysis in the context of integral transform theory. Applications to signal analysis, communication theory, and system theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	551	Information Theory	Entropy and mutual information, source and channel coding theorems, applications for communication and signal processing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	552	Digital Communications	Complex signal theory, digital modulation, optimal coherent and incoherent receivers, channel codes, coded modulation, Viterbi algorithm.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	553	Coding and Cryptography	Introduces algebra, block and convolutional codes, decoding algorithms, turbo codes, coded modulation, private and public key cryptography.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	554	Random Signal Theory	Applies statistical techniques to the representation and analysis of electrical signals and to communications systems analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	556	Detection and Estimation Theory	Combines the classical techniques of statistical inference and the random process characterization of communication, radar, and other modern data processing systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	557	Broadband Networks	Physics of wireless and optical communications. Broadband multiplexing and switching methods. Blocking and queuing analysis. Network optimization, routing, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	558	Wireless Communications	Cellular systems, path loss, multipath fading channels, modulation and signaling for wireless, diversity, equalization coding, spread spectrum, TDMA/FDMA/CDMA.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

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EEE	559	Wireless Networks	Design principles of cellular networks. Multiple access control protocols for wireless systems. Wireless routing and TCP/IP. Mobile management. Call admission control and resource allocation (e.g., power control and rate control). Wireless security. Future-generation wireless networks. A previous course in random signal theory is required to be successful in this class.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit is allowed for only CSE 591 (Wireless Networks), EEE 559 or 598 (Wireless Networks)
EEE	562	Nuclear Reactor Theory and Design	Principles of neutron chain reacting systems. Neutron diffusion and moderation. One-, two-, and multigroup diffusion equation solution methods. Heterogeneous reactors. Nuclear fuel steady-state performance. Core thermal-hydraulics. Core thermal design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	563	Nuclear Reactor System Dynamics and Diagnostics	Time-dependent solution to neutron diffusion equation. Reactor kinetics and reactivity changes. Dynamics, stability, and control of reactor systems. Modeling neutronic and thermal processes. System characterization in time and frequency domains. Reactor surveillance and diagnostics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	564	Interdisciplinary Nuclear Power Operations	Nuclear power plant systems. Studies interrelationship and propagation of effects that systems and design changes have on one another, especially in relation to nuclear power plant safety and operations. Case studies and design projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	565	Solar Cells	Introduction to the generation and utilization of electricity from solar energy. Exploration of the science and engineering of direct conversion (photovoltaics), including the design, fabrication, and operation of solar cells, and the construction and performance of solar cell modules. Prior knowledge of properties of electronic materials is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	571	Power System Transients	Simple switching transients. Transient analysis by deduction. Damping of transients. Capacitor and reactor switching. Transient recovery voltage. Travelling waves on transmission lines. Lightning. Protection of equipment against transient overvoltages. Introduces computer analysis of transients.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	572	Advanced Power Electronics	Analyzes device operation, including thyristors, gate-turn-off thyristors, and transistors. Design of rectifier and inverter circuits. Applications such as variable speed drives, HVDC, motor control, and uninterruptable power supplies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	573	Electric Power Quality	Sinusoidal waveshape maintenance; study of momentary events, power system harmonics, instrumentation, filters, power conditioners, and other power quality enhancement methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	574	Computer Solution of Power Systems	Algorithms for digital computation for the Newton and fast-decoupled power flow problem, and fault analysis. Sparse matrix and vector programming methods, creation of elimination trees, network equivalencing, solution of the least squares problem, introduction to state estimation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	575	Power System Stability	Dynamic performance of power systems with emphasis on stability. Modeling of system components and control equipment. Analysis of the dynamic behavior of the system in response to small and large disturbances. Knowledge of EEE470, 471 and 473 (or equivalents) is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

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EEE	576	Power System Dynamics	Dynamic performance of power systems with emphasis on control. Modeling of control equipment, FACTS devices, wind generators, and nonlinear loads. Design of power system stabilizers. Prior knowledge of electric power devices, power system analysis, and electrical machinery is required to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit is allowed for only EEE 576 or 598 (Power System Dynamics)
EEE	577	Power Engineering Operations and Planning	Economic dispatch, unit commitment, dynamic programming, power system planning and operation, control, generation modeling, AGC, and power production.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	579	Power Transmission and Distribution	High-voltage transmission line electric design; conductors, corona, RI and TV noise, insulators, clearances. DC characteristic, feeders voltage drop, and capacitors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	581	Filtering of Stochastic Processes	Modeling, estimation, and filtering of stochastic processes, with emphasis on the Kalman filter and its applications in signal processing and control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	582	Linear System Theory	Controllability, observability, and realization theory for multivariable continuous time systems. Stabilization and asymptotic state estimation. Disturbance decoupling, noninteracting control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	586	Nonlinear Control Systems	Stability theory, including phase-plane, describing function, Liapunov's method, and frequency domain criteria for continuous and discrete, nonlinear, and time-varying systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	587	Optimal Control	Optimal control of systems. Calculus of variations, dynamic programming, linear quadratic regulator, numerical methods, and Pontryagin's principle.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	588	Design of Multivariable Control Systems	Practical tools for designing robust MIMO controllers. State feedback and estimation, model-based compensators, MIMO design methodologies, CAD, real-world applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	589	Linear Algebra and Convex Optimization	Linear algebra and convex optimization. Vector spaces, matrix algebra, linear programming, Lagrange multipliers, Karush-Kuhn-Tucker (KKT) conditions, duality theory and algorithms for convex optimization. Newton's method, gradient and steepest descent methods. Algorithms for unconstrained, equality constrained and inequality constrained problems, which include interior point methods. Applications to approximation and data fitting and some geometric problems. Applications to signal processing, communications and control systems. Background in linear algebra necessary to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, SBHSE, SEMTE or SSEBE graduate student; Credit allowed for only EEE 589 or 598: Advanced Linear Algebra & Opt

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Master of Engineering or Electrical Engineering MS, MSE or PHD students
EEE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Electrical Engineering Program	1		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	606	Adaptive Signal Processing	Principles and applications of adaptive signal processing, adaptive linear combiner, Wiener least-squares solution, gradient search, performance surfaces, LMS/RLS algorithms, block time/frequency domain LMS.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	607	Speech Coding for Multimedia Communications	Speech and audio coding algorithms for applications in wireless communications and multimedia computing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EEE	625	Advanced VLSI Design	Practical industrial techniques, circuits, and architectures appropriate to high-performance and low-power digital VLSI designs such as microprocessors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	4		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	627	Oversampling Sigma-Delta Data Converters	Introduces design and analysis of sigma delta oversampled data converters from an IC design perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	631	Advanced Optoelectronics	Principles of heterojunctions and quantum well structures, band lineups, optical, and electrical properties. Introduces heterojunction devices. Knowledge of transport and recombination theory, pn and Schottky barrier diodes, bipolar and junction field-effect transistors, and MOS capacitors and transistors. is required to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	641	Advanced Electromagnetic Field Theory	Cylindrical wave functions, waveguides, and resonators; spherical wave functions and resonators; scattering from planar, cylindrical, and spherical surfaces; Green's functions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	643	Advanced Topics in Electromagnetic Radiation	High-frequency asymptotic techniques, geometrical and physical theories of diffraction (GTD and PTD), moment method (MM), radar cross section (RCS) prediction, Fourier transforms in radiation, and synthesis methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	686	Adaptive Control	Main topics covered: adaptive identification, convergence, parametric models, performance and robustness properties of adaptive controllers, persistence of excitation, and stability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Electrical Engineering, MS, MSE, or PHD student or Master of Engineering student
EEE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

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EEE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	731	Advanced MOS Devices	Threshold voltage, subthreshold current, scaling, small geometry effects, hot electrons, and alternative structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	3		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Electrical Engineering PhD students
EEE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-15		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Electrical Engineering Program	1-12		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EEE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Electrical Engineering Program	1		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student

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EEE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Electrical Engineering Program	1-15		Prerequisite(s): Fulton Electrical, Computer and Energy Engineering (ECEE) graduate student or CIDSE, POLY, SBHSE, SEMTE or SSEBE graduate student
EET	406	Control System Technology	Control system components, analysis of feedback control systems, stability, performance, and application.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3-4		Pre-requisites: EST 310; MAT 266; Credit for EET 506 or EET 406
EET	408	Digital Real-Time Control	Analysis, simulation, and design of discrete systems. Approach taken in this class begins with the analysis, simulation and design of a continuous system, which yields an s-based, transfer function compensator. Then, this compensator is transformed into a z-based transfer function, which can be realized with a difference equation in a microcontroller.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EET 406; Credit is allowed for only EET 408 or 494 (Digital Realtime Control)
EET	430	Instrumentation and Measurement Systems	Instrumentation and measurement techniques, sensors operating principles. Signal and error analysis. Signal conditioning and data acquisition.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 310; Credit is allowed for only EET 430 or 530
EET	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EET	506	System Dynamics and Control	Time, frequency, and transform domain analysis of physical systems. Transfer function analysis of feedback control systems performance and stability. Compensation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EET 406 or EET 506
EET	508	Digital Real-Time Control	Sample data control techniques and applications to process control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EET	530	Electronic Test Systems and Applications	Analysis, design, and application of electronic test equipment, test systems, specifications, and documentation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate (degree or non-degree) students; Credit is allowed for only EET 430 or EET 530
EET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EGR	101	Foundations of Engineering Design Project I	Introduces engineering as a profession, critical thinking in engineering design and modeling, team dynamics, engineering communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		
EGR	102	Foundations of Engineering Design Project II	Development and experimental verification of engineering models, engineering design, data acquisition, critical analysis of data, introduction to CADD, engineering communications.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 101; MAT 170 or higher; Pre- or corequisite(s): ENG 101, 105, 107, or 111
EGR	104	Critical Inquiry in Engineering	Critical thinking. Systematic evaluation of information as input to well-informed decision making. Close reading and substantive writing in a technical setting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3	L	Prerequisite(s): ENG 101, 105 or 107
EGR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EGR	201	Use-Inspired Design Project I	Design, professionalism, and engineering practice developed in a multidisciplinary project setting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 102; MAT 265 or 270 with C or better
EGR	202	Use-Inspired Design Project II	Design, problem solving, and engineering practice developed in a multidisciplinary project setting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 201 with C or better
EGR	216	Engineering Electrical Fundamentals	Introduces modeling of electrical systems using mathematical and scientific principles. Covers electrical circuit analysis techniques including Kirchhoff's and Ohm's laws, series and parallel circuit elements, equivalent elements and circuits, and nodal analysis. These techniques are developed for DC, AC, and transient conditions. Also introduces the basic structure of a modern electronic measurement system and relates this structure to measurement accuracy, precision and resolution.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only EGR 216 or EGR 294 (Engineering Fundamentals I)

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EGR	217	Engineering Mechanics Fundamentals	Provides a foundation in the theory and principles of statics and dynamics. Examines the effect of forces acting on particles and rigid bodies. Vector mechanics is used extensively. Statics addresses the topics of equilibrium in two and three dimensions, to include distributed loads, trusses, frames, friction and cables. Dynamics addresses kinematics, including translating and rotating reference frames, and two-dimensional kinetics methods of force-acceleration, work-energy, and impulse-momentum.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): PHY 121 with C or better; Credit is allowed for only EGR 217 or EGR 294 (Engineering Fundamentals II)
EGR	218	Materials and Manufacturing Processes	Applies material properties and manufacturing processes to the design and fabrication of engineered artifacts.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): CHM 113 or 114 with C or better; Credit is allowed for only EGR 218 or EGR 294 (Engineering Materials & Manufacturing)
EGR	219	Computational Modeling of Engineering Systems	Introduces computing that develops software to find solutions to engineering problems. Students write and document code to solve problems in data acquisition, modeling of physical systems, and optimization.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Credit is allowed for only EGR 219 or 294 Computational Modeling
EGR	240	CADD and Solid Modeling	Uses 3-D solid modeling software to model mechanical parts and produce valid engineering drawings, including use of geometric dimensioning and tolerancing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		
EGR	280	Engineering Statistics	Applications-oriented introduction to statistics with computer-based experience using statistical software for formulating and solving engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3	CS	Prerequisite(s): MAT 265 or 270 with C or better
EGR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EGR	301	Concentration Project I	Design, communication, and critical thinking developed in a project setting based on selected concentration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MAT 267 or 272 with C or better
EGR	302	Concentration Project II	Design, engineering practice, and communication developed in a project setting based on selected concentration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 301 with C or better
EGR	303	Mechanical Systems Project I	Analyze, design, implement and characterize a mechanical system through an in-depth mechanical system design project. Project includes modeling, analysis and measurement of the dynamic behavior of the mechanical system. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 217 with C or better; EGR 218 with C or better; EGR 219 with C or better
EGR	304	Electrical Systems Project I	Analyze, design, implement and debug an electrical or electromechanical system through an in-depth electrical system design project. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 216 with C or better; EGR 219 with C or better
EGR	305	Robotics Systems Project I	Analyze, design, implement and debug a robotic electromechanical system through an in-depth robotic system design project. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 216 with C or better; EGR 219 with C or better
EGR	306	Automotive Systems Project I	Analyze, design, implement and verify an automotive system through an in-depth design project. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 217 with C or better; EGR 219 with C or better
EGR	307	Humanitarian Engineering Project I	Analyzes, designs, implements and characterizes an engineered system that addresses a humanitarian objective. Project includes modeling, analysis and measurement of the behavior of the system. Develops professional and engineering skills in this project setting.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 217 with C or better; Pre- or corequisite(s): EGR 321
EGR	313	Mechanical Systems Project II	Applies design principles to conceptualize, implement and characterize a fluid and/or thermodynamic system in a project setting. Project emphasizes communication with project stakeholders; applying an appropriate design approach in the context of a fluid and/or thermodynamic system; critical thinking in developing system specifications and evaluating a prototype relative to these specifications; and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 217 with C or better; EGR 218 with C or better; EGR 340 with C or better
EGR	314	Electrical Systems Project II	Applies design principles to conceptualize, implement and characterize an electrical or electromechanical system in a project setting. Project emphasizes communication with project stakeholders; applying a human-centered design approach in the context of an electrical system; critical thinking in developing system specifications and evaluating a prototype relative to these specifications; and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 304 with C or better; EGR 330 or 333 with C or better
EGR	315	Robotic Systems Project II	Applies design principles to conceptualize, implement and characterize an electromechanical robotic system in a project setting. Project emphasizes communication with project stakeholders; applying a human-centered design approach in the context of a robotic system; critical thinking in developing system specifications and evaluating a prototype relative to these specifications; and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 305 with C or better; EGR 455 with C or better

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EGR	316	Automotive Systems Project II	Applies design principles to conceptualize, implement and characterize an automotive system in a project setting. Project emphasizes communication with project stakeholders; applying a human-centered design approach in the context of an automotive system; critical thinking in developing system specifications and evaluating a prototype relative to these specifications, and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 306 with C or better; EGR 340 with C or better
EGR	317	Humanitarian Engineering Project II	Applies design principles to conceptualize, implement and characterize an engineered system that addresses a humanitarian objective in a project setting. Project emphasizes communication with project stakeholders, applying an appropriate design approach, thinking critically in developing system specifications and evaluating a prototype relative to these specifications, and increasing technical competence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 307 with C or better; EGR 371 with C or better
EGR	321	Water Resource Systems	Fundamentals of water supply and surface water hydrology in the context of the engineering, design and analysis of water resources systems. Places particular emphasis on those aspects of water systems that apply in the context of the developing world as well as in the context of environmentally sustainable systems. Course delivery is designed for engineering students with a broad understanding of engineering fundamentals but without specialist civil engineering knowledge.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 217 with C or better, EGR 219 with C or better
EGR	324	Structural Design for Land Development	Covers essential structural engineering concepts including loads, materials, constraints, specifications, optimization, and the design environment, structural modeling, analysis, and design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 221; EGR 222
EGR	325	Water and Wastewater Treatment	Essential elements of aquatic chemistry, water pollution and water and wastewater treatment technologies. Provides a fundamental basis for understanding sustainable water and wastewater treatment processes and their design considerations. Includes critical evaluation of contemporary issues concerning our water environment and the associated regulatory framework to strengthen and emphasize importance of adequate practices used in operation and design of engineered water and wastewater treatment systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): CHM 113 with C or better; EGR 321 with C or better
EGR	330	Design of Electrical Systems	Overview of electrical system architectures and components used in design of smart electrical and electromechanical systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216 with C or better; EGR 219 with C or better
EGR	333	Distributed Circuits and Systems	Analysis and modeling of the generation and distribution of electrical signals and energy across distributed systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 235; MAT 274 or 275
EGR	334	Analog-Digital Interface	Signal processing and operational tools that lie between sensors and digital data processors developed from a system perspective. Includes selection, deployment and analysis of sensors, analog signal processors and converters as well as their appropriate power supplies and the impact of all these components on system performance and cost. Uses experimental and simulation tools to demonstrate typical-use cases for medical, military, industrial and consumer applications.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216 with C or better; EGR 219 with C or better
EGR	338	Microcontrollers in Smart Systems	Microcontroller implementation of smart systems. Microcontrollers applied to control dynamic systems, including the interface with sensors and actuators as well as developing simple open- and closed-loop control laws.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 330 with C or better; EGR 334 with C or better
EGR	339	Fabrication of Electrical Systems	Overview of electrical fabrication techniques; design cycle time, cost, quality, reliability, product life cycle, and testing; programmable versus hard-wired implementation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 235; MAT 274 or 275
EGR	340	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli's equation, applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MAT 266 or 271 with C or better; PHY 121 with C or better; Credit is allowed for only EGR 340 or MET 340
EGR	343	Mechanics of Solid Materials	Studies strength and physical performance, such as deformations and load-carrying capacity, of natural and artificial solid structures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 217 with C or better; EGR 218 with C or better
EGR	363	Automotive Powertrains and Thermal Systems	Internal combustion engine (ICE) design in the context of automotive systems and heat management in vehicle systems, including thermal design of engine and transmission cooling systems. Operating characteristics and efficiencies of the ICE, terminology and abbreviations used in the automotive industry, contemporary fuels and the latest hybrid technology, CAFE standards and EPA vehicle emissions standards, lubrication systems and fluids appropriate for a given design, and current and future standards requirements.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 340 with C or better
EGR	371	Best Practices for Humanitarian Engineering	Technological and process-based best practices for engineering students to gain applied competence in low-cost and low-tech appropriate methods and technologies for small-scale technical problems in local and international humanitarian development contexts.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Fulton Schools of Engineering major; junior or senior standing
EGR	388	Engineering Materials And Semiconductor Science	Semiconductor technology operates at the limits of our understanding of many sciences—materials, optics, mechanics, plasma chemistry and charge movement. As well as examining the concepts, considers how they interact within tight constraints and how this affects continuous production, future development options and trouble shooting.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: Engineering BSE or Manufacturing Engineering BS major; Junior standing
EGR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		

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EGR	401	Professional Design Project I	First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3	L	Prerequisite(s): EGR 302 (or EGR 303 and 313) or EGR 314 or 315 or 316 or 317 (or MFG 308 and 318) with C or better
EGR	402	Professional Design Project II	Second half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier course work.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 401 with C or better taken within one previous term
EGR	425	Unit Treatment Technologies and Systems	Addresses fundamental concepts of unit treatment technologies and the scientific and engineering principles that govern the proper design, operation and management of these systems. Course is divided into two overlapping major categories of unit treatment technologies: air-pollution controls and soils/groundwater remediation. Enhances understanding of the unit treatment technologies by reviews of dimensional analysis, mass transport mechanisms, mass balances, modeling, kinetics and reactors.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 325 with C or better
EGR	426	Integrated Solid Waste Systems	Addresses the fundamental concepts of solid waste, pathways and transformation processes following the from cradle-to-grave approach. Follows the life of the solid waste from point of generation, reclamation and treatment to point of disposal. Emphasizes describing the present solid waste systems as an integrative set of functional units. Considers physical, chemical and biological transformations of the solid waste, together with the existing technologies and practices for management, treatment and disposal of the solid waste. Includes a specific overview of sustainable solid waste practices such as waste minimization, pollution prevention, reuse and reclamation, together with current domestic and foreign regulations. Addresses planning and design of solid waste operations and facilities.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 325 with C or better
EGR	427	Principles of Hazardous Waste and Materials	Trains future environmental engineers and professionals in fundamental hazardous waste and materials concepts. Addresses regulatory requirements; materials hazard communication; material safety concepts; types of hazardous waste/materials (chemical, radioactive, and infectious); risk assessment and routes of exposure; personal protective equipment; prudent practices; treatment; storage and disposal of hazardous waste/materials through the lens of the cradle-to-grave concept. Gains knowledge about the hazardous waste enforcement processes.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 325 with C or better
EGR	430	Design, Fabrication, and Architecture of Electronic Devices	Comprehensive introduction to the design, operation, production and application of the most common semiconductor devices and categories of integrated circuit. Demonstrates the close interaction among materials, semiconductor physics and circuit performance, especially in terms of the applications and economics of digital systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 330 with C or better
EGR	431	Power Management	Devices and techniques to supply and manage power in electrical systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 330 with C or better
EGR	432	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 340 with C or better; Credit is allowed for only EGR 432 or MET 432
EGR	433	Transforms and Systems Modeling	State-space and transform-domain modeling and analysis of electrical and electromechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216 with C or better; EGR 217 with C or better; MAT 274 or 275 with C or better; Pre- or corequisite(s): MAT 342 or 343 with C or better if completed
EGR	438	RF Systems	Applies fundamental principles of electromagnetics to design and analyze engineered RF systems and applications. Introduces and describes transmission lines, Smith Charts, s-parameters, waves in free space, reflection and refraction and their use in engineering systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): PHY 331; Credit is allowed for only EGR 438 or EGR 494 (Fundamentals of RF)
EGR	444	Engineering Design	Applies fundamentals of mechanics in analysis and synthesis of machine components and systems, with emphasis on stress and failure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 343 with C or better
EGR	445	Mechanical Engineering Systems	Design and modeling of multicomponent electromechanical systems. Applications of computers, controllers, electronics using system hardware and software development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 303 or EGR 313
EGR	455	Robotic Systems I	Analysis and design of robotic systems focusing on kinematics, dynamics, coordinate transformations and modeling.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 217 with C or better; EGR 219 with C or better; Credit is allowed for only EGR 455 or EGR 394 (Robotics I)
EGR	456	Robotic Systems II	Design of robotic systems focusing on dynamics, modeling and controlling a robot.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 455 with C or better; Credit is allowed for only EGR 456 or EGR 494 (Robotics II)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EGR	463	Vehicle Electrical Systems and Hybrid Systems	Basic theory and operation of hybrid electric drive systems of motor vehicles. Covers fundamentals of next generation electrification including: batteries technology, charging, power electronic operation. Emphasizes the principals of HEV energy management strategies and HEV modeling fundamentals.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216 with C or better; EGR 363 or EGR 394 (Intro to Concepts in Automotive Engineering) with C or better
EGR	465	Ground Vehicle Dynamics	Basic understanding of vehicle dynamics principles and a sufficient knowledge to analyze vehicle dynamic performance and associated chassis system design concepts. Understanding of various dynamical equations of motion governing vehicle behavior as well as computer simulation.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 363 or EGR 394 (Intro to Concepts in Automotive Engineering) with C or better
EGR	476	Energy Infrastructures	Comprehensive study of sustainable energy conversion systems. Students learn to quantify and measure the concepts of sustainability of energy resources within the framework of the laws of thermodynamics. Covers conventional energy sources for primary power (fossil fuels, nuclear and hydroelectric); their sustainability, resource level and environmental impact. Covers the science and technology of heat engines and direct conversion methods. Considers conservation and storage.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 340 with C or better
EGR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		
EGR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
EGR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student
EGR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EGR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-3		
EGR	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	520	Engineering Analysis	Analytical methods for evaluation of engineering systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	525	Lean Systems	Creates a framework and model of lean engineering and a methodology for applying lean practices to systems engineering as a basis for lean product development.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	530	Principles of Systems Engineering	Engineering is increasingly about complex systems. Addresses scale, scope and complexity increase that engineers need to consider to bring together technical and social issues in a highly integrated way as they design flexible, adaptable, robust systems that can be easily modified and reconfigured to satisfy changing requirements and new technological opportunities.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student; EGR 520
EGR	535	Engineering Innovation and Entrepreneurship	Provides knowledge of innovation and entrepreneurship practices and experience in the application of engineering systems innovation within an entrepreneurial setting of driving a product or process to successful launch. Includes protection of intellectual property and contractual relations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	565	Qualitative Methods for Engineering Education Research	Provides a deep, empirical exposure to interpretive research methods in engineering education research.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	570	Capstone Design	Comprehensive project experience based on cumulative knowledge and skills gained in earlier course work. Small-group project designing, building, evaluating and analyzing components, assemblies and systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EGR 530
EGR	572	Quantitative Methods for Engineering Education Research	Specific quantitative analysis techniques used in the field of engineering education, with special focus on instrument design, ANOVA and multiple regression. Prior coursework or experience with basic statistical techniques is necessary to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Corequisite(s): EGR 673
EGR	574	Engineering Education Systems in Context	Provides a systems understanding of current trends in engineering education research to engage engineering education research graduate students with the latest developments in the field in which they will situate their research projects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EGR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	602	Principles of Independent Research	Practice of key components of independent research that include project planning, literature survey, interview, data collection and analysis, proposal development, technical writing and presentation.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Engineering PhD major
EGR	608	Advanced Simulation	Simulation has a central role in design, operation, optimization and evolution of complex systems. There are many tools but they have a common need for rigorous science/math, parameterized models and realistic validation. Uses and compares five common platforms.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Engineering PhD major
EGR	611	Complex Engineering Systems	Advanced concepts in design and evaluation of engineering systems: subsystems, systems architectures and seamless integration of subsystems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Engineering PhD major
EGR	671	Applications of Qualitative Methods for Engineering Education Research	Provides a deep, situated exposure to making and handling data in qualitative engineering education research projects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 565; PhD standing
EGR	673	Applications of Quantitative Methods for Engineering Education Research	Applies quantitative analysis techniques to an engineering education research project. Specific focus on data collection, instrument development, and ANOVA/regression analysis techniques. Prior coursework or experience with basic statistical techniques is necessary to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): PhD standing; Corequisite(s): EGR 572
EGR	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EGR	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ELL	504	Instructional Design for Culturally and Linguistically Diverse Students	Provides a foundation in instructional design to meet the academic and linguistic needs of culturally and linguistically diverse students, with a focus on English language learners.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BLE 404 or ELL 504 or SPE 404
ELL	515	Structured English Immersion (SEI) Methods	Addresses the role of language and culture in teaching, program types, and specific SEI strategies for teaching English Language Learners (ELLs).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ELL	516	Advanced SEI Methods for ELLs	More fully prepares teachers for linguistically diverse classrooms in which there are students learning through SEI methodology.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	501	Environmental Life Sciences: Grand Challenge: Global Climate Change	Introduces first-year graduate students to a range of fields related to the Environmental Life Sciences graduate program. Co-instructed by an interdisciplinary faculty team, combines overview lectures and active discussion of current literature in the fields of inquiry. Culminates in synthetic collaborative research proposals on topics that foster transdisciplinary approaches to environmental life science questions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	502	Environmental Life Sciences: Field Camp	Combines lecture, field, and laboratory components; provides opportunities to develop field skills relevant to current questions in environmental life science, and to carry out a wide range of observations and measurements in natural systems. Instructed by an interdisciplinary faculty team. Travel out of the country is required and students need to be in possession of a valid passport.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: ELS 501

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ELS	535	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning and the provisioning of ecosystem services; use of economic and other social-science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ELS 535 or SOS 535
ELS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
ELS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ELS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	501	Sustainability Leadership Workshop I	Formally takes students into the four learning threads of the EMSL program and the ASU brand of sustainability. Hands-on collaboration and group time with peer cohort members, field trips and deep diving into discussion, and application of sustainability theories into real-world scenarios. Sustainability speakers and practitioners engage students in critical thought.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	1		Prerequisite(s): Executive Masters for Sustainability Leadership major
EMS	502	Global Context I	Leaders in any organization face an increasingly connected and transparent world where social and environmental issues must be weighed in everyday decisions. Explores iconic sustainability issues and trends and their impact on their organization, institutions, communities and stakeholders. Applies tools to identify the relevant risks and opportunities within their organizational context and investigates potential responses.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): Executive Masters for Sustainability Leadership or Master of Sustainability Leadership major; Corequisite(s): EMS 503; Pre- or corequisite(s): EMS 501 or SOS 501
EMS	503	Strategic Sustainability I	Sustainability requires that strategic thinking reaches beyond traditional forms and horizons of strategic planning, such as forecasting and prediction, in order to deal with expanded planning dimensions, emerging "wicked problems" and to identify flexible platforms for success. Explores the interface between strategy and sustainability, developing a framework for strategic sustainability that underpins authentic and transparent strategic efforts. Students engage in mapping, planning and prioritizing methods, tools and techniques to identify and assess strategic opportunities.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): Executive Masters for Sustainability Leadership or Master of Sustainability Leadership major; Corequisite(s): EMS 502; Pre- or corequisite(s): EMS 501 or SOS 501
EMS	504	Communications and Sustainability I	One of the greatest challenges for leadership in sustainability is multidisciplinary communications. Currently, sustainability itself lacks meaning and emotion, which leads to a lack of commitment and execution. Therefore, all future executives must be proficient communicators who can convey vision and human context to the organization's sustainability initiatives. Helps you survey your internal communications environment, understand students target audiences and their unique customer centricities and develops their voices through the use of proven story structure.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 502, 503. Corequisite(s): EMS 505
EMS	505	Sustainability Leadership I	The practice of leadership in sustainability requires leading in multidisciplinary roles across multiple scales of an organization. In many of today's organizations, leadership must identify, communicate and support novel organizational contexts as sustainability emerges. Enables students to meld powerful and traditional leadership skills while challenging the student's prior knowledge with multiple lens of leadership in a sustainability context. Students create a personal plan for their unique needs and personal growth toward sustainability leadership.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 502, 503. Corequisite(s): EMS 504

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EMS	506	Global Context II	As material sustainability issues are identified and prioritized and as the organization applies sustainability as core success platform, the organization looks to mitigating risks outside of its control, shaping the risks it can control, and creating new opportunities and leveraging those identified in the process. Global context comes into focus not only in expanding resource relationships and concerns, but also across dimensions of time, responsibility, success and a growing need to engage with an ever-growing group of stakeholders and potential partners. Organizations and leaders must innovate and execute at all levels of the organization to match the evolving reality. Explores and applies global sustainability as a knowledge platform for ongoing success, organizational innovation and effective organizational leadership.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 504, 505; Corequisite(s): EMS 507
EMS	507	Strategic Sustainability II	As sustainability becomes a core strategic goal of any organization, it impacts all aspects of the organization from informing risk and reward to the definitions and dimensions of innovation and overall success. Uses reframing, re-visioning and backcasting via a sustainability lens as constructs for introducing strategic sustainability across all aspects of an organization--both internally and externally. Applies various methods such as natural capitalism, design for sustainability/method of sustainable product design, Anderson method, cradle-to-cradle and framework for strategic sustainable development to develop flexible action platforms for sustainable enterprises. Students create a strategic vision, action plan for an organization, including critical external partnerships with communities and institutions.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 504, 505. Corequisite(s): EMS 506
EMS	508	International Immersive	The international immersive experience takes place in a compelling location where all the challenges and opportunities of sustainability are in play. It is designed as a dynamic vehicle to make real-world connections to sustainability leaders, projects and communities, and is among the most memorable experiences of the program. Students "see" and "feel" sustainability from another country and culture's perspective and see the overlap and conflict to their own context. Extending one's professional network to other host countries and generating a reflective experience and analysis report are experiential learning artifacts that are generated from this experience. Collaborative teams work through a sustainability case study and present their solutions.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 506, 507
EMS	509	Communications and Sustainability II	Marketing and communication professionals in all industries are attempting to keep up with the rapidly expanding landscape of multichannel communications. This is especially true in sustainability, given that the Chief Sustainability Officer must understand and appreciate the modes of communications across all platforms, not just in the consumer market. Maps internal, external and target audiences/markets; strategizes channels to reach them with sustainability stories; and creates a multichannel communications plan that incorporates modes of engagement for all audiences.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 506; EMS 507; Corequisite(s): EMS 510
EMS	510	Sustainability Leadership II	As sustainability emerges as a core strategic platform for an organization, leadership and sustainability intertwine; leadership opportunities--and responsibilities--greatly expand; thus requiring innovation. Individual leadership and organizational leadership are asked to find opportunity via extended definitions of critical systems; value webs, increased roles for diverse internal and external partnerships, and the need to lead within increasingly complex and unpredictable global systems. Engage students to challenge their prior definitions of systems, responsibility and community from the perspective of sustainability and leadership and provides a toolbox for leading with sustainability as a fundamental success platform.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 506; EMS 507; Corequisite(s): EMS 509
EMS	511	Global Context III	Sustainability leaders help their organizations recognize when material issues require solutions that extend beyond their control or capabilities, and when to look for, participate in and potentially lead industry, cross-industry, regional or other collaborative approaches. Global sustainability context becomes an increasingly proactive concept where individual and organizational responsibility and success extends to a global scale. Organizations organize themselves as agents of change toward sustainability that aligns with more traditional organizational success. Students learn from successes and failures of current and past attempts and assess the implications for this change in leadership perspective to their organizational context.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 509, 510. Corequisite(s): EMS 512
EMS	512	Strategic Sustainability III	Organizations that aim at sustainability come to recognize that they must be part of sustainable success on all scales, from local to global, from internal to external and for today and tomorrow. Tools such as resource plans, investment pathways, stakeholder engagement and policy influencers set the theatre for sustainability-oriented organization to challenge the status quo and advance agendas that embed both success and sustainability. Students apply their enhanced strategic sustainability skills to examine select case studies on international sustainability in corporate and nongovernmental agencies.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 509, 510. Corequisite(s): EMS 511

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EMS	513	Communications and Sustainability III	Most stories of sustainability are driven and told with data as its central character. Unfortunately, data is nearly meaningless to our minds unless it is placed in an illuminating human context. The best chief sustainable storytellers bring meaning to data through the use of metaphor brought to life by thought-provoking narrative. Story grips the mind and propels people forward. Students develop proof of concepts for campaigns, expand social media presence and influence, create and record a 20-minute presentation in the style of a TedTALK, and become a leader in sustainable communications.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 511; EMS 512; Corequisite(s): EMS 514
EMS	514	Sustainability Leadership III	Lasting, sustainable change fully takes hold once ownership and accountability extends well into the organization and community. Engages the student to identify and apply pathways to inspire, persuade and influence others to act toward a shared global vision. Future orientation, reframing organizations to be globally scalable and still be locally focused, leadership best practices for diverse, multinational, and international human talents and redefining success and growth using sustainability as a success lens are great tasks that sustainability leaders face.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 511, 512. Corequisite(s): EMS 513
EMS	515	Capstone I	Capstone project and gateway to starting innovative sustainability initiatives and thinking. Planning, components and deliverables of the capstone from the first in-person immersion in January. Students perform a proof of concept to show viability and applicability that serves as a springboard for postgraduation continuation of capstone project into their organizations; environments. The proof of concept also becomes the final component of the e-portfolio.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 513, 514
EMS	516	Capstone II - Sustainability Leadership Workshop II	Develops a proof of concept based on project proposal and feasibility study. Requires a TED-style final project presentation.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	1		Prerequisite(s): EMS 515
EMS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	0		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	586	Introduction to MSL Capstone	Students select and prepare for their final capstone project in the MSL program, with an opportunity to present and discuss their concepts and plans with faculty and with other students in the cohort. Students also learn project management techniques used in completing their capstone project.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	1		Prerequisite(s): EMS 504; EMS 505
EMS	587	MSL Capstone Preparation	Guides students in taking their culminating project from proposal to hands-on implementation. Students connect, network, leverage, test, adapt and finally implement their capstone project.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	1		Prerequisite(s): EMS 586
EMS	588	MSL Capstone	Sustainability Leadership students complete and finally implement their capstone project.	N	RSC	N	GNA	School of Sustainability	School of Sustainability	2		Prerequisite(s): EMS 587
EMS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic	Y	IND	Y	Z1	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	School of Sustainability	School of Sustainability	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EMS	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	101	First-Year Composition	Discovers, organizes and develops ideas in relation to the writer's purpose, subject and audience. Emphasizes modes of written discourse and effective use of rhetorical principles.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): TOEFL score 560PBT/250CBT/100iBT or higher, or IELTS score >=6.5, or ACT ENG score >=19, or SAT Verbal score >=520 (or SAT Verbal score >=470 if taken before 2016), or Accuplacer score 5-7, or WAC 101 or 107 with C or better
ENG	101	First-Year Composition	Discovers, organizes and develops ideas in relation to the writer's purpose, subject and audience. Emphasizes modes of written discourse and effective use of rhetorical principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): TOEFL score 560PBT/250CBT/100iBT or higher, or IELTS score >=6.5, or ACT ENG score >=19, or SAT Verbal score >=520 (or SAT Verbal score >=470 if taken before 2016), or Accuplacer score 5-7, or WAC 101 or 107 with C or better
ENG	101	First-Year Composition	Discovers, organizes and develops ideas in relation to the writer's purpose, subject and audience. Emphasizes modes of written discourse and effective use of rhetorical principles.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): TOEFL score 560PBT/250CBT/100iBT or higher, or IELTS score >=6.5, or ACT ENG score >=19, or SAT Verbal score >=520 (or SAT Verbal score >=470 if taken before 2016), or Accuplacer score 5-7, or WAC 101 or 107 with C or better
ENG	102	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG	102	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG	102	First-Year Composition	Critical reading and writing; emphasizes strategies of academic discourse. Research paper required.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 101 or 107 with C or better

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ENG	105	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ACT English score of 26 or above, or SAT Verbal score of 660 or above (or SAT Verbal score of 620 or above if taken before 2016), or Accuplacer score of 8 or above; Credit is allowed for only ENG 101 or ENG 105
ENG	105	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ACT English score of 26 or above, or SAT Verbal score of 660 or above (or SAT Verbal score of 620 or above if taken before 2016), or Accuplacer score of 8 or above; Credit is allowed for only ENG 101 or ENG 105
ENG	105	Advanced First-Year Composition	Concentrated composition course for students with superior writing skills; intensive reading; research papers; logical and rhetorical effectiveness.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ACT English score of 26 or above, or SAT Verbal score of 660 or above (or SAT Verbal score of 620 or above if taken before 2016), or Accuplacer score of 8 or above; Credit is allowed for only ENG 101 or ENG 105
ENG	107	First-Year Composition	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): TOEFL score of 560PBT/220CBT/83IBT or above, or IELTS score of >=6.5, or ACT English score of >=19, or SAT Verbal score of >=520 (or SAT Verbal score of >=470 if taken before 2016), or Accuplacer score of >=5
ENG	107	First-Year Composition	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): TOEFL score of 560PBT/220CBT/83IBT or above, or IELTS score of >=6.5, or ACT English score of >=19, or SAT Verbal score of >=520 (or SAT Verbal score of >=470 if taken before 2016), or Accuplacer score of >=5
ENG	107	First-Year Composition	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): TOEFL score of 560PBT/220CBT/83IBT or above, or IELTS score of >=6.5, or ACT English score of >=19, or SAT Verbal score of >=520 (or SAT Verbal score of >=470 if taken before 2016), or Accuplacer score of >=5
ENG	108	First-Year Composition	For students for whom English is not the native language. Critical reading and writing; emphasizes strategies of academic discourse. Research writing required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG	108	First-Year Composition	For students for whom English is not the native language. Critical reading and writing; emphasizes strategies of academic discourse. Research writing required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG	108	First-Year Composition	For students for whom English is not the native language. Critical reading and writing; emphasizes strategies of academic discourse. Research writing required. Satisfies graduation requirement of ENG 102.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 101 or 107 with C or better
ENG	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		Prerequisite(s): freshman standing; maximum 25 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-3		Prerequisite(s): freshman standing; maximum 25 hours
ENG	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
ENG	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
ENG	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ENG	200	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better
ENG	200	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better
ENG	200	Critical Reading and Writing About Literature	Introduces the terminology, methods, and objectives of the study of literature, with practice in interpretation and evaluation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better
ENG	201	World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	201	World Literature	Classical and medieval periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & H & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	202	World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	202	World Literature	Renaissance and modern periods. Selections from the great literature of the world in translation and lectures on the cultural background.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	204	Topics in Contemporary Literature	Topics in contemporary literature, which may include narrative and medicine.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	204	Topics in Contemporary Literature	Topics in contemporary literature, which may include narrative and medicine.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	205	Introduction to Writing, Rhetorics and Literacies	How do we understand the ways in which people in systems--both small and large--social, political, and economic, throughout the world use language and other symbolic resources to carry out work? Three fields of study take this kind of questioning especially seriously: studies in writing, studies in rhetoric, and studies in literacy. Inquiry--that persistent, deliberate commitment to question and to build methods sufficient to that questioning--is a generative force in each of these fields of study. Familiarizes students with such questioning traditions and to help them judge for themselves what each is good for. The goal is to strengthen your own repertoire and decision-making power for producing and circulating work (widely defined across material, print, and digital media) that matters in our risk-ridden world. Quite simply, then, this is a course in asking good questions and in evaluating responses to situations that spur questioning.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	205	Introduction to Writing, Rhetorics and Literacies	How do we understand the ways in which people in systems--both small and large--social, political, and economic, throughout the world use language and other symbolic resources to carry out work? Three fields of study take this kind of questioning especially seriously: studies in writing, studies in rhetoric, and studies in literacy. Inquiry--that persistent, deliberate commitment to question and to build methods sufficient to that questioning--is a generative force in each of these fields of study. Familiarizes students with such questioning traditions and to help them judge for themselves what each is good for. The goal is to strengthen your own repertoire and decision-making power for producing and circulating work (widely defined across material, print, and digital media) that matters in our risk-ridden world. Quite simply, then, this is a course in asking good questions and in evaluating responses to situations that spur questioning.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	207	Elements of English Language and Cultures I	English communication and cultural awareness for international users of English. Relies on the many contexts of English use around the world to teach aspects of grammar, reading, writing, listening and speaking.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 107; ENG 108
ENG	208	Elements of English Language and Cultures II	English communication and cultural awareness for international users of English. Relies on the many contexts of English use around the world to teach aspects of grammar, reading, writing, listening and speaking.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 107 with C or better; ENG 108 with C or better
ENG	210	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	210	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	210	Introduction to Creative Writing	Beginning creative writing in genres other than poetry and fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	213	Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	213	Introduction to the Study of Language	Language as code; phonetics, phonology, morphology, and syntax; the lexicon; language acquisition; sociolinguistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better

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ENG	214	English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	214	English Grammar and Usage	Fundamentals of English grammar (word and phrase structure), English usage (punctuation, grammatical correctness), and grammatical and usage theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	215	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	215	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	215	Strategies of Academic Writing	Advanced course in techniques of analyzing and writing academic expository prose. Writing is research based.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	216	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	216	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	216	Persuasive Writing on Public Issues	Advanced course in techniques of analyzing and writing persuasive arguments addressing topics of current public interest. Papers are research based.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	217	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	217	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	217	Writing Reflective Essays	Critical examination of the influences discourse has on formation of identity; narrative analyses of self and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	218	Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	218	Writing About Literature	Advanced writing course requiring analytical and expository essays about fiction, poetry, and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	219	Newspaper Production	Students work on campus newspaper to learn basics of news and column writing, digital photography, and layout.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	221	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	221	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	221	Survey of English Literature	Medieval, Renaissance, and 18th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	222	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	222	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & H	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	222	Survey of English Literature	Romantic, Victorian, and 20th-century literature. Emphasizes major writers and their works in their literary and historical contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	228	Introduction to Shakespeare		N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; credit is allowed for only ENG 228 or 294 (Shakespeare for Teachers) OR (Introduction to Shakespeare)
ENG	229	Love and Lust in Medieval Literature	The medieval period, roughly 600-1500, cannot reasonably be called the "dark ages." Indeed, the Middle Ages provides us with a corpus of literature replete with complex characters struggling to live and love, dealing with sin and lust, unity and diversity, faith and reason within a tumultuous cultural milieu and religious rigor, all of which are feeling the winds of changes. Explores medieval literature, noting the astonishing differences from our own time, as well as surprising similarities. Western civilization, our own 21st century, for better or for worse, is indebted to the love and lust of the medievals.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; credit is allowed for only ENG 229 or 294 (Love and Lust in Medieval Lit)
ENG	230	Introduction to Film Studies	Introduces the style and cultural significance of feature films.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	241	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	241	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Pre/corequisite(s): ENG 200 with C or better if completed

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ENG	241	Literatures of the United States to 1860	Surveys literary movements and genres from colonization to the Civil War.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	242	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	242	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	242	Literatures of the United States, 1860 to Present	Surveys literary movements and genres from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre/corequisite(s): ENG 200 with C or better if completed
ENG	243	Introduction to Writing Family History	Interdisciplinary writing course on theories, methodologies, and issues in writing family history.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	244	Introduction to Researching Family History	Introduces research methods in family history.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	245	Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	245	Popular Culture Issues	Selected topics in various forms of popular culture related to written texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	287	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	287	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	287	Beginning Creative Writing Workshop in Poetry	Beginning writing of poetry.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	288	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	288	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	288	Beginning Creative Writing Workshop in Fiction	Beginning writing of fiction.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	1-6		Prerequisite(s): Barrett Honors student; ENG 102, 105 or 108 with C or better
ENG	301	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	301	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	301	Writing for the Professions	Advanced practice in writing and editing expository prose. Primarily for preprofessional majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	302	Business Writing	Advanced interdisciplinary writing course designed to improve the workplace writing competence of W. P. Carey School of Business professional and preprofessional students. Lecture, discussion, case studies, cooperative learning, interactive, Internet, student	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	302	Business Writing	Advanced interdisciplinary writing course designed to improve the workplace writing competence of W. P. Carey School of Business professional and preprofessional students. Lecture, discussion, case studies, cooperative learning, interactive, Internet, student	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	303	Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	303	Classical Backgrounds of English Literature	Readings of Greek and Latin literature in translation as they relate to literature in English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	305	Classical and Biblical Backgrounds to Literature	Selected readings from the Bible and Greek and Latin literature in translation, emphasizing ideas, forms, and myths related to the development of English literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	307	Writing Science Fiction	Writing science fiction, primarily the short story.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	310	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 210 with C or better
ENG	310	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 210 with C or better
ENG	310	Intermediate Creative Writing	Intermediate creative writing in genres other than poetry, fiction, or science fiction.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 210 with C or better
ENG	311	Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	311	Persuasive Writing	Advanced writing course that focuses on persuasive writing for diverse audiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	312	English in its Social Setting	Introduces the sociolinguistic study of the English language.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU or SB	Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	312	English in its Social Setting	Introduces the sociolinguistic study of the English language.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU or SB	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	312	English in its Social Setting	Introduces the sociolinguistic study of the English language.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU or SB	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	313	Phonology and Morphology	Introduces English morphology, phonology, etymology, and phonetic aspects of rhyme, alliteration, and other sound-based literary devices.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	314	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	314	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	314	Modern Grammar	Modern descriptive models of English grammar.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	315	Medieval Literature in Translation	Medieval literature (insular and continental) in translation, from Beowulf to Malory (excluding Chaucer), emphasizing cultural and intellectual backgrounds.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	315	Medieval Literature in Translation	Medieval literature (insular and continental) in translation, from Beowulf to Malory (excluding Chaucer), emphasizing cultural and intellectual backgrounds.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	316	Literary Readings of the Hebrew Bible	Literary analysis of two of the main genres of the Hebrew Bible: narrative art and poetry. Students learn the main literary conventions of biblical prose and poetry, and how these conventions are applied or subverted. Each class comprises the study of a literary aspect, close readings, and thematic discussions. Biblical texts are read only in translation. They are situated in the religious, literary and artistic traditions that have developed on their basis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only ENG 316, HEB 316, JST 316, REL 316 or HEB 394 (Literary Readings of the Bible)
ENG	317	Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	317	Cross-Cultural Writing	Cultural differences and their impact on writing and/or their role in miscommunication and misinterpretation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	318	The Life and Death of Languages	The history of language development, spread and contraction as well as thinking on where language may be going in the future. Discusses how languages differentiate and become new languages, how they mix with each other and how the development of writing can change this process. Maintains a focus on the ways speakers from different language communities have found to communicate through pidgin languages, bilingualism and languages of wider communication. Moreover, discusses the invention of new varieties and languages by people who feel their current choices do not fit their needs. Lastly, in considering what might be needed in the future, addresses issues such as machine translation, brain-to-brain communication, aspects of intergalactic communication posed in science fiction and interspecies communication.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only ENG 318 or ENG 394 (The Life and Death of Languages)
ENG	320	Medievalism in Modern Culture	Studies the representation of Medieval narratives, characters, themes, myths, and images in modern culture.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	320	Medievalism in Modern Culture	Studies the representation of Medieval narratives, characters, themes, myths, and images in modern culture.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	321	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	321	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	321	Shakespeare	Readings in Shakespeare's major comedies, tragedies, histories, romances and/or poems.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	323	Rhetoric and Grammar	Practical course taught in the computer lab. Emphasizes rhetorical strategies and grammar for writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	325	Restoration and the 18th Century	Writers and movements in nondramatic literature of the restoration and early 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	326	English Drama 1660-1800	English drama 1660-1800.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	
ENG	328	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	328	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	328	The Novel to Jane Austen	From origins of prose fiction through the 18th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	329	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	329	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	329	19th-Century British Fiction	Includes such authors as Austen, Dickens, Eliot, and Conrad.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	330	19th-Century British Poetry	Romantic and Victorian poets studied in context.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	331	American Drama	Major works in the development of American drama from its beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	333	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
ENG	333	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
ENG	333	American Ethnic Literature	Examines America's multiethnic identity through works of literature that depict American ethnic, gender, and class sensibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 333 (or AFH 333) or ENG 333
ENG	334	The American Southwest in Literature and Film	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AMS 336 or ENG 334 or ETH 334
ENG	334	The American Southwest in Literature and Film	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AMS 336 or ENG 334 or ETH 334
ENG	334	The American Southwest in Literature and Film	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AMS 336 or ENG 334 or ETH 334
ENG	335	American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	335	American Poetry	Themes and developments in American poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	337	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	337	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	337	Major American Novels	Major American novels studied in their ethnically diverse literary, historical, and cultural contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	338	Protest Literature	Examines traditions of social protest literature across a variety of historical periods and literary and rhetorical genres.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, ENG 105, or ENG 108 with C or better; minimum 24 earned hours; credit is allowed for ENG 394 (Banned Literature), 338 or 440 (American Protest Novels)
ENG	342	20th-Century British and Irish Literature	Major works in the development of literature since 1900, studied in their historical and cultural contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	344	Intermediate Family History Research	How to locate records, analyze and interpret evidence, and write a family history narrative.	N	RSC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	345	Selected Authors or Issues	Different topics may be offered. Film topics with lab may carry 4 credits. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	345	Selected Authors or Issues	Different topics may be offered. Film topics with lab may carry 4 credits. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	352	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	352	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	352	Short Story	Development of the short story as a literary form; analysis of its technique from the work of representative authors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	353	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 353 (or AFH 353) or AMS 353 or ENG 353 or ETH 353
ENG	353	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 353 (or AFH 353) or AMS 353 or ENG 353 or ETH 353

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	353	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 353 (or AFH 353) or AMS 353 or ENG 353 or ETH 353
ENG	354	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or AMS 354 or ENG 354 or ETH 354
ENG	354	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or AMS 354 or ENG 354 or ETH 354
ENG	354	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or AMS 354 or ENG 354 or ETH 354
ENG	355	European Dramatic Traditions	Development of European drama since Aeschylus.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	356	The Bible as Literature	Readings in the Jewish and Christian Scriptures in modern translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	359	Indigenous American Literature	Selected oral traditions and contemporary works by Indigenous American authors.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	359	Indigenous American Literature	Selected oral traditions and contemporary works by Indigenous American authors.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	359	Indigenous American Literature	Selected oral traditions and contemporary works by Indigenous American authors.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	360	Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	360	Western American Literature	Critical examination of ideas and traditions of the literature of the western United States, including the novel.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	361	Scriptwriting	The art of scriptwriting using 10-minute plays as the platform. Designed to help students learn craft techniques and to expose them to the various forms of the 10-minute script. Includes lectures, writing assignments, discussion, and criticism.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): first-year composition; credit is allowed for only ENG 361 or 394 (Scriptwriting)
ENG	363	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only ENG 363 or TCL 363
ENG	363	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only ENG 363 or TCL 363
ENG	363	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only ENG 363 or TCL 363
ENG	364	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	364	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	364	Women and Literature	Approaches to issues of gender and representation in literature by and about women.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	365	History of Film	Development of motion pictures.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3-4	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	365	History of Film	Development of motion pictures.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3-4	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	365	History of Film	Development of motion pictures.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3-4	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	366	Literature on Film	Studies literary texts and their adaptation to film.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	367	Environmental Issues in Literature and Film	Evaluates literary texts and films that address interconnected cultural, historical, and environmental issues.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	367	Environmental Issues in Literature and Film	Evaluates literary texts and films that address interconnected cultural, historical, and environmental issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	368	Art of the Personal Essay	Writing personal essays drawing on both research and personal experience.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	369	Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	369	Science Fiction Studies	Development of science fiction and fantasy literature. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	370	Science, Values, and the Public	Examines science, communication, and a range of public opinion to understand science as a discourse of profound social power.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; must have 35 or more earned hours; credit is allowed for only BIO 315 or ENG 370
ENG	371	Rhetoric of the Environmental Movement	Examines how language is used to conceptualize, clarify/obfuscate, and resolve problems among those who concern themselves with the disposition of natural resources.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	372	Document Production	Introduces document design and production. Practice in critique and in writing the content of publications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	373	Publishing in Literary Magazines	Analyzes the history, publishing preferences, editorial staff, and submission guidelines of literary magazines.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	374	Technical Editing	Fundamentals of editing technical and professional materials. Role of editors in analyzing, revising, and polishing manuscripts. Successful writer-editor dialogues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	375	Titans of Business	Explores leading CEOs and corporations from a humanities perspective.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	375	Titans of Business	Explores leading CEOs and corporations from a humanities perspective.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	376	Writing a Personal History	Interdisciplinary writing course emphasizing theories, methodologies, and issues of composing personal histories.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	377	Editing Family History for Public Audiences	Fundamentals of editing family writing. Role of editors in analyzing, revising, and polishing manuscripts for publication.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	378	Environmental Creative Nonfiction	Lectures, discussion, and criticism concerning the literary history of nature writing and techniques of writing environmental creative nonfiction for publication.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	378	Environmental Creative Nonfiction	Lectures, discussion, and criticism concerning the literary history of nature writing and techniques of writing environmental creative nonfiction for publication.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	379	Travel Writing	Studies the genesis of travel writing, what theories inform travel writing, and the various genres of travel writing today.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	379	Travel Writing	Studies the genesis of travel writing, what theories inform travel writing, and the various genres of travel writing today.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	382	Digital Project Management for Humanities	Introduces Web design for the humanities; explores the use of the ADDIE process to create digital projects.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	383	Digital Media in the Humanities	Introduction to the digital arts is an introduction to the emerging "new media" with emphasis on still imaging, audio, video, multimedia and the World Wide Web.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	385	Career Development for English Majors	Theoretical and practical aspects of career planning related to skills and interests developed in English studies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	386	American Gothic	The development of modern American Gothic as a literary form from Poe to Oates. Emphasizes the short story.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	387	Intermediate Creative Writing Workshop in Poetry: Form, Theory, and Practice	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 287 (Poetry) with C or better; credit is allowed for only ENG 310 (Intermediate Poetry) or ENG 387
ENG	387	Intermediate Creative Writing Workshop in Poetry: Form, Theory, and Practice	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 287 (Poetry) with C or better; credit is allowed for only ENG 310 (Intermediate Poetry) or ENG 387
ENG	387	Intermediate Creative Writing Workshop in Poetry: Form, Theory, and Practice	Intermediate writing of poetry. Requires term paper or equivalent out-of-class written work.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 287 (Poetry) with C or better; credit is allowed for only ENG 310 (Intermediate Poetry) or ENG 387
ENG	388	Intermediate Creative Writing Workshop in Fiction: Form, Theory, and Practice	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 288 (210: Fiction) with C or better; credit is allowed for only ENG 310 (Intermediate Fiction) or ENG 388
ENG	388	Intermediate Creative Writing Workshop in Fiction: Form, Theory, and Practice	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 288 (210: Fiction) with C or better; credit is allowed for only ENG 310 (Intermediate Fiction) or ENG 388

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	388	Intermediate Creative Writing Workshop in Fiction: Form, Theory, and Practice	Intermediate writing of fiction. Requires term paper or equivalent out-of-class written work.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 288 (210: Fiction) with C or better; credit is allowed for only ENG 310 (Intermediate Fiction) or ENG 388
ENG	390	Methods of Inquiry	Studies in writing, rhetoric and literacy are multiple and diverse because these areas deal with complicated ways people create meaning, circulate meaning, and understand meaning in a variety of contexts and a variety of modal formats. Examines ways of developing research problems and questions, designing studies and conducting, reading and evaluating research in the areas of writing, rhetoric and literacy. Qualitative methods (e.g., case study, ethnographic methods, interviewing); historical methods (e.g., archival, document analysis and artifact interpretation); rhetorical analysis and discourse analysis; feminist approaches to research and analysis; and recent advances in research in the fields of rhetoric, writing and literacy studies. Investigates the many attitudes and assumptions about creativity and cultural work that make methods of inquiry as controversial as they are significant to contemporary public life.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	391	Writing in Context	How do we understand the ways in which people use written language to carry out work in professional, academic, social and/or personal contexts? How does our understanding of the ways writing is produced for an audience shift between and among these different contexts? More importantly, how do writers adapt their writing practices in order to facilitate audience understanding as well as cultivate an audience's capacity for action? Familiarize students with rhetorical practices that position them to read, assess and respond to the rhetorical demands of a wide range of writing contexts. Strengthens students' existing rhetorical skill sets and problem-setting capacities for producing and circulating work (widely defined across material, print and digital media) that responds to a range of problems in an applied manner. Assesses the rhetorical demands of writing contexts and in developing and producing tailored, audience-specific texts that forward work in complex, interdisciplinary environments.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	392	History of Rhetorical Theory	Begins in ancient Greece with the rise of the art of public oratory (known as rhetoric) and ends in the present, an era dominated by mass media. Engages in a great deal of reading--lots of very old writings as well as some newer ones. Covers a great many topics and ideas; focuses by continually returning to the subject of public discourse. Challenging readings designed to emphasize the connection between systems of philosophy (or "worldview") and systems of communication. By focusing on big ideas, students become a better thinker and communicator in any chosen career.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	393	Theories of Literacy	While theories of literacy have, for the most part, been determined by the primacy of reading and writing script, more recent scholarship in literacy theory and history has served to challenge such limitations. Many contemporary perspectives on literacy view scripted text as one component of complex acts and practices of written communication that occur in social contexts. Studies that examine such communicative acts in their local contexts reveal that literate practices and the texts that are produced are imbued with social and cultural values and traditions and the needs and desires of individuals. As the statements above illustrate, theories of literacy themselves are embedded within the values and assumptions of individuals, institutions, and academic specialization. Examines some of these theories, their influences on academic scholarship and pedagogy, the ideological assumptions that inform them, and how we might view these theories within broader social-cultural landscapes.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	400	History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	400	History of Literary Criticism	Major critics and critical traditions in the Western world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	401	Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	401	Topics in Critical Theory	Major critical schools of recent decades--postcolonialist, psychoanalytic, deconstructionist, feminist, new historicist.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	403	Semantics	Program and methods of contemporary formal semantics. Characterizes knowledge of meaning as knowledge of truth conditions. The goal of semantics is thus to uncover the rules that allow the speakers of a language to know under what conditions any sentence is true; or in other words, to construct a theory of truth for natural language. Simple fragments including: predication, quantification, definite descriptions, simple temporal and modal expressions, and attitude verbs.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 314 with C or better; Credit is allowed for only ENG 403 or ENG 414
ENG	404	Studies in Second Language Acquisition	Specialized topics in second language teaching and learning, including theory, pedagogy, curriculum, and assessment.	Y	LEC	Y	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 and 213 with C or better OR 1 year language study and minimum 56 hours
ENG	410	Writing for Publication	Lectures and conferences concerning techniques of writing for publication.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 and one 200-level literature course with C or better, OR New College undergraduate student with minimum 45 hours
ENG	411	Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 310 with C or better
ENG	411	Advanced Creative Writing	Advanced creative writing in genres other than poetry, fiction, creative nonfiction, or screenwriting.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 310 with C or better
ENG	412	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 310, 388 or 411 with C or better
ENG	412	Creative Nonfiction	Lectures, discussion, and criticism concerning techniques of writing creative nonfiction for publication.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 310, 388 or 411 with C or better
ENG	413	History of English Language	Development of English from the earliest times to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 200 and one 200-level literature course OR New College undergraduate student with minimum 45 hours. Credit is allowed for only ENG 413 or LIN 517
ENG	413	History of English Language	Development of English from the earliest times to the modern period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 and one 200-level literature course OR New College undergraduate student with minimum 45 hours. Credit is allowed for only ENG 413 or LIN 517
ENG	414	Studies in Linguistics	Specialized topics in linguistics including phonology, syntax, semantics, pragmatics, discourse, language variation, and change.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 200 and 213 with C or better OR 1 year language study and minimum 56 hours
ENG	415	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	415	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	415	Studies in Medieval Literature and Culture	Medieval English and continental literature in translation, emphasizing cultural and intellectual backgrounds.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	416	Chaucer in Middle English	Yearly alternate between Chaucer's The Canterbury Tales and Troilus and Criseyde.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	416	Chaucer in Middle English	Yearly alternate between Chaucer's The Canterbury Tales and Troilus and Criseyde.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	418	Renaissance Literature	Prose, poetry, and drama of the Renaissance Era with an emphasis on cultural history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	418	Renaissance Literature	Prose, poetry, and drama of the Renaissance Era with an emphasis on cultural history.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	420	Multicultural Autobiographies	Examines the human experience via autobiographies and personal narratives. Multicultural, literary, and psychological perspectives on individual lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits; Credit is allowed for only ENG or IAS 420
ENG	421	Studies in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	421	Studies in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	422	Special Topics in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	422	Special Topics in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	422	Special Topics in Shakespeare	Close examination in selected dramatic and/or nondramatic works.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	423	Renaissance Drama	Topics, authors, and themes in the drama of the Tudor and early Stuart periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	423	Renaissance Drama	Topics, authors, and themes in the drama of the Tudor and early Stuart periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	424	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	424	Milton	Selected prose and poetry, emphasizing Paradise Lost, Paradise Regained, and Samson Agonistes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	425	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours

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ENG	425	Studies in Romanticism	Romanticism in continental, British, and American literature and culture.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	426	British Culture and Empire	Examines British imperial culture in art and literature, 1870-1914, and postcolonial theory.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	427	Studies in 18th-Century Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	428	The Pre-Raphaelites	Visual and literary works by Victorian Pre-Raphaelites as works in themselves and through relations between images and texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	429	Studies in European Literature and Culture	Literary, cultural, and historical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours; Credit is allowed for only ENG, SLC or THE 429
ENG	430	Studies in Victorian Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	430	Studies in Victorian Literature and Culture	Literary, social, and cultural issues of the period studied in an interdisciplinary format. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	431	Whitman and Dickinson	Evaluates the 19th-century American Literary Renaissance through the specialized examination of its poetry and authors in their historical context.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	432	The American Renaissance	Novels, poetry, short fiction, and criticism of the major literary figures of the early to mid-nineteenth century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	433	Southern Writers	Analyzes Southern culture through the eyes of the region's novelists, short story writers, poets, filmmakers, photographers, and song writers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	433	Southern Writers	Analyzes Southern culture through the eyes of the region's novelists, short story writers, poets, filmmakers, photographers, and song writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	434	Studies in the Literature and Culture of the Americas	Literature and culture of North America, South America, and the Caribbean. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	435	Literatures and Cultures of Immigration and Diaspora	Specialized topics in literary and cultural representations of immigration and diaspora studied in an interdisciplinary context.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	436	Studies in Anglophone Literature and Culture	Literary, social, and cultural issues of English-speaking former colonial territories. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours

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ENG	437	The American Novel, 1900 - 1960	Developments in theory and practice of major novelists.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	438	American Novel Since 1960	Major novelists of the period. Developments in theory and practice.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	440	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	440	Studies in American Literature and Culture	Various genres in their literary, political, theoretical, and historical contexts.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	442	Studies in 20th-Century British and Irish Literature and Culture	Major literary genres (novel, poetry, and drama) in their cultural and historical contexts. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	444	Studies in American Romanticism	Fiction, poetry, and essays of such 19th-century authors as Hawthorne, Emerson, Melville, Thoreau, Fuller, Whitman, and Dickinson. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	445	Studies in American Realism	Writers and influences that shaped the development of literary realism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	447	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours; Credit is allowed for only ENG 447, FMS 442 or SLC 450
ENG	448	Studies in Irish Literature and Culture	Themes and problems pertaining to Irish literature, film, and social and cultural history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	450	The British Novel	Focuses on the British novel from the 18th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits
ENG	452	Studies in the Novel	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	453	Studies in the American Novel	Poetics and politics of the novel, 18th through 21st centuries. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	454	Gender and Literature	Focuses on the representation of gender in literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	455	Contemporary Women Writers	Critical examination of literature by contemporary women writers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	455	Contemporary Women Writers	Critical examination of literature by contemporary women writers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	456	Studies in Forensic Linguistics	Focuses on the three main aspects of that branch of applied linguistics, namely language and the law, court cases where language is the central dispute, and linguistic evidence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better; minimum 45 hours; Credit is allowed for only ENG 456 or FOR 456 or PAX 456 or ENG/FOR 494 (Studies in Forensic Linguistics)
ENG	457	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	457	Studies in American Poetry	May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	458	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours; Credit is allowed for only ENG 458 or FMS 464 or TCL 464
ENG	459	Studies in African American/Caribbean Literatures	Studies in African American or Caribbean literatures according to genre, period, theory, or selected authors.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & G	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours; Credit is allowed for only AFR 459 (or AFH 459) or ENG 459
ENG	460	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Hispanic, and Asian American.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours; Credit is allowed for only ENG 460 or WST 467
ENG	461	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	461	Studies in Women and Literature	Advanced topics in literature by or about women.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	462	Africana Literature	Focuses on the literature of the African Diaspora, including texts from the Caribbean, the Americas, and Africa. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	463	African American Literature	Thematic and cultural study of African American literature.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	464	Great Directors	Studies the work of one or more influential directors.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	465	Studies in Film	Advanced topics in cinema.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	466	Studies in International Film	Studies non-American narrative film.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & G	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	467	American Film Musicals	A cultural history of American film musicals.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	468	Environmental Literary Criticism	Evaluates the disparate critical practices that constitute what is the emerging literary project known as "ecocriticism" or "environmental literary criticism."	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	468	Environmental Literary Criticism	Evaluates the disparate critical practices that constitute what is the emerging literary project known as "ecocriticism" or "environmental literary criticism."	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	469	Science and Literature	Historical and theoretical links between science and literature, from Francis Bacon to the present, examined in cultural context. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	470	Symbols and Archetypes in Children's Literature	Various critical approaches and recurring themes studied in relation to classical and contemporary children's literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	471	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	471	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	REC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	471	Literature for Young Adults	Prose and poetry that meet the interests and capabilities of junior high and high school students. Stresses recent literature. A passing grade of at least "C" (2.00) required before students are permitted to student teach in English.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	472	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	472	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	472	Rhetorical Studies	Developments in theory and practice of major rhetorical inquiries.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	474	Review Writing	Advanced writing course exploring rhetorical approaches to writing reviews.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Completed ENG 102, 105, or 108 with C or better; Minimum 56 hours
ENG	475	Popular Periodical Writing	Advanced writing course analyzing and imitating genres in popular periodical writing.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Pre-requisites: Completed ENG 102, 105, or 108 with C or better. Minimum 56 hours
ENG	476	Studies in Folklore	Surveys the history, genres, and dynamics of folklore, with emphasis on oral traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU or SB) & C	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	476	Studies in Folklore	Surveys the history, genres, and dynamics of folklore, with emphasis on oral traditions. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU or SB) & C	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	477	World Literature	Readings in world literature, mostly outside the United States and England.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours; Credit is allowed for only ENG 477 or IAS 477
ENG	478	Studies in Modernism	Cultural, historical, and literary issues in American and European modernism.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	478	Studies in Modernism	Cultural, historical, and literary issues in American and European modernism.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	479	Studies in Postmodernism	Literary, social, and cultural topics in postmodernism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU & G	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	479	Studies in Postmodernism	Literary, social, and cultural topics in postmodernism. May be repeated for credit when topics vary.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours
ENG	480	Methods of Teaching English: Composition	Methods of instruction, organization, and presentation of appropriate content in the teaching of composition and other writing skills.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	480	Methods of Teaching English: Composition	Methods of instruction, organization, and presentation of appropriate content in the teaching of composition and other writing skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	480	Methods of Teaching English: Composition	Methods of instruction, organization, and presentation of appropriate content in the teaching of composition and other writing skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Pre-requisites: ENG 102, 105, or 108 with C or better and one other ENG course with C or better
ENG	482	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	REC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	482	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	REC	N	OPT	Liberal Arts and Sciences	Department of English	3	L	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours
ENG	482	Methods of Teaching English: Language	Methods of instruction, organization, and presentation of appropriate content in language and usage for junior and senior high schools.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	483	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 200 with C or better and one 200-level literature course with C or better OR New College or Integrative Sciences and Arts undergraduate and minimum junior academic level and one 200-level (or higher) English course with C or better
ENG	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	485	Digital Tools	Digital (online, electronic) tools as best utilized in language arts curriculum and instruction for junior and senior high schools. Addresses many practical classroom matters; broadens knowledge of Web 2.0 opportunities for teaching and learning. Creates a detailed inventory of the digital tools familiar to secondary students, and compares these to what a clever English teacher can access in a public school classroom. Imaginations, studies, and designs digital tools to enhance student achievement. Uses digital tools to increase student access to history and culture and opportunities for individuals to find and articulate their voices, as well as opens avenues for their creativity. Empowers the English language arts classroom with critical understandings of media, culture and public relations (digital information manipulation) and develops secondary students from passive consumers to literate participants in democracy.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course with C or better
ENG	485	Digital Tools	Digital (online, electronic) tools as best utilized in language arts curriculum and instruction for junior and senior high schools. Addresses many practical classroom matters; broadens knowledge of Web 2.0 opportunities for teaching and learning. Creates a detailed inventory of the digital tools familiar to secondary students, and compares these to what a clever English teacher can access in a public school classroom. Imaginations, studies, and designs digital tools to enhance student achievement. Uses digital tools to increase student access to history and culture and opportunities for individuals to find and articulate their voices, as well as opens avenues for their creativity. Empowers the English language arts classroom with critical understandings of media, culture and public relations (digital information manipulation) and develops secondary students from passive consumers to literate participants in democracy.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course with C or better
ENG	486	Teaching Text	Approaches to texts (poetry, nonfiction and fiction) as best utilized in language arts curriculum and instruction for junior and senior high schools. Language arts teachers want all of their students to love literature and become immersed in the texts they assign (poems, short stories, plays, nonfiction and informative texts, and novels). Explores activities and philosophies for building a strong reading workshop in the secondary language arts classroom. Through identifying proficient readers, conducting thoughtful conversations about students and reading, and using a variety of ways to invite readers into books, designs and experiences reading workshops based on innovative and effective teaching strategies. Offers hands-on strategies for supporting struggling readers and for teaching reading from a critical lens.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course with C or better; Credit is allowed for only ENG 486 or 598 (Teaching Text)
ENG	486	Teaching Text	Approaches to texts (poetry, nonfiction and fiction) as best utilized in language arts curriculum and instruction for junior and senior high schools. Language arts teachers want all of their students to love literature and become immersed in the texts they assign (poems, short stories, plays, nonfiction and informative texts, and novels). Explores activities and philosophies for building a strong reading workshop in the secondary language arts classroom. Through identifying proficient readers, conducting thoughtful conversations about students and reading, and using a variety of ways to invite readers into books, designs and experiences reading workshops based on innovative and effective teaching strategies. Offers hands-on strategies for supporting struggling readers and for teaching reading from a critical lens.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course with C or better; Credit is allowed for only ENG 486 or 598 (Teaching Text)
ENG	487	Advanced Creative Writing Workshop in Poetry	Advanced writing of poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 387 (Poetry) with C or better; Credit is allowed for only ENG 411 (Poetry) or 487
ENG	488	Advanced Creative Writing Workshop in Fiction	Advanced writing of fiction.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 388 (Fiction) with C or better; Credit is allowed for only ENG 411 (Fiction) or 488

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	489	Culturally Sustaining Pedagogy	Methods of designing and implementing culturally responsive secondary curriculum and instruction using students' cultural backgrounds and languages as an asset in the teaching of English language arts. Students gain a repertoire of techniques and sources for curriculum content, instruction design and assessment techniques in the English language arts that capitalizes on the students' prior knowledge and includes community input and collaboration.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Pre-requisite: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course
ENG	489	Culturally Sustaining Pedagogy	Methods of designing and implementing culturally responsive secondary curriculum and instruction using students' cultural backgrounds and languages as an asset in the teaching of English language arts. Students gain a repertoire of techniques and sources for curriculum content, instruction design and assessment techniques in the English language arts that capitalizes on the students' prior knowledge and includes community input and collaboration.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: BA in English (Secondary Education) major; ENG 102 (or 105 or 108) and one other ENG course
ENG	490	Literary Forms: Theory and Practice in Poetry	Types, history, analysis of traditional forms, and contemporary adaptations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 487 with C or better; Credit is allowed for only ENG 490 or 495 (Poetry)
ENG	490	Literary Forms: Theory and Practice in Poetry	Types, history, analysis of traditional forms, and contemporary adaptations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 487 with C or better; Credit is allowed for only ENG 490 or 495 (Poetry)
ENG	491	Literary Forms: Theory and Practice in Fiction	Types, history, analysis of traditional forms, and contemporary adaptations.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 488 (Fiction) with C or better; Credit is allowed for ENG 491 or 495 (Fiction)
ENG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
ENG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-6		Prerequisite(s): Barrett Honors student
ENG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
ENG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
ENG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	Department of English	1-6	L	Prerequisite(s): Barrett Honors student
ENG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
ENG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-6		Prerequisite(s): Barrett Honors student
ENG	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-7	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-3		Prerequisite(s): ENG 102, 105, or 108 with C or better
ENG	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		Prerequisite(s): ENG 102, 105, or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	501	Approaches to Research	Theories, methods and/or methodologies as well as qualitative and/or quantitative approaches to the specific discipline. Familiarizes students with the areas of research.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ENG 501 or LIN 501
ENG	502	Contemporary Critical Theories	Studies the principles and techniques of contemporary theory and criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	502	Contemporary Critical Theories	Studies the principles and techniques of contemporary theory and criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	504	Cross-Cultural Studies	Theoretical and analytical issues for comparative research across distinct cultural regions and traditions.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	504	Cross-Cultural Studies	Theoretical and analytical issues for comparative research across distinct cultural regions and traditions.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	506	Methods and Issues in Teaching Language	Developing the language skills of native and non-native speakers through a process approach and advanced writing workshops in junior and senior high schools.	N	REC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	506	Methods and Issues in Teaching Language	Developing the language skills of native and non-native speakers through a process approach and advanced writing workshops in junior and senior high schools.	N	REC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	507	Methods and Issues in Teaching Composition	Up-to-date theory, practice, and implementation of secondary writing instruction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	510	Linguistics	Overview of linguistics, its subfields, and some of its applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Students who have credit for BLE 537, may not enroll in LIN 510
ENG	513	Semantics	Current approaches to linguistic meaning with particular attention to English.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	525	Teaching Second Language Writing	Provides a critical introduction to the field of second language writing as well as issues and strategies in the teaching of second language writing in a wide variety of contexts. After exploring various instructional contexts as well as the characteristics of different types of students and their texts, considers various instructional practices and strategies, focusing on course and assignment designs, reading-writing connection, teacher and peer feedback, grammar instruction, classroom assessment, plagiarism and text borrowing strategies, and negotiating language differences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)Credit is allowed for only LIN 525, 591 (Teaching 2nd Language Writing) or ENG 525
ENG	530	Old English	Study of Old English grammar, syntax, and phonology, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	531	Old English Literature	Intensive literary, linguistic, and cultural study of Old English literature.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	531	Old English Literature	Intensive literary, linguistic, and cultural study of Old English literature.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	532	Middle English Dialects	Study of the principal dialects of Middle English, with selected readings.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	533	Studies in Medieval Literature	Selected topics in English literature from the 11th through the 15th centuries.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	533	Studies in Medieval Literature	Selected topics in English literature from the 11th through the 15th centuries.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	534	Studies in Renaissance Literature	Selected topics and literary works studied in the contexts of English Renaissance culture.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	534	Studies in Renaissance Literature	Selected topics and literary works studied in the contexts of English Renaissance culture.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	535	Studies in 18th- and 19th-Century British Literature	Selected topics, issues, figures, and genres in British literature and culture of the 18th and 19th centuries.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	535	Studies in 18th- and 19th-Century British Literature	Selected topics, issues, figures, and genres in British literature and culture of the 18th and 19th centuries.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		

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ENG	536	Studies in American Literature before 1900	Selected topics, issues, figures, and genres in 17th-, 18th-, and 19th-century American literature, including the literature of conquest and contact.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	536	Studies in American Literature before 1900	Selected topics, issues, figures, and genres in 17th-, 18th-, and 19th-century American literature, including the literature of conquest and contact.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	537	Studies in Modern and Contemporary British Literature	Selected topics, issues, figures, and genres in British literature and culture after 1900.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	537	Studies in Modern and Contemporary British Literature	Selected topics, issues, figures, and genres in British literature and culture after 1900.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	538	Studies in Modern and Contemporary American Literature	Selected topics, issues, figures, and genres in American literature and culture after 1900.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	538	Studies in Modern and Contemporary American Literature	Selected topics, issues, figures, and genres in American literature and culture after 1900.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	539	Studies in Modernist and Postmodernist Literature and Theory	Selected topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	539	Studies in Modernist and Postmodernist Literature and Theory	Selected topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	540	Teaching Young Adult Literature	Issues and new approaches in teaching contemporary literature in high school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	540	Teaching Young Adult Literature	Issues and new approaches in teaching contemporary literature in high school.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	542	Studies in North American Ethnic Literatures	Selected works studied in their cultural contexts from authors representing ethnic experiences in the United States.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	542	Studies in North American Ethnic Literatures	Selected works studied in their cultural contexts from authors representing ethnic experiences in the United States.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	544	Studies in Colonial and Postcolonial Literature	Selected topics, periods, theories, and figures in works by authors representing colonial and postcolonial regions and/or experiences.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	544	Studies in Colonial and Postcolonial Literature	Selected topics, periods, theories, and figures in works by authors representing colonial and postcolonial regions and/or experiences.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	550	Translation	Surveys theories and practices of translation into English. Considers target, audience and market.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	550	Translation	Surveys theories and practices of translation into English. Considers target, audience and market.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	551	Rhetorical Traditions	Examines rhetorical traditions spanning ancient to contemporary rhetorics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	551	Rhetorical Traditions	Examines rhetorical traditions spanning ancient to contemporary rhetorics.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	552	Composition Studies	Selected topics in the history and theories of composition.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	552	Composition Studies	Selected topics in the history and theories of composition.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	553	Technologies of Writing	Critical study and cultural analysis of information technologies and their effects on various writing practices.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	553	Technologies of Writing	Critical study and cultural analysis of information technologies and their effects on various writing practices.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	554	Rhetorics of Race, Class, and Gender	Study of interdependent relationships of race, class, and gender in rhetorical constructions of self and community.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	554	Rhetorics of Race, Class, and Gender	Study of interdependent relationships of race, class, and gender in rhetorical constructions of self and community.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	556	Theories of Literacy	Examines various theories of literacy, their embedded values and assumptions, and their influences on academic scholarship and pedagogy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	556	Theories of Literacy	Examines various theories of literacy, their embedded values and assumptions, and their influences on academic scholarship and pedagogy.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ENG	557	Computer-Assisted Language Learning	Explores the field of computer-assisted language learning. Traces the development of computer-assisted language learning (CALL) over the last three decades. Focuses on research that explores how computer technology can help facilitate second language development; relies primarily on empirical data to do so. Examine established as well as new research methods in CALL. Participants participate in one research study and apply theoretical and practical aspects of CALL in these projects.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only APL 557, ENG 557 or LIN 591 (Intro to Computer Assisted Language Learning)
ENG	560	Genre Studies	Critical analysis and study of works from a single genre or comparative analysis and study of multiple genres.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	560	Genre Studies	Critical analysis and study of works from a single genre or comparative analysis and study of multiple genres.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	561	Film Studies	Analysis and study of film genres, cinematic techniques, and problems of interpretation and representation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	561	Film Studies	Analysis and study of film genres, cinematic techniques, and problems of interpretation and representation.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	562	forms of Poetry	Types, history, criticism, and schools of theory of metrical form. Analyzes lyric, narrative, and dramatic poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	562	forms of Poetry	Types, history, criticism, and schools of theory of metrical form. Analyzes lyric, narrative, and dramatic poetry.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	563	Forms of Fiction	Types, history, criticism, and schools of theory in the forms of fiction. Analyzes narrative and dramatic structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	563	Forms of Fiction	Types, history, criticism, and schools of theory in the forms of fiction. Analyzes narrative and dramatic structure.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	571	Foundations for Teaching English Learners	Provides teachers with foundational knowledge of English language learner education including: identification and knowledge of English language learners in school contexts, the role of culture in learning, principles of second language acquisition and teaching, historical and current perspectives and policies related to English learner education, and the role of parents and communities in the education of English learners.	N	LEC	Y	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 580 (1 hour); Credit is allowed for only ENG 571 or ENG 598 (Foundations for Teaching English Learners)
ENG	572	Strategies for Teaching English Learners	Supports teachers through a review of core knowledge of strategies and correlated assessments for the instruction of English learners. Teachers learn to assess EL language needs and apply appropriate teaching strategies for supporting learning English and content. Primary emphasis is in the integration of EL language and learning needs and implementation of lesson planning, strategies and appropriately leveled instruction. Teachers complete a semester-long inquiry on integrating course content into their teaching practices.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 571; Pre- or corequisite(s): ENG 580 (2 hours); Credit is allowed for only ENG 572 or ENG 598 (Strategy/Assessment/Cor e for Teaching Eng Learners)
ENG	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	581	Methods of Teaching Secondary Writing	Emphasizes methods of planning, teaching, and assessing appropriate content in the instruction of composition and related skills in secondary classrooms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Credit is allowed for only ENG 481 or 581
ENG	582	Pedagogy	Overview of diverse theories of English instruction, including composition/rhetoric, linguistics and literary, with emphasis upon development and implementation for high school- and community college-level instructors.	N	SEM	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): admission to any graduate program
ENG	583	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	583	Methods of Teaching Secondary Literature and Language	Emphasizes educational methods of planning, teaching, and assessing appropriate content in the instruction of secondary literature, literacy, and language usage.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
ENG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
ENG	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ENG	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	0-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	0-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	597	Graduate Capstone Seminar	The capstone seminar is required for graduate students who must complete a culminating experience for a degree or certificate program.	N	RSC	N	OPT	Liberal Arts and Sciences	Department of English	1-3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	597	Graduate Capstone Seminar	The capstone seminar is required for graduate students who must complete a culminating experience for a degree or certificate program.	N	RSC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	602	Advanced Studies in Theory and/or Criticism	Seminar courses on the principles, strategies, and applications of critical, cultural, and/or literary theory and/or criticism.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	603	Advanced Studies in Comparative Literature	Seminar courses on the problems, methods, and principles of comparative analysis.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	604	Interdisciplinary Cultural Studies	Seminar courses on work from literature, anthropology, and/or other disciplines, with an emphasis on cultural influences and functions.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	606	Advanced Studies in English Education	Current research, issues, and trends in English education.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ENG	625	Advanced Studies in Second Language Writing	Provides opportunities to explore advanced research topics as well as current issues and controversies in the field of second language writing--an interdisciplinary field of inquiry simultaneously situated in applied linguistics, rhetoric and composition, and teachers of English to Speakers of Other Languages.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ENG or LIN 625
ENG	632	Advanced Studies in Medieval and Renaissance Literature and Culture	Seminar in works of the Medieval or Renaissance periods, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	635	Advanced Studies in British Literature	Seminar courses on works produced in or about England, Scotland, and Wales, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	636	Advanced Studies in American Literature	Seminar courses on works produced in or about the United States, studied in their cultural contexts.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	639	Advanced Studies in Modernism and Postmodernism	Seminar courses on topics in Modernist and Postmodernist studies. May include literary and theoretical texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	642	Advanced Studies in Ethnic, Anglophone, or Post-Colonial Literatures	Seminar courses that consider the influence of cultural or geopolitical developments on the production and circulation of texts.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	651	Advanced Studies in History and Theories of Rhetoric	Selected topics in the history and/or theory of rhetoric.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	652	Advanced Composition Studies	Selected topics on particular composition theories, practices, pedagogies, and figures.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	654	Advanced Studies in Rhetoric, Writing, Technology, and Culture	Advanced study of theoretical, methodological, and pedagogical issues concerning the interrelationships among rhetoric, culture, writing, and writing technologies.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	655	Disciplinary Discourses	Investigation of professional and disciplinary issues related to linguistics and applied linguistics.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ENG 655 or LIN 655
ENG	656	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	662	Poetic Genres	Creative writing courses in the long poem, the erotic image, death and transfiguration, reading and influence, and others.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	664	Mixed Genres	Creative writing courses in the prose poem, magical realism, the literature of obsession.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	665	Creative Methods	Creative writing courses in theory of the novel, poetics, story into film, and others.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	667	Issues in the Writing Professions	Focuses on career preparation, resources, the role of writing in the community, creative writing, and the Internet.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ENG	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ENG	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ENT	305	Principles of Entrepreneurship	Entrepreneurship, with an interdisciplinary basis, focusing principles that involve the startup of a new organization, as well as its management into a fully established firm. Specific discipline-based concepts range from marketing to finance and strategic management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): W.P. Carey Business Entrepreneurship BS major or Entrepreneurship and Innovation certificate or Small Business and Entrepreneurship certificate; minimum 2.50 GPA; minimum 30 hours
ENT	441	Entrepreneurial Management	Provides a framework for dealing with issues from an entrepreneur's perspective. Covers all areas of entrepreneurship from idea conception to prototype development, to testing, refining and harnessing resources. Covers readings and cases related to topics of business models, business plans, managing startups, business law, founder's issues, managing growth, broad business functions and overall strategic and financial positioning.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): W.P. Carey Business Entrepreneurship BS major; ENT 305 with C or better; MGT 360 with C or better
ENT	448	Corporate Entrepreneurship	Covers five general areas of corporate entrepreneurship: entrepreneurial orientation and corporate venturing; franchising the refining of business models; social venturing; and the extension of partnerships (e.g., joint ventures, strategic alliances).	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): W.P. Carey Business Entrepreneurship BS major; ENT 305 with C or better; MGT 360 with C or better
ENV	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
ENV	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
ENV	201	Fundamentals of Environmental Science	Examines the functioning of the earth system and how it has changed over long and short time scales. Emphasizes understanding global processes and how human activities can disrupt these processes, changing the ability of our global environment to support life. Also emphasizes important feedbacks between biological and physical processes and their effects on the biosphere. Discusses the response of natural and managed ecosystems to global change along with prospects for the future.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181 and 182 with C or better; CHM 116 with C or better
ENV	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
ENV	310	Soil Science	Fundamental principles of soil science, including physical, chemical, biological and ecological properties. Applies these principles to explain the importance of soil as both a natural resource and ecosystem. Discusses the role of soils as the heart of terrestrial ecosystems, both natural and managed, and the importance of this key natural resource to environmental health and biological productivity. Explores how human activity and global change are impacting this vital natural resource and ecosystem that is crucial to life on earth. The laboratory component also introduces applications and standard methodology for investigating these principles.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisite(s): BIO 320 with C or better; CHM 116 with C or better; PHY 101 or higher with C or better
ENV	345	Spatial Analysis in the Environmental Sciences	Develops an understanding of the methods, tools and technologies used to collect, display, analyze and interpret spatial data in environmental science and natural resource management. Provides overview of geographic information system (GIS) applications in these fields. Basics of integrating the global position system (GPS) and remote sensing (RS) into GIS to solve problems in environmental science and natural resource management.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ENV 201 with C or better
ENV	385	Environmental Impact Assessment	An understanding of federal and state environmental laws, including the scientific processes that are incorporated into decision making, is critical for a variety of careers in the environmental sciences. Provides an overview of these laws and processes and develops the specific written and oral communications skills needed for many environmental, biophysical and natural science professions.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ENV 201 with C or better
ENV	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): minimum 45 hours

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ENV	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): minimum 45 hours
ENV	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student; minimum 45 hours
ENV	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student; minimum 45 hours
ENV	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): minimum 45 hours
ENV	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student; minimum 45 hours
ENV	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7		Prerequisite(s): minimum 45 hours
ENV	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		Prerequisite(s): minimum 45 hours
EPA	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	532	Becoming an Informed Consumer of Educational Research	Development of critical analyses skills in the examination and synthesis of educational research.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	555	Translating Research for Educational Change	Teaches educators how to translate research to promote educational change in their schools and districts. Three concepts emerge to empower practitioners to translate research to their individual schools and communities: (1) a needs assessment to understand the context (student population, community, networks); (2) an emphasis on the generalizability of research to provide an understanding of which findings are most applicable to specific contexts at which times and under which conditions; and (3) explicit training on ways of knowing to encourage practitioners to develop their own theoretical perspectives and test them against the academic research.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	556	Data Analysis for Education Decision Makers	Prepares educators to use the sources of information (i.e., results, reports and interactive programs) at their disposal to make educational decisions. Dynamic content is adapted based on the real-world information sources brought forth by the course participants.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	559	Systematic Inquiry for Problem Solving	Trains participants to produce a policy analysis aimed at addressing a problem they identify within their own organizations. Participants identify a problem, gather, analyze data and evidence to draw conclusions, and clearly and succinctly report their findings and recommendations to policymakers.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	565	Critical Topics in Education Policy	Critical topics in contemporary educational policy debates in the USA. Explores the dominant ideological and theoretical perspectives about what should be the purposes of schooling. Students analyze the humanist, core-curriculum, vocational, pragmatic as well as the standards-based, market-driven, professionally led, and networked models of reform, theories of change, implementation challenges, and the critiques leveled against these approaches. Students analyze critical topics such as policy formation, leadership, teachers unions, academic performance and community involvement. Encourages students to learn critical "policy skills" and reach reflexive and research-based conclusions about what are the requirements to develop "good school systems" and what their their individual and collective contributions could be.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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EPA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		
EPA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		
EPA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
EPA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	795	Continuing Registration		N	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EPA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	700	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Pre-requisite: EPD 710, 712 or 714 with C or better

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EPD	710	Current Research in Design	Review and critical evaluation of contemporary literature and research in design, environment and the arts.	N	SEM	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisite: Design, Environment and the Arts PhD OR Design, Environment and the Arts (Digital Culture in Design) PhD OR Environmental Design and Planning PhD OR Environmental Design and Planning (Healthcare and Healing Environments) PhD
EPD	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EPD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	1-3		
ERM	201	Environmental Management	Develops an understanding of the fundamentals of environmental science, environmental issues and major environmental standards. Topics covered include basic ecology, population dynamics, environmental resources, environmental pollution and its prevention, the environmental management regulatory framework, sustainability, pollution prevention, waste minimization, and environmental management systems. Provides the foundational knowledge used by environmental professionals who manage environmental problem solving for industry, regulatory agencies, municipalities, consulting firms, military installations, academic institutions and nonprofit organizations specializing in environmental advocacy. Overview course covering elements that are developed in more depth in other ERM courses.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): SOS 101 or SOS 110 or any SG or SQ course
ERM	203	Environmental Regulations	Explains and discusses federal environmental laws and regulations that apply to the field of environmental management. Addresses the most important Arizona state and county/local regulations that impact decision making in the environmental management practice area. Emphasizes the federal-level requirements, including laws that are most likely to be used by professionals who are not lawyers and working in positions having environmental management and engineering assignments. Uses case studies to help students learn how the laws are applied and implemented in practical situations. Develops an understanding of the fundamentals of environmental laws and regulations. Provides essential knowledge used by environmental and engineering professionals who manage regulatory issue problem solving for industry, government, consulting firms, military installations, academic institutions and nonprofit organizations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): SOS 101 or SOS 110 or any SG or SQ course
ERM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
ERM	302	Water and Wastewater Treatment Technology	Explores the development of treatment technologies. Addresses regulatory standards. Emphasizes theory and practice of system design, lab analysis standards and procedures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): MAT 210 or higher; CHM 113; CHM 116 OR MAT 210 or higher; CHM 101; PHY 121
ERM	364	Toxicology and Biohazards in Emergency Management	Introduces poisons. Dose response routes of exposure and toxicokinetics. Diseases associated with natural disasters. Clinical presentation of treatments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		
ERM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	1-4		
ERM	401	Hazardous Waste Management	Definition of hazardous waste, RCRA and CERCLA regulations, hazardous waste classification system. Overview of hazardous waste management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): CHM 101 or higher; ERM 303; MAT 210 or higher
ERM	402	Unit Treatment Technologies	Addresses various treatment technologies for contaminated air, water, and soil. Emphasizes design based upon medium, type of contamination, and concentration.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Pre- or corequisite(s): ERM 302
ERM	406	Environmental Chemistry	Examines reactions, transport, and fates of hazardous chemicals in water, soil, air, and living organisms.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Pre-requisites: CHM 101 (or 113) and MAT 170 or higher
ERM	407	Occupational Hygiene	Overview of occupational health hazards, including recognition, evaluation, and control. Includes regulatory status and health standards.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		
ERM	426	Environmental Issues	Explores the science and policy implications of contemporary problems that threaten the environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		
ERM	428	International Environmental Management	Emphasizes technological and economic pressures experienced by developing countries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3	G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ERM 428 or ERM 528
ERM	432	Sustainable Solid Waste Management	Addresses engineering and management principles associated with integrated solid waste systems. Follows the life of the solid waste from point of generation, reclamation and treatment to point of disposal. Emphasizes the functional units of a solid waste system and the relationships among them. Addresses the physical, chemical and biological transformations of the solid waste, together with the existing technologies and engineering practices for collection, management, treatment and disposal of the solid waste. Emphasizes the sustainable practices such as waste minimization, pollution prevention, reuse and reclamation of the solid waste. Also discusses existing domestic and foreign regulations guiding the proper solid waste management techniques, as well as planning and design of solid waste system operations and facilities.	N	LEL	N	GNA	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): CEE 361 or EGR 325 or ERM 302; Credit is allowed for only ERM 432 or ERM 532 or ERM 494 (Integrated Solid Waste Systems) or ERM 494 (Sustainable Solid Waste Management)
ERM	480	Senior Project	Capstone project experience refining skills in communication, research and information retrieval, critical analysis and criticism, and demonstrating technical competence in each student's area of study.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): senior standing; Pre- or corequisite(s): GIT 413 or Applied Science (Graphic Information Technology) BAS major or Applied Science (Internet & Web Development) BAS major
ERM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-12		
ERM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-6		Prerequisite(s): Barrett Honors student
ERM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-6	L	Prerequisite(s): Barrett Honors student
ERM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	1-4		
ERM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	1-7	L	
ERM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-3		
ERM	501	Principles of Hazardous Materials and Waste Management	Foundation for courses in curriculum. Topics include definitions of toxic and hazardous substances and wastes, RCRA classification, and OSHA criteria.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	502	Regulatory Framework for Toxic and Hazardous Substances	Examines federal, state, and local regulations for hazardous materials and wastes. Includes history and trends in regulatory development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ERM	503	Principles of Toxicology	Interaction of chemicals with life and environment. Mechanisms of toxic action, dose-response relationships, toxicity testing models, predictive toxicology, and epidemiology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	506	Chemistry of Hazardous Materials	Chemistry and toxicology of hazardous chemicals. Topics include proper handling, storage, transportation, and disposal.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	507	Industrial Hygiene	Emphasizes chemical hazards in industrial settings. Topics include recognizing and measuring hazards, control techniques, and regulatory standards.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	520	Sustainability and Sustainable Development	Explores broad field of environmental sustainability with U.S. and international coverage of green living practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	522	Air Pollution and Toxic Chemicals	Examines issues in the measurement analysis and control of toxic chemicals in air pollution.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	523	Soils and Groundwater Contamination	Theoretical and practical hydrogeology as it applies to cleaning up contamination. Investigative techniques, monitoring, risk assumptions, and assessment methodology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	527	Environmental/Resources Regulations Concepts	Environmental regulations related to water, land use, endangered species, NEPA and other policy issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	528	International Environmental Management	Studies environmental issues and laws outside the U.S., impact of free trade, and multinational corporations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ERM 428 or ERM 528
ERM	532	Sustainable Solid Waste Management	Addresses engineering and management principles associated with integrated solid waste systems. Follows the life of the solid waste from point of generation, reclamation and treatment to point of disposal. Emphasizes the functional units of a solid waste system and the relationships among them. Addresses the physical, chemical and biological transformations of the solid waste, together with the existing technologies and engineering practices for collection, management, treatment and disposal of the solid waste. Emphasizes the sustainable practices such as waste minimization, pollution prevention, reuse and reclamation of the solid waste. Also discusses existing domestic and foreign regulations guiding the proper solid waste management techniques, as well as planning and design of solid waste system operations and facilities.	N	LEL	N	GNA	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): Fulton Schools of Engineering or School of Sustainability or Urban and Environmental Planning graduate student or enrolled in ERM 4+1 program; Credit is allowed for only ERM 432 or ERM 532 or ERM 598 (Sustainable Solid Waste System)
ERM	540	International Environmental Law and Policy	Studies international environmental agreements, enforcement mechanisms, and the role of NGOs and international organizations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Environmental and Resource Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Environmental and Resource Management	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Environmental and Resource Management	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ERM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Environmental and Resource Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	501	Social Theory and the Environment	Investigates key conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	502	Political Ecology: Theory and Research	Investigates key theories and research of political ecology through the conceptual domains of environmental social science from interdisciplinary and comparative perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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ESS	504	Analysis of Large-Scale Socio-Technological Systems	Provide skills and methods to analyze the design and management of large-scale socio-technological systems and the societal impacts of large-scale technological systems change. Emphasizes assessing the intertwining of lives and livelihoods in large-scale technological systems and the risks and vulnerabilities associated with large-scale systems failures, including the effects of both technological failures and natural hazards.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	510	Urban Environments	Investigates major issues and themes on the urban environment, from urban sprawl to environmental justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	513	Institutions	Studies formal and informal institutional arrangements for the governance of natural resources using case studies, experiments, and formal models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	514	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	540	Statistical Modeling for Sustainability	Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to begin conducting empirical analyses in their domains of interest; bring students to a high level of competency in using a cutting-edge statistical software package (Stata) for data management and data analysis tasks; expose students to applications of statistical methods in the economics/policy/social science sustainability literatures in order to develop an understanding for how statistical tools are operationalized in the research world, and develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations and command of statistical tools that constitute quality empirical research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only AML, ESS or SOS 540
ESS	577	Interdisciplinary Writing Seminar	If you want your work to make a difference in the world, you need to be able to communicate your ideas to diverse audiences in a way that is interesting and accessible. Teaches students to write clearly, persuasively and ethically to people in their disciplines, in other disciplines, and outside academia. Approaches writing as a way to think critically and refine ideas, as well as to communicate them to others.	N	SEM	Y	GNA	Liberal Arts and Sciences	School of Human Evolution & Social Change	2		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is only allowed for ESS 577 or SOS 577 or SOS 598 (Interdisciplinary Writing) or SOS 598 (Writing Seminar)
ESS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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ESS	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
ESS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EST	115	Digital Systems I	Introduces digital electronics. Topics include number systems and codes used in digital systems, Boolean algebra, logic gates, logic families, and combinational and memory circuits.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		
EST	160	Introduction to Electronic Systems	Introduces the components, devices, and practical design principles that are used to create competitive electronic systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Credit is allowed for only EST 160 or 194 (Intro to Electronic Systems)
EST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EST	200	Project Lab	Provides theoretical and practical overview of principles of measuring instruments and the main objective is to build good lab disciplines.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	2		Pre-requisites: Sophomore standing
EST	210	Circuit Analysis I	Parallel/Series circuits, ohm's law, network theorems, capacitors/inductors and transient analysis. Overview of electronic devices, BJTs, FETs, op-amps.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisites: MAT 266 (or 271); PHY 112 (or 131)
EST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EST	310	Circuit Analysis II	Electronic device analysis and introduction to design. Power supplies, diode circuits, FETs, BJTs, op-amps. Emphasizes frequency response.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 210
EST	315	Digital Systems II	Digital electronics systems, HDL circuits and systems design techniques, and device applications.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 115 and 210; Credit is allowed for only EST 315 or 394 (Digital Electronics II)
EST	345	Planning and Delivering Engineering Projects	Project-based, hands-on course teaches team building, planning, soft skills, tracking progress, and powerful methods that deliver successful, on-time projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 200

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EST	350	Microcontroller Applications	Interfacing of microcontrollers to sensors, switches, indicators, and other human interfaces using the C programming language. Applications involve the integration of both hardware and software. Also addresses applications dealing with open- and closed-loop applications.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 315; Credit is allowed for only EST 350 or 394 (Adv Micro Controllers)
EST	370	Sensors	Overview of sensor technology, including mechanical, magnetic, radiation, thermal, chemical, and biological applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 200; EST 210; UET 331
EST	372	Wireless Networking	Systems-level coverage of advanced information communication technology (ICT) topics including both digital and analog wireless communications systems used in today's ICT networks. Transmission systems covered include microwave, satellite, cellular radio, Bluetooth and wireless fidelity communications systems. Topics include: PCM, TDM, antennas, transmission lines, microwave radio, satellite radio, Bluetooth, cellular and wireless fidelity systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): IFT 201 or IFT 358; Credit is allowed for only EST 372 or IFT 372
EST	380	Electronic Devices	Covers materials, structures, and technology for the design, production, and application of the major categories of electronic devices.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: UET 331; Credit is allowed for only EST 380 or 394 (Intro to Electronic Devices)
EST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EST	410	Electronic System Design	Analysis and design of Op-amps, power amplifiers, and digital logic families, Feedback design using frequency response. Computer analysis and design.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 310; Credit is allowed for only EST 410 or 494 (Electronics Systems Design)
EST	465	Statistical Process Control	Introduces statistics, seven QC tools, and control charts for data analysis and interpretation; process capability, 6-sigma, lean manufacturing, and quality system.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Fulton Schools of Engineering undergraduate student; Senior standing; Credit is allowed for only EST 465, 494 (Statistical Process Control) or 565
EST	470	Capstone Design I	Small-group projects designing, building, evaluating, and analyzing components, assemblies, and systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 345; EST 370; EST 372
EST	471	Capstone Design II	Continuation of a small-group project encompassing designing, building, evaluating, and analyzing components, assemblies, and systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 470
EST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		
EST	490	Electronics Project	Individual or small group projects in applied electronics; emphasizes lab practice or hardware solutions to practical problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): Fulton Schools of Engineering undergraduate student; min GPA 2.25; OR Fulton Schools of Engineering graduate student
EST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
EST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student
EST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
EST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-7	L	Prerequisite(s): Fulton Schools of Engineering undergraduate student; min GPA 2.25; OR Fulton Schools of Engineering graduate student
EST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-3		
EST	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Fulton Polytechnic School graduate student; minimum 15 hours graduate level courses
EST	565	Statistical Process Control	Seven QC tools and control charts for data analysis and interpretation; process capability, 6-sigma, lean manufacturing, quality system, case study and lab experiment.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate (degree seeking or nondegree seeking) student; Credit is allowed for only EST 465, 565 or 598 (Statistical Process Control)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Pre-requisites: MS in Technology graduate student
EST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
EST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student OR Fulton Schools of Engineering senior student with minimum 3.00 ASU GPA
ETH	100	Ethnic and Indigenous Lives	Undertakes an introductory comparative analysis of ethnic groups to understand cultural diversity within the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	
ETH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ETH	300	Principles of Ethnic Studies	Familiarizes students with a range of analytical and theoretical frameworks in the field of ethnic studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	C	
ETH	310	Critical Research Methods	Examines methodological approaches common to programs in such disciplines as American Studies, Ethnic Studies, and Women's Studies. Critical qualitative, historical, archival, and feminist methodological approaches to the study of diverse United States populations comprise the focus of this course.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	Pre-requisite: Minimum 40 hours
ETH	334	The American Southwest in Literature and Film	Evaluates literary texts and films addressing the diverse literatures and cultures of the American Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AMS 336 or ENG 334 or ETH 334
ETH	353	African American Literature: Beginnings through the Harlem Renaissance	Focuses on the history of African American literature through the Harlem Renaissance, as exemplified in selected slave narratives, poems, and fiction.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Pre-reqs for ETH 353
ETH	354	African American Literature: Harlem Renaissance to the Present	Examines the literary productions of African Americans from the Harlem Renaissance (about 1920) to the present focusing on fiction, poetry, drama, and essays.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only AFR 354 (or AFH 354) or AMS 354 or ENG 354 or ETH 354
ETH	380	Race, Gender, and Class	In-depth examination of how social inequalities are reproduced and perpetuated. Explores the intersections of race, class and gender in culture and society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only AMS 380 or ETH 380 or WST 380
ETH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ETH	428	Chicano Cultures in the Southwest	Examines the history and cultures of people of Mexican descent in the Southwestern region of the United States through exploration of "cultural citizenship" and "belonging" as they relate to the pursuit of civil rights, equality, justice and cultural production.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AMS 428 or ETH 428 or LAS 428 or MAS 598 (Chicano Cultures in Southwest)
ETH	430	Gender on the Borderlands	Examines women's status in the U.S.-Mexico borderlands through key issues such as migration, labor, violence, education, and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours OR WST 100 or 300 with C or better; Credit is allowed for only ETH 430 or LAS 430 or WST 430 or JHR 598 (Gender on the Borderlands)
ETH	449	Hate Speech, Manifestos, and Radical Writings	Examines writings, speeches and texts that provoke radical or even revolutionary social change. At its core, this course asks: What is the radical and what does it do? How do radical writings function as texts, speech acts, inspirational documents, testimonies, accounts of madness, frightening moments, calls to arms, peacekeeping entities or speaking truth to power? Examines injurious speech and provocative writings that span a range of social movements and topics, including radical feminism, radical queer, Black power, indigenous rights, art and performance, anti-technology, animal rights, violence, madness and revolutionary resistance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): minimum 35 hours; minimum 2.50 GPA; Credit is allowed for only AMS 449 or ETH 449 or WST 449 or WST 394 (Hate Speech and Manifestos)
ETH	450	Latina/os, Schooling and Social Inequality	Advanced interdisciplinary understanding of the issues facing Chicano, Mexican American and Latino communities in relation to K-16 schooling in the southwestern United States. Examines various schools of thought that have shaped social discourse and policies, develops a critical perspective on the social and political issues affecting education, and identifies issues--both historical and contemporary--affecting Chicanos in public education.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only AMS 450 or ETH 450 or LAS 450 or AMS 429 (Latino/a School & Social Inequity)

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ETH	469	Abject Bodies and the Politics of Trash	Examines the possibilities inherent in "theorizing from the gutter"; looking at the world not from a lofty "Ivory Tower" but from the slime, the muck, the dumpster, the trash heap, the wasteland, the discarded and the downtrodden. Takes its theoretical framework from a radical 1960s manifesto called SCUM Manifesto by Valerie Solanas and from the French feminist philosophies of Julia Kristeva, who theorized the abject as a relationship with the grotesque that reveals the deep-seated fear of death. Uses these theoretical positions to examine trash, both abstractly and literally. Works through a variety of concepts ranging from actual trash, garbage, waste, toxic sludge, pollution and dirt, and tackles more abstract notions of trash such as the knowledge produced on the fringe in circuses, amusement parks, "trailer trash" zones, freak shows and the bodies of those marked as "Other" or different.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 36 hours; Credit is allowed for only AMS 469 or ETH 469 or WST 469 or WST 494 (Trash, Freaks and SCUM) or JHR 598 (Trash, Freaks and SCUM) or MAS 598 (Trash, Freaks and SCUM)
ETH	473	Indigenous and Latina/Chicana Representation	Examines from an interdisciplinary perspective contemporary issues experienced by Indigenous and Chicana/Latina women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 45 hours; Credit is allowed for only ETH 473 or LAS 473 or WST 473
ETH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
ETH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
ETH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
ETH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
EVO	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	520	Evolution and Ecology of Emerging Infectious Diseases	Applying principles and concepts from Ecology, Evolution, and Epidemiology for studying emerging infectious diseases. Emphasizing the interplay of these areas. Intended for life sciences majors and first year graduate students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BIO 494 (Emerging Infectious Diseases) or EVO 520 or MIC 520
EVO	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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EVO	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	600	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	601	Principles of Evolution	Introductory course for graduate students; covers the principles of evolutionary biology from theoretical, empirical, and historical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	610	Research Areas of Evolution	Broadly conceived description of the current research areas of evolutionary biology. Expected of all first-year evolution students.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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EVO	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
EVO	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	100	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Credit is allowed for only EXW, HSC or KIN 100
EXW	101	Foundations in Exercise Science and Wellness	Student-centered instructional course designed to excite and propel the student into the development of a successful academic and professional career path in the field of exercise science and wellness. Presents a general overview of the career opportunities for students in the field with group and individual assignments that enable students to more thoroughly explore options related to their goals. Divided into 3 major sections: academic preparation, professional development and career exploration. Helps students develop their own individual blueprint for accomplishing their professional goals and understand the skills they need to develop along the way to be successful.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only EXW 101 or EXW 290 or EXW 300
EXW	102	Principles and Foundations of Health Education and Health Promotion	Designed for students who anticipate working as a health educator in clinical, governmental, worksite/corporate, research-based, or other professional settings. Students gain an understanding of the selected historical, cultural, philosophical, professional and ethical issues in the practice of health education.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		
EXW	105	Physical Activity Instruction: Beginning	Beginning instruction in a variety of physical activities such as aerobics, aquatics, racquet sports, physical conditioning, and golf. Y grade only. May be repeated for credit. 2 hours per week.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		
EXW	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
EXW	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
EXW	212	Instructional Competency Laboratory	Methods of instructing and leading fitness activities including aerobic, resistance, and flexibility activities.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Prerequisite(s): Exercise and Wellness or Physical Education major
EXW	214	Flexibility Instructional Competency Laboratory	Science and methods of instruction related to flexibility exercises and activities.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Prerequisite(s): Exercise and Wellness or Physical Education major.
EXW	216	Muscular Strength Instructional Competency Laboratory	Science and methods of instruction related to resistance training and muscular strength activities.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Prerequisite(s): Exercise and Wellness or Physical Education major
EXW	218	Cardiovascular Instructional Competency Laboratory	Science and methods of instruction for cardiovascular exercise and fitness activities.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Prerequisite(s): Exercise and Wellness or Secondary Education (Physical Education) major
EXW	284	Exercise and Wellness PreInternship	Professional development course designed to help students prepare for their respective senior-year internships and post-graduate career fields, while developing and enhancing professional practice skills. Students engage in individual assessment and group learning with student peers through activities such as required readings and self assessments, career-related exploration assignments and networking. Utilizes on-campus resources, such as Career Services and the Writing Center, for support and assistance with course work and assignments. Focuses on developing long-term professional and interpersonal competencies career preparation, professional self marketing, and workplace professionalism.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): minimum 75 hours
EXW	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
EXW	302	Fundamentals of Wellness	Overview of fundamental health, exercise and wellness concepts. Emphasizes personal wellness assessment and application.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	
EXW	303	Human Sexuality for Health Education	Provides preprofessional primary/secondary teachers and health education specialists with knowledge of the physiological, psychological and social aspects of human sexuality for health education. Provides content knowledge and curriculum development strategies to support educators in creating human sexuality curriculum for school and community health settings.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 45 hours
EXW	310	Computer Skills and Technology for Exercise and Wellness	Applies computer technology to principles of social marketing, tailored communication, e-health consumerism, and statistical analysis.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	CS	Pre-requisites: Exercise and Wellness student; MAT 114, 117, 119, 142 or 170 with C or better
EXW	311	Special Populations in Exercise and Wellness	Introduces the challenged population and surveys the agencies that work with special populations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EXW	312	HIV/AIDS Prevention	Provides an introductory, nontechnical examination of the HIV/AIDS epidemic and HIV/AIDS, examining biological, social, epidemiology, prevention, history, compassion, legal issues, testing and societal implications of acquired immunodeficiency syndrome (AIDS) and HIV infection. The need for HIV/AIDS education emerges from a comprehensive model of addressing epidemics. Health professionals need to become competent in the delivery of HIV information and prevention planning.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): minimum 45 hours
EXW	315	Physiological Foundations of Movement	Studies human movement with emphasis on physiological function of the body in response to physical activity and fitness training.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): BIO 201 with C or better; BIO 202 with C or better; Corequisite(s): EXW 316
EXW	316	Physiological Foundations of Movement Laboratory	Investigates theories and methods of exercise physiology in a laboratory and/or applied setting.	N	LAB	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): BIO 201 with C or better; BIO 202 with C or better; Corequisite(s): Exercise and Wellness BS major: EXW 315
EXW	320	Management and Leadership in Exercise and Wellness	Studies management, leadership, legal, ethical, and programmatic theories and applications in fitness and wellness settings.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: ENG 102, 105 or 108; Minimum 30 hours
EXW	321	Consumer Health	Provides preprofessional primary/secondary educators and community health education specialists with (1) a model for making informed consumer health-related decisions; (2) current information involving consumer related topics, emphasizing necessity of current information for making informed decisions; (3) mechanisms for continued consumer awareness.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): minimum 45 hours
EXW	322	Spa Management I	History of the spa industry. Overview of different types of spas, spa programs and services, facilities and equipment, operational procedures and systems, the wellness component of spas, and computer applications in spa operations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		
EXW	325	Fitness for Life	Analyzes physical fitness and benefits of exercise with emphasis on application of strategies for fitness and wellness evaluation, behavior change, and lifelong program planning.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: ENG 101; Minimum 30 hours
EXW	330	Kinesiological Foundations of Movement	Study and consideration of human movement with emphasis on kinesiology principles and their application to movement and fitness.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	4		Pre-requisites: BIO 201 with C or better
EXW	331	Violence Prevention	Examines violence prevention strategies and violence prevention content. Examines the literature to understand principles for use in the development of violence prevention curriculum in school and community settings.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): minimum 45 hours
EXW	335	Physical Activity and Fitness Concepts	Topics are designed for the physical activity and health education professional and focus on application of basic exercise physiology and nutritional concepts in the design and implementation of exercise and physical activity programs to increase physical function and improve health risk factors.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 201 and 202 with C or better
EXW	340	Health Behavior Theory	Focuses on health behavior change theories and concepts that are necessary for planning, implementing and evaluating health education and health promotion programs.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): PSY 101 (or PGS 101); minimum 45 hours
EXW	341	Injury Prevention	Explores specific strategies for injury prevention. Examines principles for the development of school and community health curriculum that address injury prevention in various areas such as home safety, fire safety, personal protection, responding to emergencies, firearm safety, motor vehicle safety, occupational safety, recreational safety, school safety and related issues.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): minimum 45 hours
EXW	342	Health Behavior Change	Examines major theories of health behavioral change. Develops intervention strategies and techniques employed to facilitate health behavioral change.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: PSY 101 (PGS 101); minimum hours 45
EXW	344	Physical Activity in Health and Disease	Examines the role of physical activity and fitness in the development of morbidity and mortality throughout the human life span.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): BIO 202; Pre- or corequisite(s) for non-Health Education and Health Promotion majors: EXW 101 (or EXW 290 or 300)
EXW	348	Methods of Health Education	Intended for the pre-professional health educator to learn how to develop sound, effective, and appropriate presentation methods to create learning experiences that facilitate voluntary changes leading to health-enhancing behaviors. Focuses on the knowledge and skills necessary to understand learning and the diverse learner; structure the learning environment; develop appropriate behavioral learning objectives; select appropriate instructional methods; and develop quality lesson, presentation, and unit plans with sound strategies for evaluating learning.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 45 hours
EXW	350	Substance Abuse and Addictive Behavior	In depth study of the pharmacology and effects of addictive substances and the psychosocial risk factors and consequences of substance abuse.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): BIO 201, PSY 101 (or PGS 101); Pre- or corequisite(s): BIO 202

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EXW	351	Substance Abuse Prevention	Prepares preprofessional primary/secondary school and community health educators to prepare and deliver substance abuse prevention education and programming.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): minimum 45 hours
EXW	361	Social Media and Marketing in Health Education	Develops competence in technologies using social media that support and promote health education. Intended for preprofessional, primary/secondary teachers and community health education specialists to learn how to create and apply health-related social marketing messages and strategies to information systems that facilitate health education and health promotion.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): minimum 45 hours
EXW	371	Conflict Management and Mediation	Covers conflict resolution and methods of preventing, managing and resolving conflict. Prepares students to address conflict, deal effectively with difficult people and incorporate effective conflict management and mediation strategies in various interdisciplinary settings within the classroom and community.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): minimum 45 hours
EXW	380	Body Image and Wellness	Explores body image in American culture from physical, psychological, historical, and societal perspectives.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: PSY 101 (PGS 101) with C or better; Minimum 30 hours
EXW	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
EXW	400	Stress Management for Wellness	Examines the stress response and management from a behavioral perspective as it pertains to individuals or groups.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 202; PSY 101; 45 minimum hours
EXW	410	Obesity Perspectives and Prescriptions	Provides a structure for understanding, critiquing and synthesizing the information and misinformation about obesity, weight loss and health. Explores topics: the obesity epidemic; health consequences of obesity; fitness and fatness; etiology of weight gain; health implications of weight loss; psychological, cultural, social and political considerations of obesity; and a review of the application of prevention and treatment of obesity. Examines a wellness perspective about obesity by considering obesity as a normal physiological response within a pathological environment.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: BIO 202; PSY 101. Credit is allowed for only EXW 410 or EXW 494 (Obesity Perspectives and Prescriptions)Pre-req for EXW 410
EXW	412	Pediatric Obesity	Covers a variety of aspects related to pediatric obesity including the causes and consequences in terms of physiologic, genetic, psychosocial, environmental and economic. Also discusses potential interventions such as behavioral, pharmacologic, surgical and public health and policy. Evidenced-based course where research guides class lectures and discussions.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 315 or KIN 340; Credit is allowed for only EXW 412 or KIN 446 or EXW 494 (Pediatric Obesity) or KIN 494 (Pediatric Obesity)
EXW	420	Exercise Testing	Theoretical basis and practical application of pre-exercise screening, exercise testing, estimates of energy expenditure, and interpretation of results.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	4		Prerequisite(s): EXW 214 with C or better; EXW 216 with C or better; EXW 218 with C or better; EXW 315 with C or better; EXW 316 with C or better
EXW	425	Exercise Prescription	Theoretical basis for and application of general principles of exercise prescription to various ages, fitness levels, and health states.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 420 with C or better
EXW	434	Fitness and Strength Conditioning	Applied course covering advanced fitness, strength and conditioning concepts and techniques. Applies to professionals working with individuals in whom a major goal of their physical activity program is to maximize human performance potential either for personal fitness goals or success in specific sports or for applications in occupational athletes (military, fire and police). Guides in development of techniques and skills critical to safe, effective and motivating instruction of advanced speed, power, agility and conditioning exercises and programs for varying individuals and teams. Includes both lecture and participatory application labs. Expects students to search and analyze the literature on advanced fitness conditioning concepts and techniques. Addresses a significant number of core competencies identified for the NSCA Certified Strength and Conditioning Specialist (CSCS) examination.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 216; minimum 75 hours; Pre- or corequisite(s): EXW 315 or 330; Credit is allowed for only EXW 434 or EXW 494 (Sports and Fitness Conditioning)
EXW	443	Emotional Health and Interpersonal Relationships	Explores factors associated with the development of positive emotional health and well-being. Emphasizes preprofessional primary/secondary teachers and health education specialists teaching emotional health within a school and community health setting, encouraging them to deepen their commitment to effective teaching by applying the principles of self-esteem, communication and accessing appropriate resources.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 45 hours
EXW	444	Epidemiology	Introduces epidemiological concepts and prepares the student to read, comprehend, and report epidemiological research.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): any CS statistics course with C or better
EXW	446	Health Promotion and Program Evaluation	Applies theory-based concepts and methods of health promotion and program evaluation.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre- or corequisite(s): EXW 101 or 102 (or EXW 290 or 300) with C or better if completed; EXW 340 or 342 or 394 (Health Behavior Theory) with C or better if completed

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
EXW	448	Foundations of School Health Education	Explores various special topics for the school and community health educator including the CDC's Division of Adolescent and School Health, the School Health Index, the Health Education Curriculum Analysis Tool, and the Coordinated School Health Approach.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	2		Prerequisite(s): minimum 45 hours
EXW	450	Social Determinants of Health and Health Behavior	Examines the social determinants (e.g., early childhood, family, schools, worksites, built and food environments, and socio-economic status) of health and health behavior, particularly physical activity behavior and eating behavior. Advocacy for individual patients/consumers (patient advocacy) with advocacy for groups of patients/consumers (policy advocacy). Identifies and explores specific skills needed by community health educators, pre-professional primary/secondary health teachers and health education specialists for developing a practice of advocacy in their work. Methods, techniques and resources used in advocating in health education.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	(L or SB) & C	Prerequisite(s): EXW 101 or 102 (or EXW 290 or 300) with C or better; PSY 101 (or PGS 101) with C or better
EXW	452	Health Advocacy in Health Education	Identifies and explores specific skills needed by community health educators, pre-professional primary/secondary health teachers and health education specialists for developing a practice of advocacy in their work. Methods, techniques and resources used in advocating in health education.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 45 hours
EXW	454	Health Promotion Program Planning and Implementation	Applies theory-based concepts and methods of health promotion (HP). Covers selected topics in HP across a variety of domains of health. Program planning concepts include the use of planning frameworks, needs assessments, and the use of theory in health promotion program planning. Also covers practical issues related to health promotion program implementation such as resource management and program marketing.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 101 or 102 (or EXW 290 or 300) with C or better; EXW 340 or 342 or 394 (Health Behavior Theory) with C or better
EXW	456	Health Promotion Program Evaluation	Covers program evaluation concepts including how to plan an evaluation, how to analyze and interpret data, and how to report evaluation results. Students learn a basic framework for conducting a program evaluation, various research/evaluation designs, and data analysis and statistics. Topics are covered in enough detail so that the student may understand how inferences are made regarding program evaluation.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre- or corequisite(s): EXW 454
EXW	460	Resistance Training Application and Theory	Fosters critical thinking as it applies to resistance training theory.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: EXW 216 and 315 with C or better
EXW	466	Health Promotion Program Management and Administration	Uses a dynamic team process to build knowledge and skills for the effective administration of health promotion program proposals. Areas of emphasis are strategic planning, managing fiscal resources, demonstrating leadership, developing human resources, facilitating community partnerships, formative and summative evaluation. Aligns with specific objectives required for the Certified Health Education Specialist offered by the National Commission for Health Education Credentialing.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 45 hours
EXW	476	Community Health	Applies major concepts of community health. Focuses on populations, settings and social issues related to community health. Basics of epidemiology, disease prevention, and health promotion. Explores community health concepts related to organizing and building community coalitions and health programs. Also explores school health, maternal, infant and child health, minority health, and environmental influences on community health.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 101 or 102 (or EXW 290 or 300) with C or better; EXW 340 or 342 or 394 (Health Behavior Theory) with C or better; Pre- or corequisite(s): EXW 446 or 456 with C or better
EXW	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s) with C or better: minimum 2.00 GPA; Exercise and Wellness major: EXW 420; EXW 425 OR Health Promotion major: EXW 284; EXW 315 or EXW 335; EXW 446 OR Health Education and Health Promotion major: EXW 284; EXW 436 or EXW 476
EXW	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6		Prerequisite(s): Barrett Honors student
EXW	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6	L	Prerequisite(s): Barrett Honors student
EXW	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
EXW	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-7	L	
EXW	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
EXW	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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EXW	501	Research Statistics	Statistical procedures; sampling techniques, hypothesis testing, and experimental designs as they relate to research publications.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	534	Sports and Fitness Conditioning	Bases of sports and fitness conditioning, including aerobic and anaerobic power, strength, flexibility, and analysis of conditioning components for sports and fitness.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	535	Advanced Exercise Assessment and Prescription	Theory and practice of laboratory methods in applied exercise physiology. Procedures for assessment and prescription for individuals with chronic disease.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	536	Physiological Aspects of Physical Activity and Chronic Disease	Role of physiological mechanisms associated with acute and long-term physical activity and its influence on chronic disease and wellness.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	538	Obesity, Exercise and Health	Critically examines scientific and medical evidence concerning obesity, exercise, and health across the life span.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	540	Mindfulness, Stress and Health	Overview of the theory, measurement, research and efficacy of mindful awareness practices and programs on stress reduction, health outcomes and health behavior. Includes an experiential learning component focused on practices and content consistent with mindfulness-based stress reduction.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EXW 540 or EXW 598 (Mindfulness Stress and Health)
EXW	542	Health Promotion	Theory and research concerning fitness and wellness programs in nutrition, physical activity, smoking cessation, and stress management.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	544	Fitness/Wellness Management	Development of the fitness/wellness industry. Planning, organizing, promoting, and managing fitness/wellness programs.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	560	Cardiopulmonary Rehabilitation	Exercise testing and prescription for cardiac and pulmonary patients as well as pharmacology, electrocardiography, pathophysiology of chronic diseases, and leadership of patients in cardiac rehabilitation and pulmonary rehabilitation programs.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	562	Functional Assessment and Exercise Prescription for Older Adults	Assessment of functional capacity and prescription of exercise that is appropriate for older adults including healthy, frail, diseased and very old.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): MS Clinical Exercise Physiology or Exercise and Wellness major
EXW	564	Aging and Lifestyle Behaviors	Provides an overview of health behaviors in older adults. Centers on the perceptions and behaviors of older adults in reference to illness prevention, health promotion and reactions to acute and chronic illness and the context in which these behaviors occur. Specifically examines the psychological, familial, cultural and contextual factors which influence older adults' personal health practices and illness behaviors. Considers the older person as an individual in a complex system, engaged in decision making and his/her subsequent actions to maintain or improve health status. Solidifies concepts through the use of in-class case studies and discussions.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: EXW 542
EXW	565	Cardiovascular and Pulmonary Physiology	In-depth study of the physiology of exercise with special regard to cardiovascular and pulmonary responses in healthy and chronically diseased individuals.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): MS in Clinical Exercise Physiology major
EXW	568	Management and Treatment of Chronic Disease for the Clinical Exercise Physiologist	Investigates the physiology, pathophysiology and treatment options for a variety of diseases that the clinical exercise physiologist routinely encounters in the work environment. Prepares students to qualify for ACSM Clinical Exercise Physiologist certification.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: EXW 560
EXW	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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EXW	597	Capstone Project	For non-thesis students in the MS degree program to provide a culminating field experience or non-research project for students to apply the coursework and healthy aging concepts.	N	RSC	N	YGB	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): EXW 500; EXW 501; EXW 536; EXW 542; EXW 591
EXW	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	635	Physical Activity and Aging	Examines and discusses the theoretical and applied health-related research on physical activity and aging.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	640	Analysis of Variance for Exercise and Wellness	Analyzes variance methods with an emphasis on research measures of human performance.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	641	Qualitative Research Methods	Introductory overview of qualitative research methods frequently used in education and health. Emphasizes analysis of research and practical application.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	642	Exercise Epidemiology	Physical activity, exercise, and physical fitness and the development of chronic disease.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: EXW 500 with C or better; EXW 501 with C or better
EXW	643	Correlation/Regression/Multi variate Statistics	Graduate-level statistics course for PhD/master's students who will be doing research in the area of exercise and wellness.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	645	Advanced Applied Methods and Data Analysis	Heavily applied focus on implementing research methods and statistical modeling techniques in the health promotion sciences. Addresses practical issues in specifying, interpreting and presenting research findings using appropriate statistical techniques. Addresses reporting standards (e.g., CONSORT, STROBE, PRISMA) and practical issues related to manuscript submission. Covers analytical methods including multiple regression and logistic regression, ANOVA, mediation and moderation, exploratory factor analysis, multilevel models for hierarchical data and intensive longitudinal data, basic time-to-event analyses (i.e., survival), and meta-analysis; also remains flexible to address critical and emerging methodologies in the health promotion sciences. Covers statistical methods in a conceptual nature with a focus on the use of statistical software packages (primarily SPSS) and interpretation of outputs.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 640, 643
EXW	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	701	Advanced Research Methods	Provides doctoral students in Nutrition and Health Promotion with instruction in methods to enhance scientific writing skills in the health sciences and guidance through the process required to organize and submit a fundable research grant proposal.	N	SEM	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 700
EXW	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
EXW	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	101	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
FAS	101	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
FAS	101	Personal Growth in Human Relationships	Personal development and behavior as related to competency in interpersonal relationships with the family. Processes of family interaction.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FAS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		Pre-requisites: Freshman Standing; Maximum 25 hours
FAS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
FAS	264	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only FAS 264 or SOC 264
FAS	264	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only FAS 264 or SOC 264
FAS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
FAS	301	Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
FAS	301	Introduction to Parenting	Integrated approach to understanding parenting and parent-child interactions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
FAS	324	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & H	Credit is allowed for only FAS or SOC 324
FAS	331	Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
FAS	331	Marriage and Family Relationships	Issues, challenges, and opportunities relating to present-day marriage and family living. Factors influencing interrelations within the family.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
FAS	332	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
FAS	332	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
FAS	332	Human Sexuality	Relationship of sexuality to family life and to major societal issues. Emphasizes developing healthy, positive, and responsive ways of integrating sexual and other aspects of human living.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
FAS	360	Black Families in the Diaspora	Within a historical, cultural, social-economic, and international context, the institution of Black families begins with their lives in Africa, South America, and the Caribbean and follows the cultural continuities and adaptations impacting the structure and functioning of contemporary African America families. Theoretical models provide focus to studying voluntary and involuntary migration, family labor force involvement, gender roles, marital relations, parenting, kinship and community networks. Throughout the course attention is given to the role of social policies in shaping the well-being of Black families.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Prerequisite(s): AFR 200 (or AFS 200) or FAS 101; Credit is allowed for only AFR 360 (or AFS 360) or FAS 360
FAS	361	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Prerequisite(s): SOC 101 or SOC 301 or CDE 232; SOC 390; Credit is allowed for only FAS 361 or SOC 391
FAS	370	Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Credit is allowed for only AFR 370 (or AFS 370) or FAS 370
FAS	370	Family Ethnic and Cultural Diversity	Integrative approach to understanding historical and current issues related to the structure and internal dynamics of diverse American families.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Credit is allowed for only AFR 370 (or AFS 370) or FAS 370
FAS	390	Supervised Research Experience	Practical, firsthand experience within current faculty research projects in family studies or child development. Y grade only; may be repeated for total of 6 hours.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		
FAS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
FAS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
FAS	403	Aging, Lifespan Development, and the Family	Analyzes aging issues and their effects on family members of older adults. Integrates social policy, health, and relational factors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	410	Military Family Systems in a Democracy	In-depth overview of recent research, issues, trends relating to military families and the interactions within the military culture and societal cultures.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): FAS 101 or PSY 101 (or PGS 101) or SOC 101; minimum 30 hours
FAS	421	Caregiving for Older Adults	In-depth analysis of the theory and practice of caregiving for the senior population. Integrates multiple perspectives (family caregivers, professionals, paraprofessionals, government, and industry policies).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC). Credit is allowed for only ALD 431, 531 or FAS 421
FAS	431	Parent-Adolescent Relationships	Dynamics of the relationships between parents and adolescents. Developmental characteristics of adolescence and the corresponding adult stage.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	

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FAS	435	Advanced Marriage and Family Relationships	In-depth examination of research, issues, and trends relating to marriage and family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Pre-requisites: Minimum 30 hours; SOC 101, PSY 101(PGS 101), FAS 101 or FAS 331 with C or better; Credit is allowed for only SOC or FAS 435
FAS	436	Sexuality in Mid-Life and Beyond	Analyzes physical changes, myths and stereotypes, gender issues, and relationship issues pertaining to sexuality in the middle and older adult years.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	440	Fundamentals of Marriage and Family Therapy	Introduces the fundamental orientations of marriage and family therapy.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
FAS	460	Leadership, Research, and Collaboration in Community Change	Advanced understanding of leadership and the development of proposals for innovative plans that enhance the well-being of children, youth and families.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): minimum 60 hours; Credit is allowed for only FAS 460 or FAS 498 (Leadership Research & Collaboration in Change) or SOC 460
FAS	461	Community Action Research Experience Research Internship	Second course in Community Action Research Experience (CARE) sequence. Students apply leadership, professional collaboration, project management and research skills in conducting an approved community action research project.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: FAS 460 (or SOC 460); Minimum 60 hours. Credit is allowed for only FAS 461 or SOC 461
FAS	472	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
FAS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
FAS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
FAS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6	L	Prerequisite(s): Barrett Honors student
FAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
FAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
FAS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
FAS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-7		
FAS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		
FAS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
FAS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEL	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	503	Academic Professional Development	Becoming and working as a academic, including how to write a vita, choose a thesis topic, or find dissertation data.	N	REC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	505	Applied Regression Analysis	Multiple linear regression topics relevant to social science data analysis. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 505
FAS	507	Categorical Data Analysis	Logistic regression and related topics relevant to categorical data analysis in social sciences. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 507
FAS	508	Structural Equation Analysis for the Social Sciences	Theory and application of structural equation modeling. Path analysis and latent variable models such as CFA, multiple group analysis and models for longitudinal data. Projects involve conducting analyses and writing results.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 508

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FAS	509	Event History Analysis	Proportional hazards models and other methods for analyzing longitudinal data and establishing hazard rates of events for exploratory variables.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 509
FAS	512	Secondary Data Anlysis	Works with existing data to produce a publishable article.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FAS or SOC 512
FAS	531	Theoretical Issues in Family Sciences	Historical and current approaches to theory development, evaluation, and application in family studies.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	539	Research Issues in Family Interaction	Critical review of current and past research in the area of family dynamics. Emphasizes interactional processes within the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	570	Introduction to Marriage and Family Therapy	Introduces major marriage and family therapy orientations. Reviews history, theory, application, and outcome research for each orientation.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	571	Assessment in Marriage and Family Therapy	Assessment and outcome evaluation of couples and families involved in marital and family therapy.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	572	Advanced Techniques in Marriage and Family Therapy	In-depth review of assumptions and advanced techniques associated with contemporary marriage and family therapy approaches.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	573	Dysfunctional Families	Critical review of current theory and empirical evidence connecting marital and family interaction patterns with aberrant behavior.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	574	Family Theory for Marriage and Family Therapy	Examines the theoretical orientations within the family therapy field, including the evolution, premises, and assumptions of each.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	575	Applied Issues in Couples - Therapy	Examines issues unique to therapeutic work with couples, including lifespan transition, multicultural issues, divorce, parenting, and remarriage. Seminar. Enroll requirements: Pre-requisites: Admission into MAS-MFT program.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	576	Applied Issues in Human Development for MFT: Psychopathology	Recognition and diagnosis of maladaptive behavior according to DSM criteria across human development.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	577	Applied Issues in Children and Adolescents in Marriage and Family Therapy	Examines developmental factors that lead to disorders in children and adolescents, with an emphasis on a systemic framework.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	578	Applied Issues in Sexuality for Marriage and Family Therapy	Examines the major methods used to assess and treat sexual issues and the treatment of sexual disorders.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	579	Applied Research in Marriage and Family Therapy	Critical examination of research concepts, quantitative and qualitative research designs, and applicability in clinical settings.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	581	Professional Issues and Ethics	Examines legal and ethical concerns of marriage and family therapists, emphasizing licensing standards and the Code of Ethics.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: MAS-MFT student
FAS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	586	Capstone I	Professional exploration and goal specification for non-thesis capstone project.	N	PRA	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): 3 hours in any CDE, FAS or SOC 500-level course with C or better; Credit is allowed for only FAS 586 or SOC 586
FAS	587	Capstone II	Develops professional expertise and area of focused interest.	N	RSC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): FAS 586 or SOC 586. Credit is allowed for only FAS 587 or SOC 587
FAS	588	Capstone III	Applies developed expertise and knowledge to professional goal.	N	PRA	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): CDE 501 or SOC 501; CDE 531 or SOC 585; FAS 500 or SOC 500; FAS 587 or SOC 587; 12 additional graduate-level hours in CDE, FAS, and/or SOC; Credit is allowed for only FAS 588 or SOC 588
FAS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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FAS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FAS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	123	ASU Financial Literacy	A practical approach to financial challenges faced by ASU students. Emphasizes financial choices likely to be encountered while at ASU, as well as issues to be encountered immediately upon graduation. Topics include credit cards, student loans, credit scores, saving, investing, insurance, transportation, housing, taxes, goal setting and budgeting.	N	LEC	N	YGB	W.P. Carey School of Business	Department of Finance	1		Credit is allowed for only FIN 123 or 191(ASU Financial Literacy)
FIN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-3		
FIN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
FIN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FIN	300	Fundamentals of Finance	Theory and problems in financial management of business enterprises.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s) with C or better: ACC 231, 232 or 261; ECN 212; ECN 221, ECN 231, IEE 380 or STP 280; MAT 211, 266 or 271; Non-Business min. 2.5 GPA and min. 56 hours; Pre- or corequisite: ACC 241, 242 or 271; Credit for only FIN 300, 302 or 303
FIN	302	Managerial Finance	Theories and techniques used for business decisions in working capital management, capital budgeting, financial control, and long-term financing.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisites with C or better: WPC Finance major; ACC 231, 232, or 261; ECN 211 or 213; ECN 212 or 214; ECN 221 or 231; MAT 211, 266, or 271; Pre- or corequisites: ACC 241, 242, or 271 with C or better if complete; Credit allowed for only FIN 302 or 303
FIN	303	Honors Finance	Covers basic principles of finance, practical tools for financial decision making, and evaluation methods employed by the firm.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisites: W.P. Carey Honors student; with C or better: ACC 231, 232 or 261; ECN 211 or 213; ECN 212 or 214; ECN 221 or 231; MAT 211 or 271; Pre- or corequisite: ACC 241, 242 or 271 with C or better if completed. Credit allowed for only FIN 302 or 303
FIN	331	Financial Markets and Institutions	Analyzes financial markets and intermediaries. Theory of financial intermediation, interest rate theory, money and capital market instruments, and government regulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s) with C or better: W.P. Carey BS major or Business minor; ACC 231, 232, or 261; ECN 211 or 213; ECN 212 or 214; ECN 221 or 231; MAT 211, 266, or 271; Pre- or corequisite(s): ACC 241, 242, or 271 with C or better if completed
FIN	361	Advanced Managerial Finance	Builds on FIN 302. Advanced material on capital budgeting, cost of capital, CAPM, asset valuation, capital structure, and financial policy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: W.P. Carey Finance BS student; FIN 302 with C or better
FIN	380	Personal Financial Management	Dynamic analysis of personal financial planning, including time value of money, stock and bond investment, and retirement and estate planning.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: Minimum 2.00 GPA; Minimum 56 hours OR Non-degree student with minimum 2.00 GPA OR Graduate student; Not for Finance major credit
FIN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey BS non-Finance major; FIN 300 (or 302 or 303) with C or better
FIN	421	Security Analysis and Portfolio Management	Security analysis theory and practice. Selection and management of financial asset portfolios. Securities markets and portfolio risk-return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey Finance BS major; ACC 340 with C or better; FIN 303 or 361 with C or better; FIN 331 with C or better
FIN	427	Derivative Financial Securities	Study of stock options, index options, convertible securities, financial futures, warrants, subscription rights, and arbitrage pricing theory.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey Finance BS major; ACC 340 with C or better; FIN 303 or 361 with C or better; FIN 331 with C or better
FIN	431	Management of Financial Institutions	Asset/liability and capital management in financial institutions. Influence of market factors and regulatory agencies. Emphasizes commercial banks.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey Finance BS major; ACC 340; FIN 303 or 361 with C or better; FIN 331 with C or better

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FIN	456	International Financial Management	Exchange rate determination, financial markets, managing multinational corporations, capital budgeting, and hedging currency risk exposure from an international perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3	G	Prerequisite(s): W.P. Carey Finance BS major: ACC 340 with C or better; FIN 303 or 361 with C or better; FIN 331 with C or better, OR Honors student in Finance: FIN 303 and 331 with C or better
FIN	461	Financial Cases and Modeling	Case-oriented capstone course in managerial finance. Contemporary issues of liquidity management, capital budgeting, capital structure, and financial strategy.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3	L	Prerequisite(s) with C or better: ACC 340; FIN 303 (or FIN 361), 331; minimum 87 hours; BS Finance major. Pre- or corequisite(s): FIN 421 with C or better if completed
FIN	471	Investment Portfolio Management	Under faculty supervision, students manage over \$500,000 of the ASU Foundation's assets over the course of the year. Must take for a total of 3 hours.	N	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-3		Pre-requisite: FIN 303 or 361 with C or better
FIN	472	Investment Banking Industry Scholars	Provides conceptual basis for performing analysis, providing advice and making decisions in elite financial services firms. Must take for a total of 3 hours.	N	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-3		Prerequisite(s): application and selection process; Credit is allowed for only FIN 472 or FIN 494 (Investment Banking Industry Scholars)
FIN	481	Honors Seminar in Finance	Honors course covering topics that include theory and applications concerning managerial finance, investments, and financial institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey Finance BS major with Honors status; ACC 340 with C or better; FIN 303 or 361 with C or better; FIN 331 with C or better
FIN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P. Carey BS student; FIN 300, FIN 302 or 303 with C or better
FIN	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	W.P. Carey School of Business	Department of Finance	1-6		Prerequisite(s): Barrett Honors student
FIN	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	W.P. Carey School of Business	Department of Finance	1-6	L	Prerequisite(s): Barrett Honors student
FIN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey Finance BS student; ACC 315 or ACC 303 or ACC 340, FIN 331, and FIN 303 or FIN 361 all with C or better
FIN	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-6		Prerequisite(s): Barrett Honors student
FIN	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-7		Pre-requisites: W.P. Carey Finance students with professional status; FIN 331 and 361 with C or better; ACC 315 or 340 with C or better
FIN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Finance	1-3		Pre-requisites: W.P. Carey Finance students with professional status
FIN	502	Finance: The Art of Managing Resources to Create Value	Develops analytical techniques and financial theories used to make optimal decisions in a corporate setting.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2-4		Prerequisite(s): ACC 502 with C or better; ECN 501 with C or better
FIN	520	Valuation Techniques	Improves the understanding of valuation concepts and how to apply them. Shows how to value assets using free cash flow and economic value-added methods.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	525	Investment Strategies	Presents the fundamental principles of risk and return, portfolio diversification, asset allocation, efficient markets, active portfolio management, portfolio evaluation. Reviews selected alternative investment strategies such as hedge fund investments.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	530	Derivatives	Intermediate- to advanced-level course in derivative assets such as options, forward and futures contracts, swaps and financial engineering.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	540	Advanced Financial Management	Offers a comprehensive exploration of the revolutionary developments occurring in the world's financial markets.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate

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FIN	545	Advanced Corporate Finance	Studies major decision-making areas and selected topics in corporate finance. Attempts to develop decision-making ability in these areas using both lectures and cases.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W. P. Carey degree-seeking graduate student; Credit is allowed for only FIN 545 or 591 (Advanced Corporate Finance)
FIN	550	Fixed Income	Intermediate- to advanced-level course in fixed income instruments and associated relative valuation of the securities.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	555	Entrepreneurial Finance	Provides an overview of the economics and institutions involved in entrepreneurial finance. Focuses on the financing of new ventures. Consists primarily of case analysis, supplemented with in-class exercises and lecture material.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W. P. Carey degree-seeking graduate student
FIN	560	International Finance	Examines the financial issues of an international investment decision. Main topics include foreign exchange market, investment alternatives in the international capital markets, and the management of foreign exchange risk.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Prerequisite(s): FIN 502 with C or better; degree-seeking graduate
FIN	565	Risk Management in Banks and Financial Institutions	Provides a risk management view of financial institutions (also known as financial intermediaries). Traditionally, banking courses have focused on an overview of the financial services industry, sector by sector, concentrating on balance sheet presentations and overlooking management decision making and risk management. In contrast, this course emphasizes a risk management approach.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W. P. Carey degree-seeking graduate student
FIN	575	Finance Capstone	Provides a culminating experience as a step in completing the degree. Applies finance principles related to the investment, risk management and financing policies of the firm to develop decision-making ability in these areas. Emphasizes analysis of finance problems through selected readings and case studies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W. P. Carey degree-seeking graduate student; Credit is allowed for only FIN 575 or 591 (Finance Capstone)
FIN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: FIN 502 with C or better
FIN	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	781	Theory of Finance	Fundamental tools of financial economics; asset pricing, arbitrage, option pricing, capital structure, dividend policy, asymmetric information, and transaction-cost economics.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	782	Theory of Finance II	Fundamentals of corporate finance, contract theory, agency problems, and game theory applications in Finance.	N	SEM	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: W. P. Carey degree-seeking Graduate student

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FIN	783	Empirical Asset Pricing	Asset pricing models in finance; efficient market hypothesis, empirical factor models, option pricing basics.	N	SEM	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: W. P. Carey degree-seeking Graduate student
FIN	785	Financial Economics of Capital Markets	Asset pricing theory, equilibrium asset pricing models, and the equity premium puzzle; incomplete and imperfect markets.	N	SEM	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: W. P. Carey degree-seeking Graduate student
FIN	786	Corporate Finance	Issues in corporate finance covering topics that impinge on corporate finance, financial contracting, intermediation; empirical corporate finance; microstructure.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: W. P. Carey degree-seeking graduate student
FIN	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisite: W.P. Carey degree-seeking Graduate student
FIN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Finance	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FIN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FIS	101	SFIS: The ASU Experience	Welcomes freshman students enrolled in the Innovation in Society major at ASU. Introduces the array of resources available to them as ASU students, stimulates them to reflect on their choice of major, and provides an opportunity to hear about the career trajectories and interests of faculty and alumni from the School for the Future of Innovation in Society. Capped at sections of 20 students to promote discussion and a sense of community.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	1		
FIS	111	Welcome to the Future	Explores the ways in which the future inspires, shapes and motivates the present. Illustrates how possible futures are used by people and institutions to advance agendas, shape conversations and sell products. Examines how science, technology and other forces are mobilized to create change. Empowers students to play a role in shaping our collective future.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		
FIS	201	Innovation in Society	In the modern age, governments, multinational corporations and civil society movements have rallied around the idea that innovation is necessary for the maintenance of health, prosperity and the good life in general. Examines the vast implications of this promise, the reasons why it is so powerful and explanations for why it falls short. Also examines what innovation is, who funds it and why some innovations succeed while others fail. Links innovation with society to see how change happens differently in different places and how diverse populations are impacted.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3	H	
FIS	305	Ways of Knowing	Students research, beginning with the concept of research itself and its various purposes, highlighting knowledge and how it is created in different disciplinary approaches. Exposes historical and philosophical underpinnings of how research is conceptualized, presented and implemented, including what constitutes information, knowledge and evidence. Introduces material that is in a traditional research design and methodology course; however, the emphasis uniquely focuses on knowledge creation, innovation, the nature of disciplinary knowledge and its impact on society. Explores the epistemological differences in problem identification and approaches to inquiry in the disciplinary perspectives of engineering, the sciences and in the social sciences.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3	L	Prerequisite(s): minimum 45 hours
FIS	307	Navigating Futures	Foresight methods and their potentials as entry-points into public discussions about near- and mid-range technoscientific developments. Four elements constitute the organizing axis of the course: (1) the history of foresight exercises in government agencies and business organizations; (2) the methods of four forms of foresight exercises (technology foresight, science and technology studies, anticipatory governance and scenario development); (3) a comparative assessment of these dominant forms; and (4) a group-based application exercise using one of the foresight methods.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3	SB	Prerequisite(s): minimum 45 hours

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FIS	308	Politics, Markets and Innovation	Studies the roles that governments, markets and other factors play in promoting, disseminating and regulating science-based technological innovation. Includes examining the theoretical literature on factors that structure markets and shape diffusion, as well as case studies that illustrate the processes and mechanisms that govern innovations in society. In addition to studying the role of governments, firms and universities, also considers the role of publics as consumers who adopt innovations but also as citizens who may be skeptical of them. Includes case studies in agriculture, health care, biotechnology and digital rights.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3	SB	Prerequisite(s): minimum 45 hours
FIS	331	Technology and the Modern World	Explores how technological systems are developed and embedded in the modern world with an eye to playing a role in creating better futures. Examines how machines and techniques can shape institutions, relationships and values. Challenges students to envision futures that they want and work to develop strategies for moving us (and our systems) toward those futures. Analyzes technologies past, present and imagined, and describes the ways in which technologies shape our world and the ways in which we shape those technologies. Through repeated practice in class students play a productive role in and even facilitate conversations that tease out the relationships between values and technological systems.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): minimum 45 hours
FIS	332	Risk and the Future	Examines the evolving global risk landscape that is resulting from rapidly increasing global connectivity, tight coupling and massive complexity. Develops an understanding of how innovation in society is changing the risk landscape and considers how innovation in approaches to risk can help navigate this emerging landscape. Topics include technological risk, sociopolitical risk, catastrophic risk, existential risk, converging technologies, perception and uncertainty, anticipation, precaution, uncertainty and risk innovation.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3	L	Prerequisite(s): minimum 45 hours
FIS	333	Governing Emerging Technologies	Examines the variety of ways in which societies make collective decisions or govern science and technology. Focuses on a particular category of science and technology: the set of emerging technologies like nanotechnology, artificial intelligence and robotics, genetic modification and synthetic biology, cognitive science and neurotechnology, geoengineering, and others that pose particular problems of high stakes, high uncertainty and ambiguous novelty. Closely allied with the research agenda of numerous faculty in the School for the Future of Innovation in Society, especially those in the Center for Nanotechnology in Society, the Risk Innovation Lab, and others; exposes students to inquiry and skills directly from the research front. Students perform numerous research tasks.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3	SB	Prerequisite(s): minimum 45 hours
FIS	334	Science, Technology and Inequality	Conceptual and theoretical frameworks; provides empirical case studies that contribute to understandings of science and technology as they are used in society. The applications of science and technology in society need to be understood as instrumental to the creation and maintenance of inequality within and between societies. Science and technology does not merely cause or alleviate inequality, but are more profoundly implicated in social relations regarding distribution and access to the benefits of different technologies as well as exposure to risks from science and technology projects in society. The more pervasive and obdurate sources of social distribution are enshrined and entrenched in these scientific and technological systems.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3	C	Prerequisite(s): minimum 45 hours; Credit is allowed for only FIS 334 or JUS 334
FIS	335	Designing Knowledge	Provides a foundational understanding of how social organizations make and use knowledge. From research laboratories to biotechnology companies to statistical agencies, many organizations are specifically designed to be knowledge enterprises, enterprises whose primary purpose is to produce knowledge. All organizations in modern societies also operate knowledge systems: systems whose purpose is to create, validate, circulate, communicate and apply knowledge in the making of decisions. Examines how these forms of organization work and contribute to modern societies.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): minimum 45 hours
FIS	336	Science and Technology Policy	Science and technology are powerful forces in the modern world. They have been hailed as a way to address everything from world hunger to old age. This does not, however, happen automatically, nor does it always work out the way one presumes. Governments make numerous decisions that affect the direction and application of science and technology, and government policies are affected by a myriad of social, political, and cultural factors. This class will explore the variety of ways in which governments make these policies, how the policies shape the development of science and technology and their applications, and how policy may be shaped to create better futures. Governments around the world have coalesced around the idea that science and technology are necessary for the promotion of the good life. We will examine how they put this idea into action by looking at five interrelated topics: Food, Security/Military, Health, Economy, and Sustainability.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		

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FIS	337	Innovation and Global Development	International development, the role of technology and innovation, and the current era of globalization. Focuses primarily on socioeconomic development. The globalization of the world economy, with the end of the Cold War, and the advent of global information and communications technologies, has had significant implications for development around the globe. While wealth is rising in many countries and among certain social classes, there is still overwhelming poverty, lack of access to clean water, adequate nutrition, and health services for the majority of people in the world. This is not a new situation; however the advent of the recent era of globalization, which includes both political and technological changes, is a variable that influences development in complex ways.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3	G	Prerequisite(s): minimum 45 hours
FIS	371	Innovation for Impact: Impact Journey	Builds on the ideas, concepts and experiences engaged in earlier course work. Innovation allows for amazing possibilities, and within each one of us is the potential to create, apply, research and scale innovation to realize impact goals. Grounded in a use-inspired framework with a focus on transforming society, engages innovation for impact with a particular focus on what constitutes and how one achieves sustainable and scalable outcomes.	N	SEM	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): minimum 45 hours
FIS	372	Innovation for Impact: Inquiry Journey	Builds on the ideas, concepts and experiences engaged in earlier course work. Grounded in a use-inspired framework with a focus on transforming society, engages innovation for impact with a particular focus on meaning making, grounded claims, and what it means to gather, analyze, construct and advance meaningful assertions and storied truths that advance productive claims about the potential of an innovation to realize impact goals.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): minimum 45 hours
FIS	373	Innovation for Impact: Innovation Journey	Builds on the ideas, concepts and experiences engaged in earlier course work. Grounded in a use-inspired framework with a focus on transforming society, engages innovation for impact with a focus on imagining, designing, developing and optimizing a particular innovation such that it is likely to realize impact goals. Beyond product-centric perspectives that locate change within the innovation, this journey emphasizes an ecological perspective that positions innovation as a shared accomplishment distributed across the designed innovation, engaged participants, prepared facilitators and a responsive ecosystem.	N	SEM	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): minimum 45 hours
FIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-4		
FIS	431	Technology, Security and Insecurity in Global Politics	Focuses on the international political aspects of technological change; examines the impact of technological innovation and political change on the international political system. The overall goal is to create an awareness of and ability to analyze and synthesize world events, the particular role of technology, and consider the myriad ways that globalization and technology as a main driver could be changing the international system of nation-states. Technological innovation often takes place within a political context, including international politics, as nation-states and other entities develop technologies within the context of competition and power. There are several issues that run throughout the course as major themes. One is the role of technology in political and social change, and the impact of the latter on the former.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): minimum 45 hours
FIS	480	Innovation in Society Studio	Facilitates experiential learning and allows students to work with clients in the field of technology, innovation and sustainability. Through team projects with identified stakeholders, students engage, plan, design, implement and assess projects while learning interpersonal skills and managing client relationships. Students gain real-world experience and develop skills in project management, including planning, implementing and evaluating a complete project cycle. Allows students to manage both client-based projects and team relationships to complete projects. Students carry out project-based research, conduct interviews and meetings, make site visits, develop work plans and scope of works, negotiate clear deliverables with clients, implement projects and give public presentations. Presentations are grounded in the idea of conducting effective science communication.	N	SEM	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): FIS 305
FIS	481	Innovation for Impact: Application Journey	As a culminating experience, course brings together the previous experiences and emerging expertise to investigate, innovate and cultivate an impact innovation to achieve impact goals. Starting with building a grounded appreciation for a particular impact outcome, participants then design an innovation to realize a better future state, grounding this work in lessons with respect to logic models, design fictions, agile startups, and rapid prototyping. Some participants simply test a component and produce a reflective analysis, while others expand credit requirements and iterate to achieve transformative outcomes.	N	SEM	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): FIS 371; FIS 372; FIS 373
FIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		
FIS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-6		Prerequisite(s): Barrett Honors student

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FIS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-6	L	Prerequisite(s): Barrett Honors student
FIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	1-4		
FIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-7		
FIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-3		
FMP	201	Film: The Creative Process I	History, elements, and techniques of theatrical film: cinematography, directing, acting, scriptwriting, producing, and criticism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	
FMP	220	Film and Media Post-Production I	Required 45-hour lab designed to teach students how to use the Avid Media Composer editing program and supporting software with an emphasis on editing techniques and workflow. Part of the Avid Learning Partner program, taught by a Certified Avid Instructor. Satisfies the Media Composer 100-level certification as part of Avid's official curriculum. Upon completion of this course, students take an exam to become an Avid Certified User.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisite: Film and Media Production student
FMP	222	Education in Film	Critically examines how teachers, students, administrators and educational issues are dramatized and represented in popular media. Explores professional teacher preparation, socio-cultural contexts of education systems and learning, and the use of cinema as social critique.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L	Prerequisite(s): ENG 101 (or ENG 102) with C or better. Credit is allowed for only FMP 222 or FMP 294 (Education in Film)
FMP	225	Introduction to Visual Effects	Introductory look into the theory and practice of creating visual effects for film, television and games. Focuses on principles of 2D visual effects as derived and modernized from traditional special effects practices as seen in pre-digital film making. Students view, discuss and critique effects from films in the 20th and 21st centuries and engage in the creation of visual effects shots in a variety of styles employing a number of standard techniques. Covers the use of Adobe Photoshop and After Effects; however, considers some use of 3D applications in the second half of the semester. At the heart of good visual effects is a critical eye and attention to detail that is gained through critique of professional and student works on a weekly basis.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Credit is allowed for only FMP 225 or FMP 394 (Introduction to Visual Effects)
FMP	240	Introduction to Animation for Film	Introduces history, theory, technique and practices of 2D and 3D animation. Covers types of animation and how to create projects for a broad variety of end uses (e.g., motion graphics, TV/film, Web, games). Students create short projects that serve as exercises to study animation techniques as well as more in-depth projects of student	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Credit is allowed for only FMP 240 or FMP 294 (Introduction to Animation)
FMP	250	Sex and Violence in Film and TV: Ethics Survey	Sex and violence portrayals in media; examines societal evolution, technological development, market imperatives, production codes, and industry realities and practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		
FMP	255	Media Authorship	Surveys the manipulation, editing, compression, encoding and search engine optimization of digital sound and video media.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	CS	Credit is allowed for only FMP 255 or 294 (Media Authorship)
FMP	261	Introduction to Screenwriting	Basic skills of screenwriting including exercises in conflict and resolution, plot points, and theories of three-act structure and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: ENG 101, 105 or 107 with C or better
FMP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
FMP	300	Focus on Film	Specialized study of prominent film artists, techniques, and genres. Emphasizes the creative process.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: ENG102, 105 or 108 with C or better
FMP	318	Directing for Film and Media I	In-depth analysis of directing theory, textual analysis, visualization, shot composition and spatial connection, staging, rehearsal techniques, and camera movement.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Film (Film and Media Production) major; FMP 320 with C or better
FMP	320	Film and Media Post-Production II	In-depth analysis of editing theory, storytelling, nonlinear editing techniques and equipment, basics of visual and audio effects and color grading using the Avid Media Composer editing program and supporting software with an emphasis on storytelling and aesthetics. Part of the Avid Learning Partner program, taught by a Certified Avid Instructor. Satisfies the Media Composer 200-level certification as part of Avid's official curriculum. Upon completion of this course, students take an exam to become an Avid Certified Professional.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s) with C or better: FMP 220; FMP 300 (Film Production Part 1 or Film Production: Film & Media Part 1 or THE 400); BA Film (Film & Media Production) major

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FMP	325	Guerilla VFX	Offers the opportunity to work with a broad variety of projects with assets ranging from excellent quality to those that are more difficult to work with. In addition to work with pre-prepared assets, students also get the opportunity to create their own effects sequences from scratch (including capturing footage). Students learn best practices for capturing all needed elements on the day of the shoot as well as planning the sequence before recording. Covers work in both 2D and 3D visual effects including: matte painting (2D and 3D), set extensions and additions, blue/green screen compositing, and 3D animation for the addition of elements into a shot. The first section of the class consists of short individual assignments aimed at teaching basic core VFX skills, finishing with the production of a class-produced VFX short film. Class member assignments are based off of individual skill and interest.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): FMP 225 with C or better; Credit is allowed for only FMP 325 or FMP 294 (Guerilla VFX)
FMP	330	Professional and Technical Writing for Film/TV Industry	Professional (noncreative) writing skills that prepare students for a career in the entertainment industry.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 220 with C or better; Minimum 56 hours; Credit is allowed for only FMP 330 or 494 (Prof & Tech Writing for Film, Media & TV Industry)
FMP	345	Cinematography I	Cinematographer's role, photographic and visual theory, framing, shot composition, cameras and equipment, crew management, basic lighting for film and video.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: FMP 220 and FMP 300 OR FMP 394 (Non-Linear Editing for Film and Media)
FMP	361	Intermediate Screenwriting	Explores the basic components of feature screenwriting: story creation, story structure, character development, conflict, pace, tone, dialogue. Each of these skills will be revisited in more detail, culminating in a series of writing exercises (10-20 pages each), verbal pitch exercises and other focused exercises designed to develop the student's unique writing voice.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): FMP 261 with C or better; Credit is allowed for only FMP 361 or FMP 394 (Intermediate Screenwriting) or FMS 394 (Intermediate Screenwriting)
FMP	365	Developing a Series	Acquaints students with the development process for episodic series (network, cable, Web, on-demand). Also explores the many facets of the television industry (creative, financial, cultural, historical) and surveys the advances in television content along with an analysis of the cultural impact of television on society.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Digital Culture (Film) or Film major or Film & Media Production minor or Film & Media Production concentration; FMP 261 with B or better; Credit is allowed for only FMP 365 or FMP 394 (Developing a TV Series)
FMP	380	Film Production Crew	Provides a practical, on-set experience for all Film (Filmmaking Practices) majors.	N	PRA	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		Pre-requisites: BA Film (Filmmaking Practices) major; 2.50 ASU cumulative GPA; FMP 300 with C or better; Credit is allowed for only FMP 380 or 494 (Film Production Crew)
FMP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
FMP	398	Capstone Development	Provides the opportunity for all Film and Media Production majors to conceive, develop and complete the intellectual property that will form the basis of their required final capstone projects for FMP in the School of Theatre and Film at Arizona State University.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Pre-requisites:
FMP	417	Business and Legal Practices in Entertainment	Examines standard business and legal elements of the film and media entertainment industry, including historical, theoretical and ethical frameworks for understanding current practices.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): minimum 45 hours
FMP	418	Directing for Film and Media II	Expands on effective techniques for working with actors and on the director's preparation for shooting scenes and films. Students learn while directing with professional set protocols in this hands-on, set-driven class.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Film (Film and Media Production) BA major; FMP 318 with C or better; Credit is allowed for only FMP 418 or FMP 494 (Film & Media Directing II)
FMP	420	Film and Media Post-Production III	In-depth analysis of editing theory, storytelling, nonlinear editing techniques and software, advanced Sound Design and Color Grading using the Avid Media Composer editing program and supporting software with an emphasis on storytelling and aesthetics. Students receive critiques of their work after each project to determine the development of their proficiency of craft and creativity. Integrated lecture/lab.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Film (Film and Media Production) major; FMP 220 with C or better; FMP 300 with C or better; FMP 320 with C or better

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FMP	465	Series Writers Workshop	Offers selected students the opportunity to develop and refine material for a proposed episodic series through collaborative workshops and writing sessions that are equivalent to the development processes utilized in various industry paradigms (network, cable, Internet/on-demand).	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: FMP 365 or 394 (Developing a TV Series) with C or better; Digital Culture (Film) or Film major or Film & Media Prod. minor or BIS (Film & Media Prod.); minimum junior standing. Credit for only FMP 465 or 494 (Television Writing Workshop)
FMP	475	Producing Series	Function and responsibilities of episodic series producers and production executives for television-based platforms (network, cable, internet/on-demand). Explores a close examination of the business of television, specifically budget, license fees, distribution, and union obligations. Other topics include the structure of studios and networks, producing and marketing series for traditional and new media platforms, and general entertainment business practices.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Film (Film & Media Production) or Film (Filmmaking Practices) major; minimum junior standing. Credit is allowed for only FMP 475 or FMP 494 (Producing Television)
FMP	480	Film Production Capstone I	Preparation for final project: screenplay, budget, shooting schedule, production lists and reports for preproduction of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Film & Media Production student; FMP 318 with C or better; THE 220 with C or better
FMP	481	Film Production Capstone II	Final project shooting and postproduction: shooting, editing picture, sound, effects and music; audience screening of required capstone film.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Film & Media Production student; FMP 480 with C or better
FMP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
FMP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): Barrett Honors student
FMP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Prerequisite(s): Barrett Honors student
FMP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Pre-requisites: Film and Media Production student or Filmmaking Practices student or Film and Media Production minor
FMP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-7		
FMP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		Pre-requisites: Film & Media Production or Filmmaking Practices student
FMP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FMP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FMP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Pre-requisite: Fine Arts Graduate student
FMS	100	Introduction to Film	Introduces the narrative structure, visual style, and cultural elements of film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	
FMS	110	Introduction to New Media	Explores the cultural effects of new media technologies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	
FMS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-3		
FMS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
FMS	200	Film History	Introduces the technological, aesthetic, social, and economic aspects of international film history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & H	
FMS	202	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	Credit is allowed for only FMS 202 or REL 202

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FMS	209	Screenwriting Fundamentals	Studies the creativity and the technique of screenwriting for the conventional narrative film and for TV; student writing exercises culminate in a script for micro cinema.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		
FMS	270	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	Credit is allowed for only FMS 270 or TCL 270
FMS	287	Topics in Film, Media, and Religion	Explores specialized topics in the study of film, media and religion. Analyzes how religious values, identities and practices related to various cultural traditions are constructed, communicated and presented through films and media.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3	HU & G	Credit is allowed for only FMS 287 or REL 287
FMS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
FMS	300	Television and Cultural Studies	Applies cultural studies theory and method to the study of American television history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better
FMS	302	U.S. Media Now	Examines the business of contemporary U.S. film, television, and new media and its relationship to artistic vision and production through research and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: FMS 100, ENG 101 and 102
FMS	309	Intermediate Screenwriting	Utilizing the elements of storytelling, students develop and write a treatment and the first act of a screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies conc; ENG 102 (or 105 or 108) with C or better; FMS 100 with C or better; FMP 261 (or FMS 209 or THP 261) with C or better
FMS	312	Film, Media, and Politics Today	Examines how entertainment technologies inform political innovation and campaigning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		
FMS	313	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	340	Contemporary American Film and Popular Culture	Analyzes American films, television programs, and music as popular cultural documents.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	345	Asian Pacific Americans and Film	In-depth examination of the representations of Asian Pacific Americans in narrative, popular, experimental, and documentary film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C & H	Pre-requisite: APA 200, APA 210, or FMS 100, or minimum 30 hours. Credit is allowed for only APA 345 or FMS 345
FMS	351	Emerging Digital Media	Analyzes modern cultural and digital technologies.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105 or 108 with C or better
FMS	352	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	C	
FMS	354	Critical Studies in Animation	Provides critical and practical tools for analyzing mainstream, experimental, and hybrid animation aesthetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: FMS 100
FMS	370	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Credit is allowed for only FMS 370 or TCL 370
FMS	374	American Visions: Innovators in Popular Media	In-depth examination of the career of an innovator in media, whether a producer, director, or scriptwriter, through his/her status as a unique storyteller of the American experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105, or 108 with C or better; Minimum 45 hours
FMS	376	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or REL 376
FMS	377	Baseball, Film, and American Dreams	Critical viewing and analysis of both narrative and documentary baseball film. Genre typically explores American values and national culture, and changes in our concepts of gender roles, race, aging, social class.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: FMS 100, ENG 101 and 102
FMS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
FMS	409	Advanced Screenwriting	Utilizing the elements of storytelling, students outline, develop, and write a feature-length screenplay.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies concentration; ENG 102, 105 or 108 with C or better; FMS 100 with C or better; FMS 309 with C or better

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FMS	411	Screenwriting Adaptation Studies	Explores the many issues related to narrative adaptation across movies and other media such as television, various Internet phenomena and gaming.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): Film and Media Studies major, minor or BIS Film and Media Studies concentration; ENG 102, 105, or 108 with C or better; FMP 261 or FMS 209 with C or better; Credit is allowed for only FMS 411 or FMS 494 (Screenwriting Adaptation Studies)
FMS	426	Films of India	Examines classic, Bollywood and diasporic films of India from 1950 to the present.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ARS 444, ARS 544, FMS 426, ARS 494 (South Asian Cinema) or ARS 494 (Films of India)
FMS	427	Identity and World Film	Examines how films around the world represent gender, race, ethnicity, and sexual orientation through the lens of genres and their variations and how genres reinforce or critique stereotypes.	N	PRA	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Minimum 55 hours; One 200-level course in literature, art history, history, or film and media studies with a grade of B- or better; Credit is allowed for only ARS 440, FMS 427, ENG 465, ARS, ENG or FMS 494 (Identity and World Film)
FMS	430	Artists in Film: Artists' Biopics	Examines artists' "biopics," biographical films about artists, chronologically from the subgenre's first appearance in 1936 to recent films. Explores relationships between film and history and between film and myths of creativity; major directors' attraction to artists' biopics; stereotypes of artists (e.g., genius, deviant); and how notions of creativity are inflected by gender, race and national identity. Assignments include weekly readings and film viewings and one short paper; optional documentaries and films are also available.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): a least one course at the 200 level or above in ARS, ENG, FMS, HST with B or better; Credit is allowed for only ARS 443, 494 (Artists Biopics) or FMS 430
FMS	440	Los Angeles: Movies and Culture	Explores film treatment of the historical culture of Los Angeles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies concentration; ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	441	Global Cinema	Examines how film represents three important dimensions of globalization: its relationship to national culture, terrorism, and immigration.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & G	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	442	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours; Credit is allowed for only ENG 447, FMS 442 or SLC 450
FMS	445	The Holocaust in German-Mediated Memory	Examines representations of the Holocaust from across different media (literature, film, architecture, memoir, photography) and from across multiple generations of German engagement with this period in history.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 or ENG 201 or ENG 202 or ENG 204 or FMS 100 or FMS 200 or JST 210 or JST 230 or SLC 202 with C or better; Credit is allowed for only FMS/GER/JST/SLC 445 or GER 494 (Holocaust & German Media or Holocaust & German Mediated Memory)
FMS	446	Weimar-Era German Film	Examines early film production in Germany during the period of the Weimar Republic.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only FMS 446 or GER 446 or SLC 446 or GER 494 (Weimar German Cinema) or GER 494 (Studies in German Film)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FMS	450	Technology, Culture, and Media	Studies the socio-political relationships among technology, culture, and media.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	460	Masculinity and Film	Examines the representation of masculinity and the male body in film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	461	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440
FMS	464	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	(L or HU) & C	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours; Credit is allowed for only ENG 458 or FMS 464 or TCL 464
FMS	465	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 465
FMS	466	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	C	Credit is allowed for only FMS or TCL 466
FMS	468	Crime and Violence in American Film	Addresses three primary aspects of crime and violence in film: representation, societal attitudes, effects on audience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies concentration; ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	470	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 470
FMS	471	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU & C	
FMS	475	Latin American Film	Examines the role of film in contemporary Latin American culture; films viewed and analyzed as casebook examples. Focuses on the aesthetics and generic conventions of contemporary Latin American films.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ENG 102, ENG 105, ENG 108, FMS 100, or SLC 202 with C or better; Credit is allowed for only FMS 475 or SLC 475 or SPA 475 or THE 475 or FMS 494/SLC 494/SPA 494/THE 494 (Latin American Film)
FMS	482	Entertainment Industries	Uses historical methodologies to critique emerging trends in the business of new media storytelling.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: BA Film and Media Studies major or minor or BIS Film and Media Studies concentration; ENG 102 (or ENG 105 or 108) with C or better; FMS 100 with C or better
FMS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		
FMS	486	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
FMS	490	Capstone Seminar	Capstone seminar.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3	HU	Pre-requisites: BA Film and Media Studies major; minimum 56 hours; ENG 102, 105 or 108 with C or better; FMS 100 with C or better
FMS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-6		Prerequisite(s): Barrett Honors student
FMS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of English	1-6	L	Prerequisite(s): Barrett Honors student
FMS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FMS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-7		
FMS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-3		
FMS	502	Hollywood Film Historiography (Online)	This course is offered online only. Explores historiographic and critical scholarship on Hollywood as an industrial, cultural, and aesthetic enterprise.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	503	Media Industries	Examines the business of contemporary U.S. media practices including film, television, Web-based media, music, video games, mobile phones, and other interactive media. Explores the changing economic structures of these media industries and their relationship to artistic vision and production.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	504	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	REC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Master of Liberal Studies student or MAS in American Media and Popular Culture student. Credit is allowed for only MLS or FMS 504
FMS	507	Crime and Violence in American Film (Online)	This course is available online only. Focuses on historiographic and critical scholarship on three aspects of crime and violence in American film: (1) regulation and censorship; (2) representation and society; and (3) theories about the effects on audiences of viewing crime and violence in films.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	508	Race and Gender in American Film	Investigates the diverse ways in which race and gender are represented in American film history and culture. In a broader context, also analyzes how the meaning of race and gender, and their intersectionality, has shifted and changed across time and space, and how cinema has contributed to these shifts. Gives attention to the relationships among visual style, narrative structure, generic convention and identity. Students become more literate about the power of film to reflect and refract ideologies of race and gender, and to analyze how these identities impact the experiences of individuals and groups in our	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only FMS 508 or FMS 598 (Race and Gender in American Film)
FMS	511	Fundamentals of Cinema & Television Narrative Online	Studies the creativity and the technique of screenwriting for the conventional narrative film and for television. Student writing exercises culminate in a script for micro-cinema. Seminar. Pre-requisite: online student in MAS American Media and Popular Culture	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	512	Intermediate Cinema and Television Narrative (online)	Focuses on the feature-length screenplay; students complete the first act and treatment of an original feature.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	520	Cultural History of US Television: Theory & Method	Engages both the theory and methods of cultural studies as implemented in television studies and U.S. television history (from the 1940s to the present).	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
FMS	522	Los Angeles: Movies and Culture	Focuses on historiographic and critical scholarship of industry, genre and representation in post-war, self-reflexive Hollywood cinema.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FMS	523	Film Authorship	Explores the notion of authorship in film, television, and digital media by engaging with a number of critical methodologies such as auteurism, structuralism, post-structuralism, feminism.	N	SEM	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): American Media and Popular Culture MAS students
FMS	527	Identity and World Film	Examines how films around the world represent gender, race, ethnicity, and sexual orientation through the lens of genres and their variations and how genres reinforce or critiques stereotypes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ARS 540, FMS 527 or (ARS 494, ENG 465, FMS 494 or ARS 598 Identity and World Film)
FMS	543	Artists in Film: Artists' Biopics	Examines artists' "biopics," biographical films about artists, chronologically from the subgenre's first appearance in 1936 to recent films. Explores relationships between film and history and between film and myths of creativity; major directors' attraction to artists' biopics; stereotypes of artists (genius, deviant, etc.); and how notions of creativity are inflected by gender, race and national identity. Assignments include weekly readings and film viewings and one short paper; optional documentaries and films are also available.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ARS 443 or ARS 543 or FMS 430 or FMS 543 or ARS 598 (Artists in Film: Biopics)
FMS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FMS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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FMS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
FOR	105	Physical Evidence and the Crime Scene	First course in a two-semester series of laboratory and lecture courses focusing on introducing non-scientists to forensic science. Explores the investigative and laboratory technologies behind common forensic techniques utilized in crime scene documentation and reconstruction, the identification and value of physical evidence, documentation and collection of evidence, comparative analysis, and the latest technologies in mobile device forensics.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	
FOR	106	Biology Behind the Crime Scene	Second of two courses offering the non-scientist an introduction to the forensic sciences. Focuses on the biology and chemistry in analytical techniques used in the crime lab such as quantitative DNA analysis, toxicology and controlled substance analysis. Also covers topics related to death investigation, as well as plant and pollen identification as they relate to forensic science and criminal investigations.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	
FOR	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
FOR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
FOR	210	Sociology of Murder	Sociological perspectives on various forms of murder and types of murderers. Also considers forms of punishment for murder.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SB	Credit is allowed for only FOR 210 or SOC 210
FOR	286	Principles of Forensic Science	Introduces and surveys the practices and procedures used by forensic scientists in the modern crime laboratory. Students apply lecture topics to forensic-themed laboratory activities.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisite(s): BIO 181; BIO 182; CHM 113; CHM 116
FOR	290	Historical Perspectives of Forensic Science	Explores the history and evolution of forensic science and its use in criminal investigations. Topics include: the "discovery" of DNA, the societal impact of forensic science, increased use of forensic science in criminal investigations, and a timeline of technological advances that has helped propel forensic science into popular culture.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Credit is allowed for only FOR 290 or FOR 294 (Historical Perspectives of Forensic Science)
FOR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
FOR	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	PRA	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
FOR	350	Computer Forensics	Concepts of computer forensics, forensic analysis techniques, computer forensic tools and software for forensic investigators, network forensics, data forensics, mobile device forensics, malware forensics, cyber crimes and fraud, computer security incident response.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: ACO 100 with C or better
FOR	370	Modern Practices in Forensic Science	In-depth treatment of the practices and procedures used by forensic scientists in the modern crime laboratory. Students apply lecture topics to forensic-themed laboratory activities.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181; BIO 182; BIO 305 or FOR 286; CHM 113; CHM 116; Pre- or corequisite(s): BCH 371; BCH 372; LSC 347; LSC 348
FOR	377	Forensic Analytical Chemistry Laboratory	Focuses on common analytical techniques currently used in forensic laboratories and provides further hands-on experience with methods and instrumentation utilized in a modern crime laboratory. Applies gained knowledge to lab exercises designed with crime laboratory evidence types and protocols in mind.	N	LAB	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	2		Prerequisite(s): FOR 375 or LSC 375 with C or better; FOR 376 or LSC 376 with C or better
FOR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
FOR	400	Comparative Forensics	Familiarizes students with the comparative methods used in the forensic analysis of fingerprint, questioned document and firearms evidence. Discusses the theory and principles of individualization as assessed in forensic casework. Exposes the operation and theory of the scientific instruments used when performing comparative analysis. Reinforces learning objectives through case studies, practical exercises, outside projects and guest lectures.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181; BIO 182; CHM 113; CHM 116; Pre- or corequisite(s): BIO 305 or FOR 286; Credit is allowed for only FOR 394 (Comparative Forensics) or FOR 400
FOR	401	Forensic Toxicology	Focuses on toxicology as it pertains to forensic science. Topics include: the history of toxicology; the pharmacodynamics and pharmacokinetics of drugs and alcohol in the human body; as well as the legal applications of toxicology. Also discusses ethics, quality control and quality assurance, and courtroom testimony (as they relate to forensic toxicology). May address other topics such as environmental toxicology, poisons, and current topics related to forensic toxicology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181; BIO 182; CHM 113; CHM 116; Pre- or corequisite(s): BIO 305 or FOR 286; Credit is allowed for only FOR 394 (Forensic Toxicology) or FOR 401
FOR	402	Forensic Biology	Focuses on molecular genetics and biology pertaining to forensic science. Course subject matter includes: the history of forensic biology, serological techniques, DNA and DNA analyses, topics in molecular genetics, and forensic biology in the crime lab. Also discusses ethics, quality control and quality assurance, and courtroom testimony (as they relate to forensic biology). Addresses other topics such as current court cases and topics related to forensic biology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 181; BIO 182; CHM 113; CHM 116; Pre- or corequisite(s): BIO 305 or FOR 286; LSC 347; LSC 348; Credit is allowed for only FOR 402 or FOR 394 (Forensic Biology)

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FOR	406	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L or HU	Prerequisite(s): ENG 101 or 105 or 107 with C or better. Credit is allowed for only FOR 406 or IAS 406 or PHI 406
FOR	410	Professional Practices in Forensic Science	Focuses on professional practices as they relate to the forensic scientist or forensics professional working in a modern crime laboratory (public or private). Topics include quality assurance programs and practices; ethics and analytical bias; the audit and accreditation processes; and the relationship with forensic science and the courtroom, to include courtroom testimony procedures. Includes oral mock court scenarios, as well as enhancing writing skills appropriate to the forensic sciences.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Prerequisite(s) with C or better: BIO 305 or FOR 286; ENG 102 or 105 or 108
FOR	425	Analytical Chemistry for Life Sciences	Presents an analysis of chemicals, including the theoretical and practical considerations regarding the separation, detection and quantitative determination of chemicals. Illustrates the application of different analytical procedures using some of the common chemicals of concern in the forensics and environmental fields.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): CHM 234 with C or better; CHM 238 with C or better; Credit is allowed for only FOR 425 or LSC 425
FOR	426	Analytical Chemistry for Life Sciences Lab	Provides hands-on experience with sample extraction, sample clean-up, and instrumental analysis of common chemicals. Largely focuses on the application of analytical chemistry methods to the fields of forensics and the life sciences. Mainly uses the solvent and solid-phase analyte extraction methods; gas chromatography-mass spectrometry, FTIR and NMR, generally determines analyte identification.	N	LAB	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	2		Prerequisite(s): CHM 234 with C or better; CHM 238 with C or better; Corequisite(s): FOR 425 or LSC 425; Credit is allowed for only FOR 426 or LSC 426
FOR	447	Molecular Genetics Laboratory	Investigative lab involving DNA isolation, PCR, gel electrophoresis, enzyme digestion and ligation, transformation, and hybridization analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): minimum 45 hours; Credit is allowed for only FOR 447 or LSC 447
FOR	454	History of Genocide	Examines the individuals and institutions responsible for the most infamous episodes of state-sanctioned violence in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	G & H	Prerequisite(s): minimum 45 hours. Credit is allowed for only FOR 454 or HST 454
FOR	456	Studies in Forensic Linguistics	Focuses on the three main aspects of that branch of applied linguistics, namely language and the law, court cases where language is the central dispute, and linguistic evidence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better; minimum 45 hours; Credit is allowed for only ENG 456 or FOR 456 or PAX 456 or ENG/FOR 494 (Studies in Forensic Linguistics)
FOR	475	Principles of Toxicology	Presents the fundamental principles of toxicology and its application to both human and environmental situations. Starts with the means of defining and quantifying toxic effects through dose response curves (e.g. LD50, EC50, LOEL, NOEL). Then focuses on absorption pathways for toxicants as well as the degradation metabolism pathways for toxicants. Finally focuses on the mechanism of toxic action for common poisons and environmental pollutants. Emphasizes toxicants that students are likely to encounter in forensics and environmental fields.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: BCH 361 (or BCH 371 or LSC 394; Modern Concepts in Biochemistry) and BIO 353. Credit is allowed for only FOR or LSC 475
FOR	480	Advanced Topics in Human Forensic DNA Typing	Examines the science of current forensic DNA typing methods by focusing on the technology behind STR, Y-STR and mtDNA typing, real-time PCR, serology tests, capillary electrophoresis, expert systems and statistics.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): FOR 380 or LSC 380; Credit is allowed for only FOR 480 or LSC 480 or FOR 494 (Advanced Topics in Human Forensic DNA Typing) or LSC 494 (Advanced Topics in Human Forensic DNA Typing)
FOR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): minimum 45 hours
FOR	485	Forensic Science Capstone	Culmination course integrating all components of Forensic Science major courses demonstrating knowledge and competency in the field of forensic science. Includes Forensic Science Assessment Test (FSAT) preparation and FSAT completion.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BIO 305 or FOR 286; FOR 410; 6 additional hours of upper-division FOR coursework; senior standing
FOR	486	Peer Mentoring in the Forensic Sciences	Advanced students learn and apply mentoring skills in teaching labs.	N	SEM	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): minimum 45 hours
FOR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
FOR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
FOR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
FOR	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student

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FOR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7	L	
FOR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
FRE	101	Elementary French	Intensive aural/oral drill in class and lab; basic grammar supplemented by simple prose readings.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in FRE 101 if credit with C or better earned in FRE 101, 102, 201, 202, 305 (or FRE 205), 311, 312, 321, 322, 411 or 412
FRE	102	Elementary French	Intensive aural/oral drill in class and lab; basic grammar supplemented by simple prose readings.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Prerequisite(s): FRE 101. Students may not enroll in FRE 102 if credit with C or better earned in FRE 102, 111, 201, 202, 305 (or FRE 205), 311, 312, 321, 322, 411 or 412
FRE	110	Intensive French I	Proficiency-based course that provides an intensive introduction to the French language and culture. Introduces the language and culture through a variety of topics from everyday life. Focuses on the development on all four communicative skills. Class time is spent mainly on communicative activities based on active listening and speaking practice of everyday French as used in different social situations, with much use of various print, video and Web-based media.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Credit is allowed for only FRE 101 or FRE 102 or FRE 110 or FRE 111
FRE	111	Fundamentals of French	Primarily for students with two years of high school French who need review to enter second year study.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Students may not enroll in FRE 111 if credit with C or better earned in FRE 101, 102, 201, 202, 305 (or FRE 205), 311, 312, 321, 322, 411 or 412
FRE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
FRE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	201	Intermediate French I	Grammar review, with emphasis on development of skills of speaking, reading, writing, and listening comprehension.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in FRE 201 if credit with C or better earned in FRE 202, 305 (or FRE 205), 311, 312, 321, 322, 411 or 412
FRE	202	Intermediate French II	Continuation of grammar review with emphasis on development of skills in speaking, reading, writing, and listening comprehension.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in FRE 202 if credit with C or better earned in FRE 305 (or FRE 205), 311, 312, 321, 322, 411 or 412
FRE	210	Intensive French II	Second semester of an intensive, proficiency-oriented language course designed to develop functional proficiency in French in a dynamic communicative environment. Class time is spent mainly on a variety of communicative activities based on active listening and speaking practice of everyday French as used in different social situations, with much use of various print, video and Web-based media.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Prerequisite(s): FRE 102, 110, or 111 with C or better; Credit is allowed for only FRE 201 or FRE 202 or FRE 210
FRE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	305	Readings in French Literature	Survey of francophone literature designed to teach reading with facility and comprehension. Vocabulary building, familiarity with literary terms, their meaning and use, and introduction to textual analysis of literary genres are major elements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): FRE 202 or FRE 210 with C or better; Students may not enroll in FRE 305 if credit earned in FRE 321 or FRE 322
FRE	311	Oral and Written Expression I	Practices interpersonal and interpretive writing and speaking, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): FRE 202 or FRE 210 with C or better
FRE	312	Oral and Written Expression II	Practices presentational writing and speaking, emphasizing current usage and promoting facility in the expression of ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): FRE 202 or 210 with C or better
FRE	315	French Phonetics	Practice and theory of French pronunciation. Emphasizes standard French, although an overview of regional varieties is offered.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: FRE 311
FRE	319	Business French	Introduces the structure, vocabulary, and practices of the French business world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: FRE 312
FRE	321	French Literature	Representative masterpieces and significant movements of French literature of the Middle Ages through the 18th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & H	Pre-requisites: FRE 305; FRE 312

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FRE	322	French Literature	Literature of the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: FRE 305; FRE 312
FRE	325	French Language and Culture Through Film	Reviews French vocabulary and grammar through French films, with emphasis on listening comprehension and oral and written production.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s) with C or better: FRE 311, 312
FRE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	411	Advanced Spoken French	Improvement of spoken French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: FRE 311; 6 hours of 300-level French
FRE	412	Advanced Written French	Improvement of composition skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: FRE 312; 6 hours of 300-level French
FRE	415	French Civilization I	Political, intellectual, social, economic, and artistic development of France from its origins to the end of the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: 6 hours of upper-division French
FRE	416	French Civilization II	Political, intellectual, social, economic, and artistic development of France from the 18th century to present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	pre-requisites: 6 hours of upper-division French
FRE	421	Structure of French	Phonology, morphology, syntax, semantics, and varieties of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): FRE 311, 312; SLC 201
FRE	422	Applied French Linguistics	Applies linguistic theory and second-language acquisition theory to teaching of French.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 213 or SLC 201; FRE 311 or FRE 312
FRE	423	French Syntax	Analyzes French syntactic structure by contemporary theoretical models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 213 or FRE 421 or SLC 201
FRE	441	French Literature of the 17th Century	From 1600 to 1660.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 321; 6 hours of 300-level French courses
FRE	442	French Literature of the 17th Century	From 1660 to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H	Pre-requisites: FRE 321; 6 hours of 300-level French courses
FRE	445	French Literature of the 18th Century	Contributions of the philosophers and the development of the novel and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: FRE 321; 6 hours of 300-level French courses
FRE	451	French Poetry of the 19th Century	From Romanticism to Parnassian poetry to Symbolism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	452	French Novel of the 19th Century	From Constant, Hugo, Balzac, Stendhal, and Sand to Flaubert and Zola, with emphasis on major literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	453	Theater of the 19th Century	From Romantic drama to the Symbolist Theater. Representative plays of Hugo, Musset, Vigny, Dumas, Becque, Rostand, Feydeau, and Mirbeau.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	461	Modern Narrative	Representative authors from Gide to the new Nouveau Roman.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	462	Modern Poetry	Representative authors from Mallarme to Bonnefoy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	471	The Literature of Francophone Africa and the Caribbean	Selected prose, poetry, and drama of black authors from Africa and the Caribbean.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: FRE 322; 6 hours of 300-level French courses
FRE	472	Franco-Canadian Civilization	Study of the civilization of Quebec in particular through its history, language, literature, music, and customs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): 6 hours of 300-level French courses
FRE	480	Translation Theory and Practice	Theoretical and practical approaches to the fundamentals of meaning-based translation.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: FRE 412
FRE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
FRE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
FRE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
FRE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
FRE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
FRE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
FRE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
FRE	510	Introduction to Textual Analysis	Introduces various oral and written techniques aimed at explicating literary texts. Required of all French graduate students focusing on literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only FRE 494 (Introduction Textual Analysis) or 510
FRE	521	History of the French Language	Principal phonological, morphological, and semantic developments of French from Latin to present, with emphasis on Old and Middle French. Some familiarity with Latin is recommended.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	550	French for Reading Knowledge	Teaches non-speakers of foreign language, or those with only basic notions of the language, how to read in a foreign language at an advanced level. Consists of a concise overview of grammar as well as reading comprehension practice for students who plan to take the Graduate Foreign Language Exam or others who would merely like to learn to read in a foreign language. Focuses only on reading and not on listening, speaking or writing as in a traditional language course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only FRE 494 (French for Reading Knowledge) or FRE 550 or FRE 598 (French for Reading Knowledge)
FRE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FRE	790	Reading And Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	100	Introduction to Engineering	Introduces the engineering design process; working in engineering teams; the profession of engineering; engineering models, written and oral technical communication skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	2		
FSE	104	EPICS Gold Feasibility and Planning	First of a sequence of three one-credit service-learning courses in which EPICS GOLD groups are formed from students potentially representing all engineering, computer science and construction disciplines as well as other ASU majors, including sustainability, business, liberal arts, sciences and others. Groups of 4-5 students work together to assess the feasibility and sustainability of their proposed plans for long-term projects that solve problems and benefit clients and often, the larger community. Project work centers on the engineering, technology, computing, sustainability, business and other needs of a not-for-profit community partner; interdisciplinary group interaction is an integral element for the project success.	N	LEC	N	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): Fulton Schools of Engineering student; Credit is allowed for only FSE 104 or FSE 194 (EPICS Gold I)

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FSE	150	Perspectives in Grand Challenges for Engineering	Explores social dimensions of developing engineering solutions to meet local and global challenges. Introduces National Academy of Engineering (NAE) Grand Challenges for engineering and Grand Challenge Scholars Program.	N	LEC	N	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3	SB	Prerequisite(s): admission to the Engineering Grand Challenge Scholars Program. Credit is allowed for only FSE 150 or FSE 194, Perspectives on Grand Challenges for Engineering Prerequisite(s): admission to the Engineering Grand Challenge Scholars Program. Credit is allowed for only FSE 150 or FSE 194, Perspectives on Grand Challenges for Engineering
FSE	181	Technological, Social, and Sustainable Systems	Introduces the importance and role of technological, social, and sustainable systems in the modern world. Provides a framework for the theory and practice of sustainable engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3	HU	Credit is allowed for only SOS 181, FSE 181, or CEE 181
FSE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	201	Engineering Undergraduate Teaching Assistant	Theory and rationale of active learning and teaching strategies that stimulate intellectual development. Leadership, teaching, teamwork and communication skills needed to facilitate effective undergraduate learning in engineering. Implementation of these skills in a classroom setting.	N	PRA	Y	YGB	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): Ira a Fulton School of Engineering major; minimum sophomore standing
FSE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		Prerequisite(s): Barrett Honors student
FSE	301	Entrepreneurship and Value Creation	In-depth application of entrepreneurial concepts including opportunity recognition, value creation and new business management. Identifies the needs of a market and problem solves to meet those needs through innovation. Covers common mistakes made in the new venture process and how to work to avoid these mistakes.	N	LEC	N	GNA	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3		Prerequisite(s): Business undergrad; ACC 241 or 242 w/C or better OR Engineering junior OR non-bus junior; min 2.50 cum ASU GPA; MGT 290 w/C or better; Pre- or coreq(s): MGT 340 w/C or better if completed; Credit is allowed for only FSE 301 or MGT 360
FSE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Prerequisite(s): Fulton Engineering undergraduate student
FSE	399	Cooperative Work Experience	Work periods with industrial firms or government agencies alternated with full-time course work. Not open to students from other colleges.	N	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		Prerequisite(s): Fulton Engineering undergraduate student
FSE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		Prerequisite(s): Barrett Honors student
FSE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6	L	Prerequisite(s): Barrett Honors student
FSE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
FSE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-6		Prerequisite(s): Barrett Honors student
FSE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-7		
FSE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-3		
FSE	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	501	Technology Entrepreneurship	Fundamental principles and concepts of technology entrepreneurship.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
FSE	502	Strategic Enterprise Innovation	Strategies, techniques, and practices of process, product, and management innovation across the enterprise.	N	LEC	N	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	3		Pre-requisite: School of Engineering Graduate student

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FSE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	590	Reading and Conf	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	594	Conf and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		Prerequisite(s): Fulton Engineering graduate student
FSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
FSE	600	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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FSE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
FSE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
FSH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
FSH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Art	1-4		
FSH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6		Prerequisite(s): Barrett Honors student
FSH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Art	1-6	L	Prerequisite(s): Barrett Honors student
FSH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Herberger Inst Design & Arts	School of Art	1-4		
GAP	10	Academic Skills I for International Pathways	Non-credit course designed for international ASU-USA Pathways students from any discipline who want to develop both their general English language competence and the academic skills which they need in order to succeed in their for-credit studies. The curriculum has been organized around tasks that students need to master in order to perform and interact appropriately in an international English-medium higher education setting.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	11	Academic Skills II for International Pathways	Non-credit course designed for international ASU-USA Pathways students from any discipline who want to continue to develop both their general English language competence and the academic skills which they need in order to succeed in their for-credit studies. The curriculum has been organized around tasks that students need to master in order to perform and interact appropriately in an American higher education setting.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	12	Academic Skills III for International Pathways	Non-credit course designed for international ASU-USA Pathways students from any discipline who want to refine both their general English language competence and the academic skills which they need in order to succeed in their for-credit studies. The curriculum has been organized around tasks that students need to master in order to perform and interact appropriately in an American higher education setting.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	20	Academic Foundations for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course develops oral linguistic fluency and accuracy along with listening comprehension skills needed for academic success. In addition, this course creates cultural awareness in the American university setting.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	30	Communication Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills and cultural awareness needed to comprehend and practice theories of communication skills in public, small group and interpersonal settings. Also supports, linguistically and culturally, students' study of speech communication processes such as problem solving, decision making and information sharing.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		

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GAP	31	Math Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills needed to comprehend and apply math terminology in various math contexts through in-class problem-solving activities and presentations.	N	LEL	N	GNA	Office of the Provost	Global Launch	1		
GAP	32	Computer Information Systems Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills needed to understand and apply concepts and terminology related to the role of computers in business and society and use of word processing, spreadsheets, database, presentation and application software. In addition, the course supports the students' linguistic ability to discuss computers in terms of ethics and social issues as well as technology and business.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	33	Global Management Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills, communication skills and cultural awareness needed to comprehend and apply basic concepts related to management in a global environment including global politics, legal systems and sociocultural environments.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	41	History Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills and cultural awareness needed to comprehend global history by exploring topics such as: changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare and women around the world.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	42	Sociology Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills needed to understand and apply concepts and terminology related to the fundamentals of sociology. Also supports, linguistically and culturally, students' study of social organization, interaction and social change.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	44	Biology Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills and cultural awareness needed to comprehend and apply basic principles and concepts of biology including the method of scientific inquiry and behavior of matter and energy in biological systems.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	80	Math for Business Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills and cultural awareness needed to comprehend and practice topics in math for business analysis.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GAP	90	Macroeconomics Bridge for International Pathways	Designed for international ASU-USA Pathways students, this non-credit course supports student development of language skills, higher-level thinking skills and cultural awareness needed to comprehend and analyze the structure and functioning of the American economy as well as the basic economic institution and factors that determine national income and employment levels.	N	LEL	N	GNA	Office of the Provost	Global Launch	3		
GBL	11	Business English Communications II	This course is a continuation of GBL 10 in that it further develops the students to meeting the challenges of the degree bearing MGM/MAGAM programs at Thunderbird. Students may enter into GBL 11 directly with a TOEFL score of 95 Internet-Based test or better. Each class continues to improve upon one or more of the different language communication fundamentals (reading, writing, listening, speaking, and cultural adaptation) and overlaps content themes in order to prepare the student with the necessary business vocabulary, the communication skills, and the expectations required for success in a post graduate situation.	N	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	NC Thunderbird School of Global Management	0		
GBL	20	Language Foundations	Entry-level course explores the grammatical, syntactic and cultural underpinnings of the English language for international students studying English as a foreign language.	N	LEC	N	GNA	Office of the Provost	Global Launch	0		
GBL	22	Special Programs Training		N	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	24	Special Programs Field-Based Learning		N	LEC	N	GNA	Office of the Provost	Global Launch	3		
GBL	25	Special Programs English for Specific Purposes		Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	26	Special Programs Project Work		N	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	27	Special Programs Current Issues and Topics		Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	28	Academic Culture	Multidisciplinary approach to American academic culture. Designed for international students who will be matriculating into an American university and explores such themes as study skills, using academic resources and participating fully in academic life.	N	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	40	Basic 1 Listening/Speaking	On completing the Basic 1 Listening/Speaking course, a student will be able to (1) follow directions and comprehend main ideas and supporting details of short, simple passages and conversations spoken slowly; and (2) speak informally to express basic needs, habits and descriptions in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		

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GBL	41	Basic 1 Reading/Writing	On completing the Basic 1 Reading/Writing course, a student will be able to (1) recognize main ideas and find supporting details in selected reading passages of a few pages; and (2) produce a guided writing with a personal point of view, demonstrating level-appropriate control of grammar, word forms, and punctuation.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	42	Basic 1 Structure	This course covers helping verbs, pronouns, adjectives, count/non-count nouns, and tenses (present, present progressive and simple past).	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	43	Basic 1 Communication	International students studying English as a foreign language study the fundamentals of English communication.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	50	Basic 2 Listening/Speaking	On completing the Basic 2 Listening/Speaking course, a student will be able to follow instructions, directions, and comprehend the main ideas and supporting details of 1-3 minute announcements and conversations with controlled speech and delivery; and (2) speak informally in basic social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	51	Basic 2 Reading/Writing	On completing the Basic 2 Reading/Writing course, a student will be able to (1) recognize main ideas, find supporting details, and recognize the organizational pattern in short and page-length reading passages; and (2) produce a composition, based on a model, with a personal point of view, demonstrating level-appropriate control of grammar, word form, and punctuation.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	52	Basic 2 Structure	Learn grammar for everyday writing and speaking--present, progressive and future tenses, irregular verbs in the past tense, modal verbs, pronouns, order of adjectives, and comparisons.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	53	Basic 2 Communication	Learn to communicate effectively at the basic level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	60	Intermediate 1 Listening/Speaking	On completing this course, a student will be able to (1) comprehend the main ideas and supporting details of 1-5 minute listening passages, conversations, instructions, and directions with controlled speech and delivery; and (2) speak informally in common social situations in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	61	Intermediate 1 Reading/Writing	On completing this course, a student will be able to (1) recognize the main ideas and find supporting details in selected reading passages of a few pages; and (2) produce an organized composition, with a personal or an objective point of view, demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	62	Intermediate 1 Structure	Improve grammar for everyday writing and conversation, present perfect and present perfect continuous and future tenses, noun clauses and grammar to cover frequency, duration, possibility and necessity.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	63	Intermediate 1 Communication	International students studying English as a foreign language continue to build on the fundamentals of English communication, including working on vocabulary expansion, pronunciation, idiom decoding, fluency and verbal accuracy.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	64	Intermediate 1 Business: Introduction	International students studying English as a foreign language, learn the fundamental vocabulary, concepts and cultural customs of business in an American context.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	65	Intermediate English for Social Sciences	In this communicative, content-driven course, international students studying English as a foreign language learn how to speak, write and critically analyze the vocabulary, concepts and context for American social sciences. Designed for students at an intermediate level of English proficiency.	Y	LEL	Y	GNA	Office of the Provost	Global Launch	3		
GBL	66	Intermediate English for STEM	In this communicative, content-driven course, international students studying English as a foreign language learn how to speak, write and critically analyze the vocabulary, concepts and context for STEM studies. Designed for students at an intermediate level of English proficiency.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	70	Intermediate 2 Listening/Speaking	On completing this course, a student will be able to (1) comprehend the main ideas and supporting details of 5-10 minute general topic listening passages with modified speech and delivery; and (2) speak formally and informally on a variety of general topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	71	Intermediate 2 Reading/Writing	On completing this course, a student will be able to recognize the main ideas and supporting details and distinguish between fact and opinion in a reading passage of several pages; and (2) produce a composition, based on a writing task, with an objective point of view demonstrating level-appropriate control of mechanics and grammar.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	72	Intermediate 2 Structure	Focus on an overview of all the tenses. This course also covers passive voice and sequence of tenses with adverbial clauses.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	73	Intermediate 2 Communication	Learn to communicate effectively at the intermediate level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		

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GBL	74	Intermediate 2: Business Management	International students studying English as a foreign language discover key concepts and ideas related to business management. Students have the opportunity to speak, read and write about, as well as listen to, accessible levels of business management materials, including work and motivation, company structure and recruitment.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	75	Intermediate American Culture Studies Special Topic		Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	76	Intermediate Bridge to ASU		Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	80	Advanced 1 Listening/Speaking	On completing the Advanced 1 Listening/Speaking course, a student will be able comprehend the main ideas and supporting details of brief academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	81	Advanced 1 Reading/Writing	On completing the Advanced 1 Reading/Writing course, a student will be able to (1) recognize the main ideas and supporting details and determine logical inferences in selected general reading passages of several pages; and (2) produce a composition, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	82	Advanced 1 Structure	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	85	English for Humanities and Design Studies	In this communicative, content-driven course, international students studying English as a Foreign Language continue to build their learning of ways to speak, write and critically analyze the vocabulary, concepts and context for humanities and design studies. Designed for students at an advanced level of English proficiency.	Y	LEL	Y	GNA	Office of the Provost	Global Launch	3		
GBL	90	Advanced 2 Core Listening/Speaking	On completing this course, a student will be able to (1) comprehend the main ideas and supporting details of complex but abbreviated academic lectures and instructions spoken naturally; and (2) speak formally and informally on academic topics in a comprehensible manner demonstrating level-appropriate fluency and control of pronunciation, grammar, and vocabulary.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	91	Advanced 2 Core Reading/Writing	On completing this course, a student will be able to (1) recognize the main ideas and supporting details, and determine logical inferences in authentic and selected academic and general reading passages of several passages; and (2) produce a well-developed essay, based on an assigned writing task, with an objective point of view, demonstrating level-appropriate word choice and control of mechanics and grammar.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	9		
GBL	92	Advanced 2 Structure	This course covers complex sentence structure, participial phrases, reduced adjective clauses and appositives, infinitives and gerunds, hypothetical conditionals, and the subjunctive.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	93	Advanced Communication Special Topic	Learn to communicate effectively at the advanced level in a variety of everyday situations and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	94	Business English Special Topic	Learn to communicate effectively in a variety of business situations and develop English skills necessary for success in today's business world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	95	Advanced American Culture Studies	Learn about American culture and develop communication skills necessary for success in today's world.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	96	Academic English Studies Special Topic	Learn the Academic English necessary for success at an American university or college.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GBL	98	Professional English Special Topic	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Office of the Provost	Global Launch	3		
GCU	102	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
GCU	102	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	102	Introduction to Human Geography	Systematic study of human use of the Earth. Spatial organization of economic, social, political, and perceptual environments.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
GCU	113	United States and Arizona Social Studies	Introduction to the United States and Arizona from the integrated social science perspectives of history, geography, and government.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & H	Credit is allowed for only GCU 113, HST 113, or GCU 194, US & AZ for Aspiring Elmtry Ed
GCU	114	World Social Studies	Introduction to the world from the integrated social science perspectives of history, geography, and government.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G & H	Credit is allowed for only HST or GCU 114
GCU	121	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SB & G	
GCU	121	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	SB & G	
GCU	121	World Geography	Description and analysis of areal variations in social, economic, and political phenomena in major world regions.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	4	SB & G	

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GCU	171	The Thread of Energy	Follows the thread of energy through every aspect of our lives. Discusses the technical, social, legal, and policy contexts of all energy resources, including present and unconventional fossil fuels, nuclear power, and renewable resources. Addresses energy use throughout history, the influence of energy on quality of life, the role it plays in political strategies and environmental quality, how it shapes our neighborhoods and cities, its contribution to our personal comfort and national security, and how its importance is reflected in the worlds of business and the humanities. Its dual role is as a stand-alone introduction to energy, and as a first step to more advanced studies of energy in the natural, technical, and social sciences.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	Credit is allowed for only GCU or SOS 171
GCU	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GCU	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
GCU	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
GCU	241	The Global Economy in Transition	Production, distribution, and consumption of various types of commodities of the world and relationships to the activities of humans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	Pre-requisite: Minimum 15 hours
GCU	253	Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and division of the world into cultural areas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	253	Introduction to Cultural and Historical Geography	Cultural patterns, including such phenomena as language, religion, and various aspects of material culture. Origins and diffusion and division of the world into cultural areas.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
GCU	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
GCU	322	Geography of U.S. and Canada	Spatial distribution of relevant physical, economic, and cultural phenomena in the United States and Canada.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & C	
GCU	323	Geography of Latin America	Spatial distribution of relevant physical, economic, and cultural phenomena in South, Middle, and Caribbean America. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as numerous analytical essays and an in-depth research paper, in addition to regular tests and quizzes, are required.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	Pre-requisite: Minimum 45 hours
GCU	325	Geography of Europe	Broad and systematic overview of Europe, emphasizing physical, economic, and cultural phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	326	Geography of Asia	Spatial distribution of relevant physical, economic, and cultural phenomena in Asia, excluding the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	328	Geography of Middle East and North Africa	Spatial distribution of relevant physical, economic, and cultural phenomena in the Middle East and North Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	332	Geography of Australia and Oceania	Spatial distribution of relevant physical, economic, and cultural phenomena in Australia, New Zealand, and Pacific Islands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	344	Geography of Hispanic Americans	Examines the homelands, migrations, settlements, landscapes, roles, and selected cultural traditions of Hispanic Americans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & C	
GCU	350	The Geography of World Crises	Contemporary world crises viewed from a perspective of geographic concepts and techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	351	Population Geography	Demographic patterns; spatial, temporal, and structural investigation of the relationship of demographic variables to cultural, economic, and environmental factors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	Prerequisite(s): MAT 117 or higher with C or better, or other course meeting General Studies MA requirement with C or better
GCU	356	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GCU	357	Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU	357	Social Geography	Environmental perception of individuals and groups. Stresses the spatial aspect of social and physical environments.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
GCU	359	Cities of the World I	Historical evolution of urban patterns and structures in the Middle East, India, Southeast Asia, China, Japan, and Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G & H	
GCU	360	Cities of the World II	Historical evolution of urban patterns and structures in Latin America, North America, Sub-Saharan Africa, and Australasia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	361	Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU	361	Urban Geography	External spatial relations of cities, internal city structure, and spatial aspects of urban problems in various parts of the world, particularly in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
GCU	364	Energy in the Global Arena	Production, transportation, and consumption of energy, emphasizing the electric power industry and its environmental problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	373	Introduction to Geographic Information Science	Introduces theoretical and computer-based aspects of Geographic Information Systems, involving data analysis and map generation.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	4	SG	Pre-requisite: PSY 230 or SBS 304
GCU	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
GCU	414	Teaching Geography Standards	Introduces Arizona Geography Standards for K-12 educators, emphasizing exciting curricula and illustrated with best practices by master teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GCU	421	Geography of Arizona and Southwestern United States	Geography of the Southwest with an emphasis on Arizona. Divided into physical geography, history, people, and economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & C	
GCU	424	Geography of Mexico and Middle America	Central America and Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	425	Geography of the Mexican American Borderland	Geography of a binational and bicultural region. Examines settlement, boundary issues, ethnic subregions, population change, industrial development, and urban growth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	(L or SB) & G	
GCU	426	Geography of Russia and Surroundings	Examines the geography of Russia and other post-Soviet states.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	432	Geography of China	Examines the physical, economic, cultural, social, demographic, agricultural, political, historical, and environmental aspects of the geography of China.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB & G	
GCU	433	Geography of Southeast Asia	Examines the biophysical and social features of Southeast Asian nations and peoples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GCU	441	Economic Geography	Spatial distribution of primary, secondary, and tertiary economic and production activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU	442	Geographical Analysis of Transportation	Networks, modes, economics, and flows at the urban, national, and international scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU	474	Public Land Policy	Geographic aspects of federal public lands, policy, management, and issues. Emphasizes western wilderness and resource development problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SB	
GCU	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12	G	Pre-requisite: Junior standing; Credit is allowed for only GCU 485 or GPH 485 or LAP 485 or POR 485 or PUP 485 or 585
GCU	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
GCU	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Prerequisite(s): Barrett Honors student
GCU	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GCU	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		

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GCU	496	Geographic Research Methods	Scientific techniques used in geographic research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	Pre-requisites: GPH 111, GCU 102, GCU 121 and GIS 205 with C or better
GCU	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
GCU	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GCU	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GCU	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
GCU	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	514	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GCU 514 or SOS 514
GCU	515	Human Migration	Economic, political, social, and geographic factors underlying population movements. Migration selectivity, streams and counter-streams, labor migration, and migration decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	529	Contemporary Geographic Thought	Comparative evaluation of current philosophy concerning the nature and trends of geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	542	Geographical Analysis of Transportation	Examines the geographical aspects of transportation systems. Looks at the geography of networks; transport costs and rates; different modes of transport, trade, economic development, and technology. Studies the movement of freight and passengers at the individual, urban, national, and international scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	585	Geographic Research Design and Proposal Writing	Prepares students to undertake creative geographic research culminating in the generation of new knowledge. Serves as a foundation for the student in achieving the objective of a productive and successful degree. To accomplish this, instruction stresses a research framework, ethical practice, and the generation of an original research proposal. Specific learning objectives are: to produce an area of specialization statement, literature review, problem statement, description of methods and final proposal; to develop the skills needed to conceive and plan a research project; to communicate ideas effectively in written and oral form; to develop and articulate informed opinions about research designs; to learn about academic publishing format and process; and to understand and engage in ethical research practices.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: Graduate student
GCU	586	International Field Studies	Organized field study in specified international locations.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only GCU 485 or 586 or GPH 485 or 585 or LAP 485 or 585 or POR 485 or PUP 485 or 585
GCU	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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GCU	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GCU	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	596	History of Geographic Thought	Historical development of geographic thought from pre-Greek days to the early 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	671	Introduction to Geographic Teaching	Intensive course in geographic education, scientific method in research on geographic education, research trends, resources for teaching, best practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	672	Physical Geography for Teachers	Transfer of matter and energy exhibited in the Earth's climate, hydrology, soils, biogeography, and landforms; case studies; virtual field trips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	673	Human Geography for Teachers	Analyzes cultural, economic, urban, historical, transportation, population, political, and development geography; case studies; virtual field trips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	674	Geographic Techniques for Teachers	Introduces geographic techniques, including GPS, GIS, remote sensing, cartography, qualitative, and field methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	675	World Geography for Teachers	Systematic overview of geographic knowledge about different world regions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	676	North American Geography for Teachers	Systematic overview of geographic knowledge about different North American regions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	677	Geography Across the Curriculum	Intensive course on intergrating reading, writing, and mathematics standards with geography content; selected case studies; best practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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GCU	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GCU	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	101	Elementary German	Reading, writing, speaking, and understanding of basic German, with emphasis on pronunciation and grammar.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Credit is allowed for only GER 101 or 111
GER	102	Elementary German	Reading, writing, speaking, and understanding of basic German, with emphasis on pronunciation and grammar.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: GER 101 with C or better; Credit is allowed for only GER 102 or 111
GER	110	Intensive German I	Students learn to read, listen, write and speak German. Develops ability to communicate in German using a variety of tools. Uses German to ask and answer questions; name and describe persons, things, places and events; deals with certain situations; narrates orally and in writing; writes letters and postcards; fills out forms; and comprehends some texts. Expands knowledge of the cultures of the German-speaking countries. Students contribute to the class discussions what they might already know.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Credit is allowed for only GER 101 or GER 102 or GER 110 or GER 111
GER	111	Fundamentals of German	Primarily for students with two years of high school German who need review to enter second-year study.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Pre-requisites: GER 101 with C or better; Credit is allowed for only GER 102 or 111
GER	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Maximum 25 hours
GER	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	201	Intermediate German	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: GER 102 or 111 with C or better
GER	202	Intermediate German	See GER 201	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: GER 201 with C or better

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GER	210	Intensive German II	Helps develop reading, writing, listening and speaking skills and strategies with activities both inside and outside of class. Guides student further into learning about the cultures of the German-speaking countries.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Prerequisite(s): GER 102 or 111 with B or better OR GER 110 with C or better; Credit is allowed for only GER 201 or GER 202 or GER 210
GER	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	310	Advanced German Grammar and Composition I	Intensive, contextualized advanced German grammar and intensive practice in writing, emphasizing covered style and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 202 with C or better
GER	311	German Conversation	Expansion of idiom through oral practice dealing with contemporary articles, essays and stories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: GER 202 with C or better
GER	312	Readings in German Culture	Provides strategies for building reading proficiency in German through longer cultural texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 310 with C or better
GER	313	Advanced German Grammar and Composition II	Intensive, contextualized advanced German grammar and intensive practice in writing, emphasizing covered style and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 310 with C or better
GER	315	Germanic Mythology	Religious and spiritual beliefs and practices of the ancient Germanic peoples as reflected in their culture, including the pantheon of their gods, as well as the reception of these beliefs through and including contemporary times.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisites: ENG 102, 105, or ENG 108 with C or better; Credit is allowed for only GER 315 or 394 (Germanic Mythology)
GER	319	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 310 with C or better
GER	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	412	Advanced German	Improvement of writing and speaking ability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): GER 313 with C or better
GER	415	German Civilization	Aspects of political, social, and cultural life of the German-speaking world from the beginning through 1600.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Pre-requisite: A 300-level German course
GER	416	German Civilization	From 1600 through 1945.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Pre-requisite: A 300-level German course
GER	421	German Literature Survey, 800-1800	From the beginning to Classicism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): 6 hours of 300-level German courses with C or better
GER	422	German Literature Survey, 1800-Today	From Romanticism to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better; 6 hours of 300-level German courses with C or better
GER	431	German Humor	Popular and literary texts (collections of jokes, pranks and comedies) in the print and visual media provide a basis of comparison for students to reflect critically on the function of humor in German culture from the sixteenth century until the present. Exposes the different types and functions of German humor and understands both the historical and the contemporary theoretical debate on the study of (German) humor. Taught almost exclusively in German, with reading and writing assignments done in the target language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: Two 300-level GER courses with C or better; Credit is allowed for only GER 431 or 494 (German Humor and Comedy)
GER	441	Fairy Tales	Foundational fairy tale texts collected by the Brothers Grimm and written by Hans Christian Andersen and their modern permutations reflect basic human desires, fears and aspirations as well as the values of the period in which they are written. These stories and their variants in popular culture across the globe permit students to reflect critically on the functions of fairy tales in both past and present civilizations. Students perceive the ways in which ancient tales can be utilized for various purposes and understand the contemporary theoretical debate on the study of fairy tales and their role in popular culture. Course taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ENG 102, 105 or 108 with C or better; one other ENG or GER upper-division course with C or better. Credit is allowed for only GER 441, GER 494 Fairy Tales, or SLC 441
GER	445	The Holocaust in German-Mediated Memory	Examines representations of the Holocaust from across different media (literature, film, architecture, memoir, photography) and from across multiple generations of German engagement with this period in history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or ENG 201 or ENG 202 or ENG 204 or FMS 100 or FMS 200 or JST 210 or JST 230 or SLC 202 with C or better; Credit is allowed for only FMS/GER/JST/SLC 445 or GER 494 (Holocaust & German Media or Holocaust & German Mediated Memory)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GER	446	Weimar-Era German Film	Examines early film production in Germany during the period of the Weimar Republic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only FMS 446 or GER 446 or SLC 446 or GER 494 (Weimar German Cinema) or GER 494 (Studies in German Film)
GER	447	German Modernism	Examines examples of modernism in literature, art and film from German-speaking Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only GER 447 or SLC 447 or GER 494 (German Modernism)
GER	453	German Literary Masterpieces on Film	Film and literature in their correlation to each other and to cultural, political, and social trends in German-speaking countries. Special arrangements for graduate students and those without a knowledge of German.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	
GER	455	Multi-Kulti: Multiculturalism Through Film	Examines how ethnic identities are perceived, constructed and marketed as well as how they perceive themselves and the "others." Critically engages with such concepts as migration, assimilation, citizenship, hybridity and authenticity. Focuses on exemplary films, including comparisons with minority experiences in other countries. Through film and other material on the topic, will learn to contextualize recruitment of guest workers, xenophobia and racism, citizenship law, immigration and national identity, the institutions of multiculturalism, religion, the private sphere, multilingualism, popular culture and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GER 455 or SLC 455 or GER 494 (Multi-Kulti: Multiculturalism in Central Europe) or SLC 494 (Multi-Kulti: Multiculturalism in Central Europe)
GER	465	Intercultural Communicative Competence	Focuses on the importance of culture(s) and the ways in which culture(s) effects and interrelates with communication. Communicating across cultures is very important in order for us to be able to function in a globalized, diverse world, e.g., workplace, city. Using our own experiences and discussions as well as the readings, course increases our sensitivity, understanding and awareness of our own culture(s) as well as other culture(s). Approaches the study of intercultural communicative competence in a theoretical and practical way.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101, 105, or 107 with C or better; Credit is allowed for only GER 465 or SLC 465 or GER 494 (Intercultural Communicative Competence) or SLC 494 (Intercultural Communicative Competence)
GER	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
GER	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
GER	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
GER	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GER	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required. Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
GER	499	Individualized Instruction	Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GER	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	521	History of German Language	Linguistic development of German from the earliest records to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	550	German for Reading Knowledge	Teaches non-speakers of foreign language, or those with only basic notions of the language, how to read in a foreign language at an advanced level. Consists of a concise overview of grammar as well as reading comprehension practice for students who plan to take the Graduate Foreign Language Exam or others who would merely like to learn to read in a foreign language. Focuses only on reading and not on listening, speaking, or writing as in a traditional language course.	N	LEC	Y	GNA	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only GER 494 (German for Reading Knowledge), GER 598 (German for Reading Knowledge), or GER 550
GER	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GER	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GER	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GIS	201	Spatial Thinking	Introduces spatial thinking, a cross-disciplinary foundation for geographic information science (the science of dealing with spatial/geographical data; their manipulation, interpretation and use in problem solving); geospatial technologies (the specific technologies underpinning geographic information science); and spatial analysis (the science of solving spatial problems).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GIS	205	Geographic Information Technologies	Introduces modern geographic information technologies, including cartography, GIS, remote sensing, global positioning systems, and statistical analyses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	CS	
GIS	211	Geographic Information Science I	History and basic aspects of GIS including map and data file structure, conversions, and synthesis with a computerized environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	CS	
GIS	220	Mathematical Principles in GIS	Covers the basic math principles needed to excel in GIS and spatial analysis.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: MAT 265 (or MAT 270) with C or better
GIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GIS	311	Geographic Information Science II	GIS as a basis for microcomputer spatial analysis and synthesis. Includes digitizing, database organization, spatial retrieval, and graphics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	CS	Prerequisite(s): GIS 211 with C or better
GIS	321	Programming Principles in GIS	Basic principles of programming for GIS in python covering data processing, analysis, and application development.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: CSE 110
GIS	322	Spatial Data Structures and Algorithms	Fundamental data structures and algorithms for the integration, management, processing and analysis of geographically referenced data.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: GIS 321
GIS	341	Introduction to Cartography and Georepresentation	Study and creation of maps. Fundamental mapping principles (projection, scale, generalization, symbolization) and computer-based cartographic production.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	CS	Prerequisite(s): minimum 45 hours
GIS	351	Air Photo Interpretation	Subset, remote sensing, includes photography, films, aerial geometry, image components, stereoscopy, photogrammetry, ground truthing; interpret physical, cultural, economic, intelligence information.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): minimum 45 hours
GIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GIS	412	Spatial Decision Support Systems	Theoretical and technical requirements for implementing spatial decision support tools.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): CSE 110 with C or better; GIS 311 with C or better
GIS	431	Spatial Databases	Covers data modeling concepts, the relational data model for the storage and retrieval of spatial and nonspatial information. The data retrieval emphasizes the industry-standard query language SQL and Spatial Query Languages.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: GIS 311; GIS 322

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GIS	441	Geographics: Interactive and Animated Cartography and Geovisualization	Advanced cartography, stressing influence and application of the computer on geographic representation. Emphasizes creation of maps for the Internet.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	CS	Prerequisite(s): GIS 321
GIS	461	Optimization Fundamentals for Spatial Analysis	Covers the fundamentals of optimization for spatial analysis. Reviews elements of calculus, matrices, and basic linear algebra. Introduces linear programming, integer programming and branch and bound, and heuristics. Provides the basics for use and application of GIScience and spatial analysis methods. Objectives include: reviewing basics of math, calculus and linear algebra; introducing optimization approaches, including linear programming, integer programming and heuristics; and applying these methods to structured problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: MAT 270 (or 271 or 272) with C or better; Credit is allowed for only GIS 461, 561, PUP 481, 581, GCU 494 (Optimization Fundamentals) or 598 (Optimization Fundamentals)
GIS	462	Location Analysis and Modeling	Provides a technical overview of location theory in the context of GIScience, focusing on analysis and modeling issues. Relies upon applications associated with emergency service planning, natural resource management, retail site selection, among others, to make connections among models, spatial information, and interpretation of findings. Explores utilization and implementation considerations using GIS. Objectives include: exposing a range of location analysis and modeling approaches; applying approaches in combination with GIS and optimization software; and carrying out an application-oriented study relying on acquired skills.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): GIS 211 with C or better; GIS 461 with C or better; Credit is allowed for only GIS 462 or GIS 562 or PUP 482 or PUP 582 or PUP 598 (Location Modeling)
GIS	470	Statistics for Geographers	Statistical techniques applied to the analysis of spatial distributions and relationships. Introduces models and theory in geography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	CS	Prerequisite(s) with C or better: MAT 117 (or MAT 119, 142, 170, 210, 211, 251, 265 or 270)
GIS	471	Geographic Information Analysis	Basics of spatial data analysis. Topics include point pattern analysis, spatial autocorrelation, spatial regression, and kriging.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: GIS 470
GIS	472	Spatial Regression Analysis	Students gain insight into the scope of spatial regression methods, apply them in an empirical setting, and properly interpret the results of spatial regression analysis.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: GIS 471; Credit is allowed for only GIS 472 or GPH 598 (Spatial Regression)
GIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GIS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GIS	501	GeoDesign in Practice	Covers the basic topics of GeoDesign in practice including data, analysis, geocoding, mapping and projected implementation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): GIS 601 and 602 (or PUP 576)
GIS	505	GeoDesign Principles	Systematic exploration and evaluation of alternative complex human-environmental systems using spatially and temporally explicit theories, data and methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): GIS 601 and 602, or PUP 576; Credit is allowed for only GIS 505 or PUP 505
GIS	512	Spatial Decision Support	Designs and implements a spatial decision support system and analyzes and understands the theoretical underpinnings that form these systems.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only GIS 412 or GIS 512
GIS	515	GIS Workshop	GIS as a tool to address large, multifaceted problems.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GIS 515 or PUP 576
GIS	521	Geographic Information Science III	In-depth look at programming within GIS. Focuses on programming and methodology, utilizing specific software, and basic scientific computing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	531	Spatial Databases	Advanced data modeling concepts, the relational data model for the storage and retrieval of spatial and non-spatial information. Data retrieval emphasizes the industry-standard query language SQL and spatial query languages. Covers research topics for graduate students.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only GIS 431 or GIS 531

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GIS	561	Optimization Fundamentals for Spatial Analysis	Covers the fundamentals of optimization for spatial analysis. Reviews elements of calculus, matrices and basic linear algebra. Introduces linear programming, integer programming and branch and bound, and heuristics. Provides the basics for use and application of GIScience and spatial analysis methods. Objectives include: (1) review basics of math, calculus and linear algebra; (2) introduce optimization approaches, including linear programming, integer programming and heuristics; and (3) apply these methods to structured problems.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only GCU 494 (Optimization Fundamentals) or GCU 598 (Optimization Fundamentals) or GIS 461 or GIS 561 or PUP 481 or PUP 581
GIS	562	Location Analysis and Modeling	Provides a technical overview of location theory in the context of GIScience, focusing on analysis and modeling issues. Relies upon applications associated with emergency service planning, natural resource management, retail site selection, among others to make connections among models, spatial information and interpretation of findings. Explores utilization and implementation considerations using GIS. Objectives include: (1) exposure to a range of location analysis and modeling approaches; (2) ability to apply approaches in combination with GIS and optimization software; and (3) capability of carrying out an application-oriented study relying on acquired skills.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GIS 561; Credit is allowed for only GIS 462, 562, PUP 482, 582, or 598 (Location Modeling)
GIS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		
GIS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	601	Introduction to Geographic Information Systems	Introduces GIS theory and practice for professionals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): Geographic Information Systems MAS student
GIS	602	Intermediate GIS	Introduces visualization, spatial analysis and open source tools.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): Geographic Information Systems MAS student
GIS	603	Spatial Statistics and Modeling	Introduces spatial statistics and modeling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): Geographic Information Systems MAS student
GIS	604	Implementation in the Corporate and Public Sectors	GIS use in the corporate and public sectors including proposal development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): Geographic Information Systems MAS student
GIS	605	GIS Project Planning and Implementation	Moving from project proposal to implementation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): Geographic Information Systems MAS student

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GIS	606	GIS Project Presentation	Development of technical reports and presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): Geographic Information Systems MAS student
GIS	610	Programming the GIS Environment	Programming fundamentals for desktop GIS and custom applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): Geographic Information Systems MAS student
GIS	630	GIS Technologies	Uses of GIS technology for data collection and management.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): Geographic Information Systems MAS student
GIS	640	GIS for Business	Uses of GIS in business practice including site suitability, demographic data and business analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): Geographic Information Systems MAS student
GIS	650	GIS for the Internet	Programming GIS for the Internet and mobile applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): Geographic Information Systems MAS student
GIS	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GIS	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GIS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	135	Graphic Communications	Technologies and processes involved in the design, image generation, transmission, and industrial production of graphic information.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		
GIT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-3		
GIT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		
GIT	210	Creative Thinking and Design Visualization	Fundamental methods, concepts, and techniques of creative thinking, design visualization, and problem solving, including communication and societal influences.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		
GIT	211	Introduction to Video Game Art	2D and 3D art assets for video games. Areas covered: classic pixel art, seamless texturing and tiling, sprite animation, 3D virtual studio, box modeling.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Credit is allowed for only GIT 211 or 294 (Intro to 2D-3D Video Game Art)
GIT	215	Introduction to Web Authoring	Graphic user interface planning and evaluation using industry-standard languages; graphics, color layout and file format considerations.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		
GIT	230	Digital Illustration in Publishing	Raster and vector illustration in publishing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		
GIT	237	Web Content Design	User-centered design principles for visual content on the World Wide Web with emphasis on usability, page architecture, search engine optimization, coding, scripting and interactivity.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 215; GIT 230 or Prerequisite(s): BAS in Graphic Information Technology or BAS in Internet and Web Development student
GIT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		

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GiT	295	Introduction to Technical Imaging	Explores imaging technologies utilized in industry. Covers basic imaging concepts, chip technologies, optics, motion analysis, high-speed video, thermal imaging, and science relating to light and latent imaging.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: Undergraduate student; Credit is allowed for only GiT 295 or 294 (Introduction to Technical Imaging)
GiT	303	Digital Publishing	Web and print publication design and production using industry-standard composition software, proofing, and output devices.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: GiT 230 or BAS student in Graphic Information Technology or Internet/Web Development.
GiT	310	Web Foundations	7.5-week course covers fundamental methods, concepts and techniques of semantic and validated Web development as well as aesthetic Web design. Includes Photoshop, HTML5 and CSS technologies.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): minimum junior standing; Credit is allowed for only GiT 215 or GiT 237 or GiT 310 or GiT 394 (Web Foundations)
GiT	312	3-D Computer Graphics Modeling and Representation	3-D modeling applications: modeling for video games, mapping techniques, texturing, box modeling, geometric representation, strategies and assemblies.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3	CS	Pre-requisites: GiT 211 or GiT 294 (Intro to 2D-3D Video Game Art)
GiT	314	Multimedia Design, Planning and Storyboards	The creative process of generating ideas, conceptualizing projects, planning, designing, story boarding, and presenting interactive multimedia products.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisites: GiT 210, GiT 215 and GiT 230 OR CST 200 and IFT 301 OR BAS student in Graphic Information Technology or Internet/Web Development
GiT	315	Digital Video Techniques	Covers video production, including planning, pre-production, production, post-production and online video technologies and how video is an integral part of the graphic information industry. Concentrates on commercial and client-driven video production.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GiT 230; Credit is allowed for only GiT 315 or GiT 294 (Intro to Video Content)
GiT	333	Printing Technology	Theory and application of sheet and web press technology for offset-lithography, flexography, screen process, and digital printing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite: GiT 303
GiT	334	Image Editing and Manipulation	Theory and application of advanced image editing and raster techniques for reproduction and dissemination.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GiT 230 or Graphic Information Technology or Internet/Web Development BAS major
GiT	335	Computer Systems Technology	Computer technology: hardware, software, storage, networking, Internet, telecommunications, and information systems. Requires independent research.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisites: Minimum 45 hours; Not for credit for the BS/GiT degree
GiT	340	Information Design and Usability	Design and technology solutions for increasing Website usability and methods of organizing information to improve the user experience.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): junior standing; Credit is allowed for only GiT 340 or GiT 494 (Information Design and Usability)
GiT	384	Commercial Photography	Digital image capture, and output in a commercial studio emphasizing publishing workflow.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisites: GiT 230 or BAS student in Graphic Information Technology or Internet/Web Development
GiT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		
GiT	402	New Media Internet Technologies	Project-based exploration of new media Internet technologies from a graphic technology prospective. Emphasizes how, why, and when new media can be used to enhance a Web site and the user's experience.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GiT 237 (or GiT 337) OR BAS student in Graphic Information Technology or Internet/Web Development. Credit is allowed for only GiT 402, 502 or 494 (New Media Internet Technologies)
GiT	411	Computer Animation	3-D computer animation methods: rigging for video games, principles of animation, loops, skinning, blending, advanced modeling and motion.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: GiT 312
GiT	413	Professional Portfolio Design and Presentation	Digital media portfolio design and production: planning, audience analysis, media selection, authoring, media formats, production, copyright considerations, marketing, and delivery. Requires capstone group project.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): Graphics Information Technology major; senior standing; GiT 303
GiT	414	Web Site Design and Internet/Web Technologies	Web site design, authoring, standards, protocols, tools, and development techniques for commercial client-sided Web-based graphic information systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GiT 237 or Applied Science (Graphic Information Technology) BAS or Applied Science (Internet & Web Development) BAS major; Credit is allowed for only GiT 414 or GiT 515 or GiT 598 (Website Design and Internet/Web)

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GI T	415	Advanced Digital Video Techniques	Covers advanced video creation and editing techniques including motion graphics, green screen technology, audio sweetening and creative video editing. Course culminates with a completed video production that is commercial in nature.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 315; Credit is allowed for only GIT 415 or GIT 394 (Advanced Video Techniques)
GI T	417	Advanced Web Markup and Scripting	Industry-standard programming languages and techniques to create interactive graphic information Web sites and applications.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 237 or Applied Science (Graphic Information Technology) BAS or Applied Science (Internet & Web Development) BAS major; Credit is allowed for only GIT 417 or GIT 519 or GIT 598 (Advanced Internet Programming)
GI T	418	Multimedia Authoring, Scripting and Production	Production of multimedia projects using industry-standard authoring applications: client considerations and project documentation; user interface design, interactivity, media, and databases.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 417; Credit is allowed for only GIT 418 or GIT 598 (Multimedia Authoring, Scripting and Production)
GI T	432	Graphic Industry Business Practices	Business practices related to the graphics industry; business models, cost analysis, marketing and management approaches.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre- or corequisite(s): senior standing or Graphics Information Technology major; Credit is allowed for only GIT 432 or GIT 598 (Graphic Industry Business Practices)
GI T	435	Website and E-Commerce Strategies	Internet Web site management, security, marketing, and e-commerce business models.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 414; Credit is allowed for only GIT 435 or GIT 598 (Website & E-Commerce Strategy)
GI T	437	Color Reproduction Systems	Scientific analysis for the engineering of color reproduction systems and color models used in the graphics industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): GIT 334; Credit is allowed for only GIT 437 or GIT 573 or GIT 598 (Color Reproduction Systems)
GI T	450	Digital Workflow in Graphic Industries	Digital production system analysis for content creation, automation output of graphic information to print and Web, including networking and job tracking.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): CH 360, GIT 237 (or GIT 337) OR Graphic Information Technology BAS or Internet & Web Development BAS major; Credit is allowed for only GIT 450 or GIT 598 (Digital Workflow in Graphic Industries)
GI T	480	Senior Project	Capstone project experience refining skills in communication, research and information retrieval, critical analysis and criticism, and demonstrating technical competence in each student's area of study.	N	LEC	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): minimum 90 hours; Pre- or corequisite(s): GIT 413 or Applied Science (Graphic Information Technology) BAS major or Applied Science (Internet & Web Development) BAS major
GI T	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-12		
GI T	490	Advanced Commercial Photography	Studio-based class focusing on set design, advanced photographic techniques, raw workflow, marketing, business, and digital rights management.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Pre-requisite: GIT 384
GI T	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-6		Prerequisite(s): Barrett Honors student
GI T	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-6	L	Prerequisite(s): Barrett Honors student
GI T	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		
GI T	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-7	L	

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GI T	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-3		
GI T	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GI T	502	New Media Internet Technologies	Project-based exploration of new media Internet technologies from a graphic information technology prospective. Emphasizes how, why and when new media can be used to enhance a Web site and the user's experience while maintaining branding cohesively across all technologies.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only GI T 402, 502 or 598 (New Media Internet Technologies)
GI T	515	Website Design and Technologies	Standards, tools and techniques for creating websites, with emphasis on designing for multiple devices and systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only GI T 414 or GI T 515 or GI T 598 (Website Design and Internet/Web)
GI T	519	Advanced Scripting for the Web	Uses industry-standard markup and scripting languages to develop interactive websites and applications.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only GI T 417 or GI T 519 or GI T 598 (Advanced Internet Programming)
GI T	537	Current Issues in Cross Media Production	Directed group study of selected current issues relating to cross-media production for the graphic information industries. Requires graduate group leadership.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): graduate student in Technology (Graphic Info Tech)
GI T	538	Personnel Development for the Graphics Industry	Employee training and development specific to production and management in the graphics industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): graduate student in Technology (Graphic Info Tech)
GI T	540	Cross-Media Design Solutions	Universal design theory, creative problem solving, and case study applications for print, Web, and new media products of the graphics industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): graduate student in Technology (Graphic Info Tech)
GI T	542	Usability and User Experience	Design and technology solutions focusing on how information is organized graphically to communicate and how website usability is employed to improve human interaction with inline information.	N	LEL	N	OPT	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): graduate student in Technology (Graphic Info Tech); Credit is allowed for only GI T 494 (Information Design and Usability) or GI T 542
GI T	573	Color Metrology	In-depth study and analysis of systems used to manage color reproduction in the graphic arts industry and information technology.	N	LEL	N	GNA	Ira A. Fulton Engineering	Graphic Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GI T 437 or GI T 573 or GI T 598 (Color Reproduction Systems)
GI T	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GI T	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GI T	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GI T	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GI T	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Graphic Information Technology	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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GIT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Graphic Information Technology	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GIT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Graphic Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	101	Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	
GLG	101	Introduction to Geology I (Physical)	Basic principles of geology, geochemistry, and geophysics. Rocks, minerals, weathering, earthquakes, mountain building, volcanoes, water, and glaciers. Students must complete both GLG 101 and GLG 103 to receive an SQ (general studies).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	
GLG	102	Introduction to Geology II (Historical)	Basic principles of applied geology and the use of these principles in the interpretation of geologic history. Both GLG 102 and 104 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SG & H	
GLG	103	Introduction to Geology I-Laboratory	3 hours lab, some field trips. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SQ	
GLG	103	Introduction to Geology I-Laboratory	3 hours lab, some field trips. Both GLG 101 and 103 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	
GLG	104	Introduction to Geology II-Laboratory	Lab techniques involving map interpretation, cross sections, and fossils. Both GLG 102 and 104 must be taken to secure SG general Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SG	Co-requisite: GLG 102
GLG	108	Water Planet	Overview of the processes that control water supply to natural ecosystems and human civilizations. Part I introduces the basic science that helps us understand the water planet, including the hydrologic cycle, glaciers and ice; rivers, oceans, and natural hazards associated with water such as flooding, landsliding and tsunamis. Part II covers some of the management and resource allocation topics that face humanity today, including droughts, groundwater contamination, impacts on fisheries, conflicts over water, patterns of water use, and effects of global climate change on future water supplies. Uses water issues facing Arizona and California as examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4	SQ	Credit is allowed for only GLG 108 or SOS 182
GLG	108	Water Planet	Overview of the processes that control water supply to natural ecosystems and human civilizations. Part I introduces the basic science that helps us understand the water planet, including the hydrologic cycle, glaciers and ice; rivers, oceans, and natural hazards associated with water such as flooding, landsliding and tsunamis. Part II covers some of the management and resource allocation topics that face humanity today, including droughts, groundwater contamination, impacts on fisheries, conflicts over water, patterns of water use, and effects of global climate change on future water supplies. Uses water issues facing Arizona and California as examples.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	Credit is allowed for only GLG 108 or SOS 182
GLG	110	Dangerous World	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SG & G	
GLG	110	Dangerous World	Geological studies as they apply to interactions between humans and Earth. Includes geological processes and hazards, resources, and global change. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SG & G	
GLG	111	Dangerous World Laboratory	Basic geological processes and concepts. Emphasizes geology-related environmental problems concerning Arizona. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SG	
GLG	111	Dangerous World Laboratory	Basic geological processes and concepts. Emphasizes geology-related environmental problems concerning Arizona. Both GLG 110 and 111 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SG	
GLG	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GLG	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	301	Earth Science in Arizona and the Southwest	Place-based application of geology and allied Earth system sciences to explore and interpret the landscapes, rocks, geologic history, climate, resources, and natural hazards of Arizona and the Southwest. Integrates case studies of the interactions of Southwest cultures and societies (past and present) with Earth systems, and inquiry into the future sustainability of Southwestern communities and lifeways.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): ENG 101, 105 or 107 with C or better; GLG 101, GLG 102, GLG 110, GPH 111 or SES 121; MAT 117 or higher. Credit is allowed for only GLG 301, GLG 394 (Earth Sci in AZ & SW) or SOS 372

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GLG	304	Minerals, Energy, and Society	Studies the science and technology of the minerals and energy industries, how these industries interact with society, and how these interactions may change in the future.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: ENG 101 (or 105 or 107) with C or better; GLG 101 (or 102 or 110) or GPH 111 or SES 121 or Junior standing; Credit is allowed for only GLG 304, 394 (Minerals, Energy & Society) or SOS 373
GLG	305	Dynamic Earth	Emphasizes the link between Earth's interior and surface, focusing on Earth systems and cycles, such as observation and modeling of the geometry and motions of Earth's rigid outer shell, the tectonic plates, and how they are coupled to the geologic record, the nature of Earth's internal structure, and convective motions within the planet. Specific topics include: (1) essentials of Earth's dynamic interior (models for physical and chemical evolution); (2) essentials of lithosphere evolution (cooling of oceanic plates, the age of the Earth, and continent formation); (3) multi-scale tectonics (plate tectonics, continental deformation, mountain building, tectonic context of metamorphism); (4) essentials of volcanism in a tectonic context; (5) geodynamic context of plate boundaries; and (6) chemical cycles (role of the solid crust and mantle for transporting, storing, and cycling water and minerals). Provides an essential global context for studies of Earth and Environmental Science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): BIO 100 or CHM 101 (or higher) or PHY 101 (or higher) with C or better; GLG 101 or SES 121 with C or better; MAT 170 or 210 or 251 with C or better
GLG	310	Structural Geology	Geologic structures and the mechanical processes involved in their formation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): GLG 101 or SES 121 with C or better; MAT 170, 171, 210, 251, 265, or 270 with C or better
GLG	321	Mineralogy	Crystal chemistry, crystallography, mineral identification, origin and occurrence of minerals, systematic mineralogy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		Prerequisite(s): CHM 113 (or both CHM 111 and 117 or 114) with C or better; MAT 170, 210, 265 or 270 with C or better
GLG	325	Oceanography	Introduces marine geology, chemistry, and physical and biological oceanography. Methods of oceanic exploration, environmental and social aspects of oceans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s) with C or better: BIO 100 (or BIO 182 or 282 or GLG 101 or SES 121); CHM 101 (or CHM 113 or 114). Credit is allowed for only BIO 325 or CHM 385 or GLG 325
GLG	327	Earth's Critical Zone	The Earth's near surface environment (the "critical zone") supports most life and is the dynamic interface between the solid Earth and its fluid envelopes where much of the geologic record is produced. We now know that we face rapid climate change and the consequences of changes in land use, water resources, and ecosystems. Critical to planning a response to, or mitigation of, environmental change is understanding how the Earth surface works. Focuses on how changes to the environment manifest themselves in the critical zone—in the form and function of the Earth's surface (landforms, water resources, soils, ecosystems). Offers a quantitative introduction to the form and function of the processes impacting the Earth's critical zone to build an understanding of the interactions of physical, chemical and biotic processes in shaping the surface and determining fluid, solute and sediment fluxes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisites with C or better: GLG 101 & 103 or SES 121 & 123; MAT 170 or 171 or 210 or 251 or 265 or 270; PHY 101 or 111 or 121 or 150 or CHM 101 or 107 or 113 or 114 or BIO 100 or 181 or 182 or 281 or 282. Credit is allowed for only GLG 327 or SOS 374
GLG	362	Geomorphology	Land forms and processes that create and modify them. Lab and field study of physiographic features.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: GLG 101 or SES 121 with C or better; MAT 266 or 271 with C or better
GLG	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	400	Earth and Space Exploration Colloquium	Presentation of recent research by faculty and guests. Written assignments required. 1 semester hour required for Geological Sciences majors; may be repeated for a total of 2 semester hours.	N	LEC	Y	YGB	Liberal Arts and Sciences	School of Earth and Space Exploration	1		
GLG	404	Fundamentals of Planetary Geology	Surveys planetary topics, including impacts, tectonics, and volcanism on planetary objects, and use of spacecraft data, including geological mapping.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): GLG 101 (or GLG 102) or SES 121 (or SES 122) with C or better
GLG	406	Geology of Mars	Geological evolution of Mars through analyses of spacecraft data, theoretical modeling, and study of terrestrial analogs; emphasizes current work. Possible field trips to examine Arizona geology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		
GLG	410	Computers in Geology	Geological computer skills including data processing, visualization, presentation, numerical analysis, software and hardware applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	CS	Prerequisites: GLG 101 or SES 121 with C or better
GLG	418	Geophysics	Solid earth geophysics; geomagnetism, gravity, seismology, heat flow. Emphasizes crust and upper mantle.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: MAT 272 or 267 with C or better; PHY 131 and 132 or PHY 151 with C or better

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GLG	419	Geodynamics	Emphasizes application of continuum principles to geological problems, including lithospheric stresses, heat transfer, fluid mechanics, and rock rheology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite(s): MAT 267 or MAT 272 with C or better; PHY 131 and 132 (or PHY 151) with C or better
GLG	420	Volcanology	Distribution of past and present volcanism, types of volcanic activity, mechanism of eruption, form and structure of volcanoes, and geochemistry of volcanic activity.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite: Engineering, Math or Science major; Minimum Junior standing
GLG	422	Planetary Volcanology	Studies the effects of planetary environments and magma compositions on styles of volcanism and the nature of volcanic products on the terrestrial planets and outer planet satellites. Overview of volcanism on specific planetary objects, analysis of spacecraft image data, basic mathematical volcanic modeling, and reviews of key papers.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): AST 111 or AST 112 or GLG 101 or 102 or 110 or GPH 111 or SES 121; MAT 170 or MAT 171 or 210 or 251 or 265 or MAT 270 with C or better. Credit is allowed for only GLG 422 or GLG 494 (Planetary Volcanology)
GLG	424	Petrology	Origin of igneous and metamorphic rocks. Optical mineralogy, hand specimen identification, and thin-section analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): GLG 321 with C or better
GLG	430	Paleontology	Introduces concepts and analytical techniques in biogeology, paleobiology, paleoecology, and paleoenvironmental reconstruction from the fossil record.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: GLG 102 (or SES 122) with C or better; GLG 104 (or SES 124)
GLG	435	Sedimentology	Origin, transport, deposition, and diagenesis of sediments and sedimentary rocks. Physical analysis, hand specimen examination, and interpretation of rocks and sediments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s) with C or better: GLG 102 (or SES 122), 321
GLG	441	Ore Deposits	Origin, occurrence, structure, and mineralogy of ore deposits.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites with C or better: GLG 101 (or SES 121); GLG 310 (or 321)
GLG	451	Field Geology I	Geological mapping techniques using topographic maps and aerial photos. Intensive field-based instruction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	L	Pre-requisites: GLG 310 with C or better; Pre/Co-requisite: GLG 321
GLG	452	Field Geology II	Geological mapping techniques using topographic maps and aerial photos. Intensive field-based instruction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	L	Prerequisite(s): GLG 310 with C or better; GLG 321 with C or better; GLG 451 with C or better
GLG	455	Advanced Field Geology	Geologic mapping in igneous, sedimentary, and metamorphic terrains of the Basin and Range province of Arizona.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3-4		Pre-requisite: GLG 310 with C or better; Pre/Co-requisite: GLG 451 with C or better if completed
GLG	460	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite with C or better: AST 112 (or BIO 182 or BIO 282 or GLG 102 or SES 122), one 300-level course in AST or BIO or CHM or GLG or MIC or PHY or SES. Credit is allowed for only AST 460 or GLG 460 or MIC 475
GLG	461	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and minerals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		
GLG	464	Solving Environmental Problems	Capstone course intended primarily for seniors in the Earth and Environmental Studies degree program. Hybrid self-study design project workshop guided by faculty, in which student teams research and develop plans for a viable solution to a real environmental problem in the American Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): Earth and Environmental Sciences BA seniors; GLG 305, 325 or 327 with C or better
GLG	470	Hydrogeology	Geology of groundwater occurrence, aquifer and well hydraulics, water chemistry and quality, contaminant transport, remediation. Emphasizes quantitative methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		
GLG	471	Hydrology	Descriptive and quantitative hydrology; hydrologic cycle, models, and systems. Rain-runoff models. Hydrologic design. Concepts, properties, and basic equations of groundwater flow. Emphasizes quantitative methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): CEE 341 or MEE 340 or GLG 362 with C or better; Credit is allowed for only CEE 440 or CEE 545 or CEE 598 (Hydrology) or GLG 471 or GLG 490 (Hydrology)
GLG	481	Geochemistry	Origin and distribution of the chemical elements. Geochemical cycles operating in the Earth's atmosphere, hydrosphere, and lithosphere.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisite: CHM 341, CHM 346 or GLG 321 with C or better. Credit is allowed for only CHM or GLG 481
GLG	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		

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GLG	485	Meteorites and Cosmochemistry	Chemistry of meteorites and their relationship to the origin of the Earth, solar system, and universe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: CHM 341, CHM 346, or GLG 321 with C or better; Credit is allowed for only GLG 485 or CHM 485
GLG	489	Field Geochemistry	Explores basic field measurements and sampling techniques for environmental systems, with a focus on carbon cycling in the Colorado River. Surveys a variety of geochemical principles, including: equilibrium aqueous speciation, acid-base chemistry, solution-mineral equilibrium systems, oxidation-reduction reactions, organic and environmental geochemistry and biogeochemical cycles. Applies chemical principles and analytical techniques to answer questions about environmental systems and processes.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3	L	Prerequisite(s): CHM 302 or GLG 321 or GLG 481 with C or better; Credit is allowed for only CHM 489 or GLG 489 or GLG 490 (Field Geochemistry)
GLG	490	Topics in Geology	Special topics in a range of fields in geology.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
GLG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Prerequisite(s): Barrett Honors student
GLG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
GLG	495	Undergraduate Thesis	Guided research culminating in the completion and presentation of an undergraduate thesis based on supervised research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		
GLG	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
GLG	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-7		
GLG	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
GLG	500	Earth & Space Exploration Colloquium	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	581	Isotope Geochemistry	Geochemistry and cosmochemistry of stable and radioactive isotopes; geochronology; isotope equilibria.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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GLG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GLG	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GPE	10	English Verbal Skills for International Scholars	Helps international graduate students (prospective ITAs) as well as other graduate students or visiting scholars at ASU improve their spoken English (pronunciation and fluency). Helps familiarize students with American classroom culture and helps them become effective classroom teachers. Each student receives an individual pronunciation assessment to help him or her focus on areas needing improvement. There is direct instruction and practice of pronunciation (e.g., sound, stress, rhythm, intonation). By participating in and leading class discussions, by working in small groups or pairs and by preparing for videotaped presentations, students improve English fluency.	N	LEC	Y	YGB	Office of the Provost	Global Launch	3		
GPE	11	International Scholar Teacher Training	Familiarizes international graduate students (prospective ITAs) at ASU with American classroom culture and helps them become effective classroom teachers. Exposes various methods of teaching commonly used in the American university classroom.	N	LEL	N	YGB	Office of the Provost	Global Launch	3		
GPE	90	Business Presentation Skills	Develops ability to verbally persuade, inform and motivate an audience. Covers integral key competencies such as: identifying audience, researching and organizing information, preparing and delivering effective visuals, and communicating concisely in English. Coupled with activities which include impromptu business-themed presentations, evaluations by the professor and feedback from peers.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		
GPE	91	Academic and Business Writing Skills	Develops the skills needed to write clearly and effectively, in both academic and business settings, through the exploration of efficient techniques and writing processes for targeting specific audiences with impactful content.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		
GPE	92	Critical Thinking Through Case Studies and Reading Strategies	Teaches international students reading and critical thinking strategies required for a master's-level program. Teaches how to read and understand dense textbooks, articles and magazines in a timely fashion and identify the important information.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		

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GPE	93	American Business and Cross-Cultural Communication	Improves international students' ability to compare and contrast aspects of American business culture with other cultures in order to understand similarities and differences.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		
GPE	94	Business Listening and Conversation	Improves the student's ability to effectively communicate orally at a master's level. Covers speaking and listening strategies and skills necessary to participate in discussions related to business topics. Students learn to control the input they receive and produce coherent and appropriate responses.	N	LEC	N	YGB	Office of the Provost	Global Launch	6		
GPH	111	Introduction to Physical Geography	Spatial and functional relationships among climates, landforms, soils, water, and plants.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	SQ	Credit is allowed for only GPH 111 or 411
GPH	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GPH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	210	Society and Environment	Examines the interaction among social processes, key environmental issues, and nature's role as a resource at global and regional scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	G	
GPH	211	Landform Processes	Laboratory science class on earth-surface processes, with exercises emphasizing how erosion, transportation, and deposition modifies landforms.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4	SQ	
GPH	212	Introduction to Meteorology	Fundamentals of weather and climate, including basic atmospheric processes and elements. Students whose curricula require a lab course must also register for GPH 214. Both GPH 212 and 214 must be taken to secure SQ General Studies credit	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SQ	
GPH	213	Climate and Weather	Fundamentals of meteorological/climatological analysis, including terminology and symbology. Recommended for meteorology/climatology program students. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	SG	
GPH	214	Introduction to Meteorology Laboratory	Introduces basic meteorological/climatological data and measurements. Suggested concurrent enrollment in GPH 212. Both GPH 212 and 214 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1	SQ	
GPH	215	Climate and Weather Laboratory	Fundamentals of meteorological/climatological map analysis and interpretation. Recommended for meteorology/climatology program students. May be taken concurrently with GPH 213. Both GPH 213 and GPH 215 must be taken to secure SG General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1	SG	
GPH	267	Extreme Weather	Introductory survey of extreme weather and climate processes and the often disastrous consequences at the intersection of human operations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
GPH	275	Geography of Cyberspace	Focuses on the relationship between geography and human's use of (and creation of) Internet and communications technologies to interact with each other over space and time. Studies the cyberspaces that they produce and their impacts on the information society. Topics include cyberpunk and space in popular culture; computer spaces, virtual worlds, and gaming; mapping cyberspace; bots, crawlers, and viruses; cyberspace law; cyberspace as social media; historical cyberspaces; the Digital Divide; geographies of e-commerce; mobile cyberspaces; cyberspace; and code/space.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GPH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	314	Global Change	Response of Earth's natural systems (atmosphere, hydrosphere, lithosphere, biosphere) to past environmental change, and effects of potential future changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	HU & G	Pre-requisite: Minimum 45 hours
GPH	381	Geography of Natural Resources	Nature and distribution of natural resources and the problems and principles associated with their use.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	G	
GPH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	405	Energy and Environment	Sources, regulatory and technical controls, distribution, and consequences of the supply and human use of energy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Minimum 75 hours; Credit is allowed for only GPH 405 or 505
GPH	409	Synoptic Meteorology I	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisites: MAT 270 with C or better; Pre/Co-requisite: PHY 121
GPH	410	Synoptic Meteorology II	Diagnostic techniques and synoptic forecasting. Includes techniques of weather analysis, map interpretation, and satellite and radar analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisite: GPH 409 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GPH	412	Physical Meteorology	Physical processes in the earth-atmosphere system on regional and global scales; concepts and analysis of energy, momentum, and mass balances.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GPH 111, MAT 270, PHY 121 and PHY 122 with C or better. Credit is allowed for only GPH 412 or GPH 591 (Physical Meteorology)
GPH	413	Meteorological Instruments and Measurement	Design and operation of ground-base and aerological weather measurement systems. Collection, reduction, storage, retrieval, and analysis of data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GPH 213 with C or better
GPH	414	Climate Change	Surveys three climate research areas: paleoclimatology, theories (e.g., greenhouse warming), numerical modeling.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	G	Prerequisite(s): GPH 111 or 213 or 314 with C or better
GPH	418	Landforms of the Western United States	Studies landforms and geomorphic processes in the western United States, including lecture, topographical maps, aerial photographs, satellite imagery, and field trips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	
GPH	422	Plant Geography	Plant communities of the world and their interpretation, emphasizing North American plant associations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): BIO 181 or GPH 111 or PLE 200 with C or better; Credit is allowed for only BIO 430 or GPH 422 or PLE 422
GPH	433	Alpine and Arctic Environments	Regional study of advantages and limitations of the natural environment upon present and future problems involving resource distribution, human activities, and regional and interregional adjustments.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	G	Credit is allowed for only GPH 433 or 598 (Alpine & Arctic Environments)
GPH	474	Dynamic Meteorology I	Large-scale atmospheric motion, kinematics, Newton's laws, wind equation, baroclinics, vorticity, and the midlatitude depression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: MAT 271, PHY 131, PHY 132 with C or better
GPH	475	Dynamic Meteorology II	Topics in climate dynamics. General circulation, numerical modeling, teleconnection phenomena, and surface-atmosphere interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite: GPH 474 with C or better
GPH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
GPH	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12	G	Pre-requisite: Junior standing; Credit is allowed for only GCU 485 or GPH 485 or LAP 485 or POR 485 or PUP 485 or 585
GPH	491	Geographic Field Methods	Field techniques, including use of aerial photos, large-scale maps, and fractional code system of mapping; urban and rural field analysis to be done off campus.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
GPH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
GPH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Prerequisite(s): Barrett Honors student
GPH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
GPH	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
GPH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
GPH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
GPH	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	511	Fluvial Processes	Geographical aspects of processes of river erosion, transportation, sedimentation; emphasizing spatial characteristics of forces, resistance, landforms, sediment; includes computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	535	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP or GPH 535

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GPH	569	Digital Analysis of Remotely Sensed Data	Focuses on the digital image processing of remotely sensed data for earth resource analysis and applications. Provides the skills and knowledge to apply digital remote sensing techniques for biophysical and environmental planning and problems. Through laboratory work, students have opportunities to practice concepts and techniques learned in the lecture part. Requires a reasonable background in college algebra and basic statistics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only GPH 394 (Digital Analysis of Remotely Sensed Data), 569 or 598 (Digital Analysis of Remotely Sensed Data)
GPH	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	585	International Field Studies	Organized field study in specified international locations.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only GCU 485 or 586 or GPH 485 or 585 or LAP 485 or 585 or POR 485 or PUP 485 or 585
GPH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	596	Advanced Spatial Statistics	Multivariate and advanced statistical techniques including Box-Jenkins modeling and spectral analysis. Requires project papers and presentations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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GPH	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GPH	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	101	Designing Life	Helps students develop strategies to successfully navigate their education experience. Focuses on critical and reflective thinking.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
GRA	111	Graphic Design History I	Surveys development of visual communication from its origins to the 20th century. Investigates significant technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	
GRA	112	Graphic Design History II	Surveys contemporary and 20th-century graphic design. Investigates relationships among graphic design and related disciplines, technological, industrial, and social influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: GRA 111 with C or better
GRA	121	Principles for Graphic Design I	Graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Environmental Design or Graphic Design major. Corequisite(s): GRA 111
GRA	122	Principles for Graphic Design II	Continued exploration of graphic design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): GRA 121 with C or better; Environmental Design or Graphic Design major. Corequisite(s): GRA 112
GRA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
GRA	220	Design Drawing I	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for graphic design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 122 with C or better; Passed Milestone; Co-requisites: GRA 221; GRA 222
GRA	221	Letterform	Drawing of letterforms with focus on proportion and structure. Introduces letterform nomenclature and classifications. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 222

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GRA	222	Visual Communication I	Theoretical and applied studies in shape, drawing, and color. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA122 with C or better; Passed Milestone; Co-requisite: GRA 220; GRA 221
GRA	223	Typography	Theoretical exercises in spatial and textural qualities of type. Problems in tension, activation, and balance. Exercises in simple typographical applications. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 220 and GRA 221 with C or better; Co-requisite: GRA 224
GRA	224	Visual Communication II	Transition from theoretical to applied problems. Emphasizes refinement of visual skills. 6 hours a week.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 220 and GRA 222 with C or better; Co-requisite: GRA 223
GRA	225	Communication/Interaction Design Theory	Theory related to the design of communication artifacts and interaction within various media environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
GRA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
GRA	321	Technology for Design I	Explores the process of technology in design. Projects interface with GRA 361.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Graphic Design student; Co-requisite: GRA 361
GRA	322	Technology for Design II	Emphasizes advanced technology in design problems. Projects interface with GRA 362.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: GRA 321 with C or better; Co-requisite: GRA 362
GRA	345	Design Rhetoric	Develops critical thinking and expression of ideas in concise and persuasive written and spoken form.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	L	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; Architecture, Digital Culture (Design), Design Studies, Environmental Design, Graphic Design, Industrial Design, Interior Design, Landscape Architecture major
GRA	361	Visual Communication III	Explores methodologies of strategic communication, development of visual systems, and information design ideation processes leading to applied projects in print and digital media.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Graphic Design student; GRA 223 & 224 with C or better; Co-requisite: GRA 321
GRA	362	Visual Communication IV	Comprehensive studio projects with emphasis on production processes leading to multidisciplinary applied projects in print, 3-D space, and digital media.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Graphic Design student; GRA 361 with C or better; Co-requisite: GRA 322
GRA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
GRA	401	Creative Environment	Explores and investigates theories of the psychology of space, psychology of people in space, and the psychology of objects as it pertains to creativity and the creative environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
GRA	421	Exhibit Design	Familiarization with the processes associated with the design of exhibits, especially visual communication in 3-D.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 422; GRA 461
GRA	422	Motion Graphics and Interaction Design	Discusses and explores theory related to the design of motion graphics and interaction through lectures and studio projects.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Graphic Design student; GRA 322 with C or better; Co-requisites: GRA 421; GRA 461
GRA	423	Advanced Interaction Design	Advanced discussion and exploration of theory related to the design of interaction.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: GRA 422
GRA	424	Advanced Media	Advanced exploration of digital media for communication.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: GRA 422 with C or better
GRA	440	Finding Purpose	Career orientation in the creative professions, including value clarification, decision making, lifestyle planning, goal setting, and expression of individual talents.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
GRA	461	Visual Communication V	Comprehensive studio projects with emphasis on design processes, including research, writing, critical thinking, practice, presentation, and analysis.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisites: GRA 421; GRA 422
GRA	462	Visual Communication VI	Comprehensive studio projects pursued in cooperation with a public organization or private enterprise. All projects culminate in an exhibit.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Graphic Design student; GRA 461 with C or better; Co-requisites: GRA 423; GRA 424

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GRA	464	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 464 or MGT 464 or SOS 474
GRA	465	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 465 or IND 465 or MGT 465 or SOS 475
GRA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Graphic Design student; GRA 362 with C or better; Co-requisite: GRA 461
GRA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
GRA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
GRA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
GRA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
GRA	501	Creative Environment and Collaborative Leadership	Explores and investigates creativity and group collaboration leadership as it applies to the creative process.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): graduate Herberger Institute for Design and the Arts major
GRA	521	Advanced Visual Communication Design Studio I	Students translate data, stories and references that they collect in their research into masterful visual narratives. This studio is an inquisitive environment for exploring ways to frame information and weave stories with graphic design. Students acquire new knowledge as individuals and as a group. Emphasizes studio-based research, conceptual development and articulation of process, voice and a high level of design execution.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): Master of Visual Communication Design major. Credit is allowed for only GRA 521 or GRA 590 (Advanced Visual Communication Design Studio I)
GRA	522	Advanced Visual Communication Design Studio II	Encourages students to develop a framework for understanding the role of design systems, tools and objects as cultural artifacts and their reflection on social diversity. In particular, students focus on the cultural experience of collaborative consumption as it is fostered through visual communication design.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): GRA 521. Credit is allowed for only GRA 522 or GRA 590 (Advanced Visual Communication Design Studio II)
GRA	526	Visiting Designers	Series of workshops (three per semester) in which students work closely with professionals and scholars in design and related disciplines.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student
GRA	561	Methods in Visual Communication I	Introduces methodology in visual communication.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Master of Science in Design or PhD in Environmental Design & Planning student
GRA	562	Methods in Visual Communication II	Advanced theories and methodologies in visual communication. Emphasizes visual search as the synthesis of theory and practice.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: DSC 561 with C or better
GRA	563	Thesis Document Design	Emphasizes the construction of the final thesis document as a visual communication object and/or medium.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Master of Science in Design student
GRA	581	Internship in Teaching Design	Develop assignments, conduct critiques, structure dialogue, make presentations, and assist in the instruction of studio and lecture courses.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Master of Science in Design student
GRA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
GRA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	621	Advanced Visual Communication Design Studio III	Structured around the Design School traveling-studio model, this studio challenges students to work together to identify new design opportunities. For approximately one week during the semester, students travel to an off-campus location to examine a local condition there for which new design solutions are needed. Students return to ASU and continue working on the project for the semester.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): GRA 522
GRA	622	Advanced Visual Communication Design Studio IV	As a culmination of study at the master level, the student is responsible for the development of an individually determined, semester-long project in response to defined objectives, periodic commentary by committee, and formal review. Students meet regularly with a faculty member to discuss assignments. Final faculty review and project book containing a written as well as graphic theoretical component are the forms of final presentation for this contribution to the field of visual communication design.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): GRA 621
GRA	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
GRA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
GRD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Graduate College	Graduate College	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Graduate College	Graduate College	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GRD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	N	LEC	Y	Z1	Graduate College	Graduate College	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
GRD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	GNA	Graduate College	Graduate College	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GRK	101	Elementary Ancient Greek	Ancient Greek grammar and vocabulary with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
GRK	140	Greek and Latin Roots in Bioscientific Terminology	Introduces students to the ancient Greek and Latin root words most commonly used in biological, medical, and other scientific terminology, and gives practice identifying them in context. The knowledge of these root words enables students to memorize with greater ease and increased retention the bioscientific terminology they encounter in other coursework as well as in their medical or scientific profession.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
GRK	142	Ancient Greek Civilization	Ancient Greek civilization and culture. Studies (in roughly equal parts) the art, archaeology, literature, culture and history of ancient Greece from prehistoric times until after the conquests of Alexander the Great (the Hellenistic Age).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H	Credit is allowed for only GRK 142, GRK 194 (Ancient Greek Civilization) or SLC 142
GRK	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
GRK	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	201	Intermediate Ancient Greek	Continuation of GRK 101. Ancient Greek syntax and grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		Pre-requisites: GRK 101 with C or better

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GRK	221	Survey of Ancient Greek Literature	Introductory survey of ancient Greek literature. Familiarizes students with the important literary genres, texts, and authors of the ancient Greeks from Homer to the Hellenistic period. All readings in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only GRK 221, SLC 221 or 294 (Ancient Greek Literature in Translation)
GRK	223	Introduction to Greek and Roman Mythology	Familiarizes students with the characters and events of ancient Greek and Roman myths through their literary manifestations, and moves beyond mere narrative to consider the possible interpretations and functions of these myths, thus revealing the central concerns of ancient society and giving insights into the working of our own society and its literary and artistic traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only GRK 223, LAT 223, SLC 223, GRK 294 (Greek and Roman Mythology)
GRK	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	301	Ancient Greek Literature I	Readings in ancient Greek prose; advanced grammar. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: GRK 201 with C or better
GRK	302	Ancient Greek Literature II	Continuation of GRK 301. Readings in ancient Greek poetry.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: GRK 301 with C or better
GRK	344	Classics and Comics	Explores the connections between the classical tradition of Ancient Greek and Roman literature and the modern American superhero comic book tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GRK 344 or LAT 344 or SLC 344 or GRK/LAT/SLC 394 (Classics and Comics) or SLC 494 (Classics and Comics)
GRK	346	Ancient Greece II: Late Classical and Hellenistic Period	Traces the transformation of the Greek world between the end of the Peloponnesian War (404 B.C.) and the absorption of the last major Greek state by growing power of Rome (30 B.C.), with special attention to how Greeks in this period lived and thought and how the period's political and economic changes helped to create new forms of culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & H	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only GRK 346 or HST 346 or SLC 346
GRK	347	Ancient Greece I: Bronze Age through the Peloponnesian War	Traces Greek History from its prehistoric beginnings through the Peloponnesian War (431-404 B.C.), with a special focus on the Archaic (ca. 800-480 B.C.) and Early Classical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only GRK 347 or HST 347 or SLC 345
GRK	360	Greece and Rome at War	Familiarizes students with the major battles, leaders and tactics of Classical Greece and Rome. Supplements lectures with student participation including study of original sources, group presentations, and gaming battle simulations. This multifaceted approach gives a greater sense of the evolution of the leaders, armies and tactical systems of the Greeks and Romans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 360, HST 397, LAT 360, SLC 360 or SLC 394 (Greece and Rome at War)
GRK	362	Ancient Greek Religion	Surveys ancient Greek religion, including its gods, ritual practices and festivals. Analyzes the development of the religion over time, and how both ancient and modern figures interpreted its meaning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; Credit is allowed for only GRK 362, REL 360, SLC 362 or SLC 394 (Ancient Greek Religion)
GRK	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	444	Heroes, Ancient and Modern	Explores the heroic literature of the ancient Greeks and Romans, then traces the classical tradition and reception of the classical hero in medieval and modern texts. Incorporates history, art history and material culture from the relevant societies to supplement study of the texts involved.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 444, LAT 444, SLC 444 or SLC 494 (Heroes: Ancient and Modern)
GRK	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
GRK	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
GRK	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
GRK	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
GTD	501	Global Technology and Development	Major theories of economic, political, and social development, with particular emphasis on the impact of current technologies and globalization.	N	LEC	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	503	Technology and the International Political System	Historical development of international political system, with emphasis on role of technology.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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GTD	504	Technology and Development in Zones of Conflict	Examines the special context of technology and development in zones of conflict that face wars among other nations, civil strife and dramatic political change.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	505	Research Design in Technology and Development	Emphasizes techniques of primary data collection, effective uses of secondary sources, for qualitative and quantitative applications.	N	LEC	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	506	Quantitative Analysis in Technology and Development	Uses correlation and regression-based multivariate statistical approaches in development studies.	N	LEC	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	507	Technology and Development in The Middle East	Examines historical and current patterns of political and socioeconomic development in the Middle East, including the role of technological development and current events.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GTD 507 or GTD 598 (Political Development in the Middle East)
GTD	508	Technology and Development in Latin America	Examines historical and current patterns of political and socioeconomic development in Latin America, including the role of technological development and current events.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GTD 508 or GTD 598 (Technology and Development in Latin America)
GTD	509	Technology and Development in North Africa	Examines historical and current patterns of political and socioeconomic development in North Africa, including the role of technological development and current events.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GTD 509 or GTD 598 (Technology and Development in North Africa)
GTD	510	Technology and Development in Sub-Saharan Africa	Examines historical and current patterns of political and socioeconomic development in Sub-Saharan Africa, including the role of technological development and current events.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GTD 510 or GTD 598 (Technology and Development in Sub-Saharan Africa)
GTD	511	Development Policy and Practices	Since the Bretton Woods Agreements in 1944, enormous energy has been devoted to generating the right tools for global development policy. Yet, little attention is given to the relationship between these tools, the practice of development and actual outcomes. At best, it is understood as a "gap" between the theory of development policy and practices. There is no reflection on what the good development policy looks like or what collective learning we have thus far. Informs students on the complexity of policy making and its relationship to development practices through time. Creates an intellectual space to discuss the practices of global development; uses case studies to enhance students' creativity and skill needed in managing and negotiating critical development challenges. Approaches development policy (models, strategies and project design) primarily as a tool to legitimize power relation rather than to orient practice for desired development outcomes.	N	LEC	N	GNA	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student
GTD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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GTD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	100	Introduction to the Science of Health Care Delivery	Introduces the science of health care delivery in the United States. Presents basic concepts in health services, health care organizations, and the delivery of safe, accessible, high-quality health care. Solidifies concepts through the use of assignments, exams and discussions.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		
HCD	101	Introduction to Public Health	Introduces public health in the United States. Familiarize students with the broad discipline of public health and how it influences community and individual health status. Discusses the role of various agencies in public health, methods of measurement and evaluation, major public health issues in the United States, and factors that contribute to individual and community health. Solidifies concepts through the use of in-class discussion, group work and individual analysis.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Credit is allowed for only HCD 101 or PBH 100
HCD	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-3		
HCD	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-4		
HCD	201	Economics for Health Majors	Introduces economics and demonstrates the relevance of economic principles to the study of health care delivery systems and public health. Combines elements of a traditional introductory economics curriculum with broad coverage of the history of economics, and specific application to current issues in health care delivery and public health policy. Prepares the student for further study of health economics.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Credit is allowed for only HCD 201 or PBH 201
HCD	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-4		
HCD	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	PRA	N	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-6		Prerequisite(s): Barrett Honors student
HCD	300	Biostatistics	Biostatistics and its use in health and health services research. Familiarize students with statistical concepts and methods to analyze and interpret data and conceptually addresses statistical theory. Introduces SPSS software to analyze large data sets.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3	CS	Prerequisite(s): completion of General Studies MA requirement with C or better; minimum 45 hours. Credit is allowed for only HCD 300 or PBH 300
HCD	302	Health Care Management	Broad concepts and skills of management; application of these techniques to health care organizations. Students appreciate the variability of management styles and personalities and begin to develop their own style. Solidifies concepts through the use of case studies and asynchronous discussion boards.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): ECN 212 or HCD 201 or PBH 201
HCD	303	Global Health Care Systems	Examines health care delivery systems internationally and explores contemporary issues affecting the institutions that provide health care and the people who seek health services. Covers the historical development of international health care systems, the organization and financing of systems of care, and the policy process and priority setting. Also covers current efforts at health care reform. Provides students with the necessary professional skills to be effective participants in efforts to evaluate and improve the delivery of health care nationally and internationally.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3	G	Prerequisite(s): minimum 30 hours
HCD	304	Health Care Finance	Influence and effect of health care financing from an institutional and individual perspective. Examines current issues in health care financing including the Affordable Care Act, payment models, Medicaid expansion, accountable care organizations, the role of health insurance and efforts to contain health care costs.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 302
HCD	305	Public and Community Health	Provides a broad survey of national, state and local community health sciences and services including cultural and ethnic issues. Examines the concepts of health and wellness and introduces health education as a foundation for population-based health care.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): Medical Studies major or HCD 101 or PBH 100
HCD	330	Health Care Systems in the U.S.	Presents and integrates the organization, financing, and delivery of health services in the United States from the professional, organizational, community, and systems perspectives.	N	LEC	N	OPT	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): minimum 30 hours
HCD	332	Health Care Legislation	Provides an overview of the federal/state health policy legislative process, how it is implemented in institutions, and its effect on health science professionals and delivery of services.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only HCD 332 or HSC 494 (Health Care Legislation)
HCD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-4		
HCD	400	Interpreting the Scientific Literature	Emphasizes clinical relevance and application of searching and interpreting the literature, using case studies as examples. Applies these skills through in-class activities and through written report at the conclusion of the course. These tools ultimately assist the student with critical thinking and application of concepts to clinical scenarios. Class is held in a computer lab to facilitate class engagement.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 100; HCD 300; MAT 210, 251, 265, or 270

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HCD	401	Leadership and Professionalism	Leadership, leadership theory and inter-professionalism in practice. Applies didactic content to case studies and activities designed to promote critical thinking and effective teamwork. Solidifies concepts through the use of assignments, exams and discussions.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only HCD 401 or MED 450
HCD	402	Health Economics	Emphasizes clinical relevance and application of searching and interpreting the literature, using case studies as examples. Applies these skills through in-class activities and through written report at the conclusion of the course. These tools ultimately assist the student with critical thinking and application of concepts to clinical scenarios. Class is held in a computer lab to facilitate class engagement.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): ECN 211 or ECN 212 or PBH 201; minimum 45 hours
HCD	403	Process Engineering	Core concepts in process engineering, specifically related to systems improvement and patient safety. The Institute of Medicine (IOM) advocates for integrating process engineering within health care to optimize health care outcomes. The IOM addresses multiple dimensions of health, including efficiency, effectiveness, safety, equity, patient-centeredness and access. These domains provide the framework from which faculty approach course content.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): CHS 100; HCD 300, PSY 230, STP 226, STP 231, or SOC 390; minimum 45 hours
HCD	404	Advanced Concepts in the Science of Health Care Delivery	Applies the themes of science, systems and leadership across the continuum of health and health care. Application and discussion of core competencies to facilitate critical thinking.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): CHS 100; HCD 401; HSC 330
HCD	405	Health Technology	Develops essential skills in identifying, analyzing and evaluating information technology applications in health care. Examples include electronic health records, computerized prescriber order entry, and computerized clinical decision support. Discusses the use of health technology in a variety of care settings, including outpatient and inpatient, and facilitate access to health care in resource-poor communities through the use of efficient technology.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 100 or HCD 101 or MED 100; HCD 300 and HSC 330
HCD	422	Health Disparities and Access to Health	Racial and ethnic health disparities in the United States. Explores disparities in healthcare seen at the provider and system level and their effects on health in the community. Also considers the historical context of racial and ethnic health disparities and the demographic and conceptual issues surrounding health disparities research. Reflects on the effects of behavior, socioeconomic status and group-specific disparities on community health status.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 101 (or PBH 100) or BS Medical Studies major. Credit is allowed for only HCD 422 or PBH 422
HCD	444	Science of Health Care Delivery Internship	Applies the themes of science, systems and leadership across the continuum of health and health care. Application and discussion of core competencies to facilitate critical thinking.	N	RSC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): HCD 300, PSY 230, STP 226, STP 231, or SOC 390; HCD 401; KIN 290
HCD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		Prerequisite(s): minimum 2.00 GPA; senior standing
HCD	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-6		Prerequisite(s): Barrett Honors student
HCD	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-6	L	Prerequisite(s): Barrett Honors student
HCD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-4		
HCD	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-6		Prerequisite(s): Barrett Honors student
HCD	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-7	L	
HCD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-3		
HCD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	501	Health Behavior and Statistical Tools in Health Environments	Provides an understanding of the statistical tools and principles of research design and methods in health behavior research in health environments. Encompasses an overview of quantitative, qualitative and mixed designs and focuses on the interpretation and communication of health behavior research through published reports and presentations. Incorporates research approaches and methodologies utilized in an array of content areas. Helps students gain a strong conceptual understanding and application of the statistical tools and research methods used to answer research questions of interest to health and health behavior researchers; it does not focus on mathematical treatments of underlying assumptions and formulae and related statistical problems sets or exercises.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	4		Prerequisite(s): degree- or nondegree-seeking graduate student

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HCD	502	Health Care Systems and Design	Introduces direct health care delivery structures and processes within and across health care settings, and their impact on the patient, family and community experience of the health care system and services. Examines the interaction among people, resources, delivery systems and built environments using perspectives, tools and strategies from multiple disciplines to evaluate strengths, gaps and opportunities for system improvements.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	510	Interdisciplinary Approaches to Promotion of Healthy Lifestyles	Focuses on application of interventions to promote healthy lifestyles. Includes the theoretical and empirical foundations for clinical evidence for the implementation of healthy lifestyle interventions.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	511	Health Economics, Policy, and Payment Models	Economics provides a framework to understand and predict human decision making under scarcity, uncertainty and imperfect information. Examines concepts central to health care economics and their application to important decisions made by patients, families, practitioners, administrators and policy makers. Uses an individual family's scenario through a progressive case study to evaluate how incentives and information affect the health and health care of each family member. Each meeting integrates basic economic principles, existing facts and knowledge from economic research, and individual perspectives and experience regarding how these concepts apply to health care policy.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only BMD 511 or HCD 511
HCD	520	Interdisciplinary Perspectives on Health Disparities and System Access	Presents minority health and health disparities concepts and practices from an applied and action-oriented perspective for clinicians and administrators in order to transform systems of inequality and increase access and quality of care for ethnic minorities and other vulnerable populations.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	521	Law and Health Promotion	Analyzes case studies which illustrate the impact of policy and law on health promotion strategies and health outcomes. Includes discussions of the theoretical foundations supporting legal, ethical and economic decision making related to health promotion and real-world examples of the impact of current policies.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	531	The Health Care System	Health care delivery in the United States, including its composition, function and historical organization. The broad discipline of health services systems, health care organizations, and the delivery of safe, accessible, high-quality health care. Discusses the health care system from the perspective of various patient populations, including the aging patient population. Examines the influence of health care reform on health care delivery and costs. Solidifies concepts through the use of in-class case studies and discussions.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	532	Health Care Management	Explores all aspects of managing health care organizations to provide high-value care (better outcomes at lower costs), including human resources, credentialing, finance, supply management, project management. In addition, students appreciate the variability of management styles and personalities and begin to develop their own styles. Solidifies concepts through the use of case studies from health care and other industries.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	540	Seminar in Science of Health Care Delivery	Provides an introduction to the science of health care delivery, an exciting field that focuses on how to achieve the quality care that providers want to deliver and patients expect to receive. Too often quality care is compromised by inadequately designed systems of care. Provides an overview of the health care delivery system and then introduces the major components of the field.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	550	Capstone	Discusses the results from student capstone projects, done in teams, and these projects related to broad topics explored during the prior coursework in the program. Capstone projects are identified early in the master's program in conjunction with and overseen by the degree leaders and the industry partners, and often a health care organization or health agency. These projects are worked on through the year with final written and verbal reports due in the last half of the semester.	N	RSC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	2		Prerequisite(s): HCD 502 with C or better; HCD 540 with C or better
HCD	560	Systems Metabolic Physiology	Studies vertebrate energy metabolism in the context of systems physiology. With a particular focus on mammals and especially humans, discusses macronutrient storage, mobilization and utilization at the whole organism level. Presents theory and practice of several methodologies used to measure metabolic turnover, including indirect calorimetry, mass balance, isotopic tracers and doubly labeled water. Topics include metabolic rate and fuel selection during rest, locomotion and environmental stress such as energy scarcity or oversupply.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): minimum 3.00 GPA; degree- or nondegree-seeking graduate student

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HCD	561	Cellular Energetics and Metabolism	Focuses on the thermodynamics and kinetics of energetic processes at the cellular level. Discusses the metabolism of macronutrients by cells, principally skeletal muscle, cardiac muscle, adipose and liver. Presents membrane transport, energy storage and mobilization, non-oxidative/oxidative pathways of ATP synthesis and energy dissipation processes. Develops and uses concepts of metabolic control, energetic efficiency, metabolic scope and signaling to explore classic and current biomedical literature. Particularly emphasizes mitochondrial metabolism, including the chemiosmotic theory, proton leak, superoxide (free radical) production, interactions between the glycolytic and oxidative pathways, and the central role mitochondria play in health, disease and mortality. Describes the theory and practice of several methodologies central to the study of energy metabolism.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): minimum 3.00 GPA; degree- or nondegree-seeking graduate student
HCD	562	Emerging Bioethical Issues in Translational Biomedical Research	Discusses ethics and policy issues related to translational biomedical sciences research. Emphasizes research involving human subjects. Topics include: genomics and biospecimen research, especially related to biobanks, including confidentiality issues, genetic testing, ownership of genetic information, community advisory boards and return of results questions; regulation of research and proposals including human research oversight by the Institutional Review Board (IRB); relationship between medical research and medical treatment; and communication with patients, within and between institutions and with the general public.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): minimum 3.00 GPA; degree- or nondegree-seeking graduate student
HCD	563	The Metabolic Syndrome	Provides a comprehensive understanding of the metabolic syndrome from an environmental, genetic and molecular perspective. Also discusses the treatment of this complex disease including lifestyle changes, pharmacological interventions and surgical procedures. Evidenced-based course where research guides class lectures and discussions.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	564	Translational Biomedical Sciences Seminar and Data Club	Combined seminar and data club related to translational biomedical sciences.	N	SEM	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3		Prerequisite(s): minimum 3.00 GPA; degree- or nondegree-seeking graduate student
HCD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-15		
HCD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Health Solutions	School for the Science of Health Care Delivery	1		
HCD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-4		
HCD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		

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HCD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	School for the Science of Health Care Delivery	1		
HCD	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	GRD	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School for the Science of Health Care Delivery	1-15		
HCD	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Health Solutions	School for the Science of Health Care Delivery	1-12		
HCD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	School for the Science of Health Care Delivery	1		
HCD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School for the Science of Health Care Delivery	1-15		
HCI	311	Introduction to Health Care Innovation: Foundational Concepts	Organized around the Seven Pillars of Innovation: innovation process, leadership structure, outcomes, evidence-based practice, finance, policy, and technology and communication. Provides basic definitions and principles of innovation in addition to characteristics, skills and knowledge required for the innovator.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours
HCI	313	Philosophy of Science in Health Care: Understanding Paradigms of Health and Healing	Philosophy of science and its application to health and healing paradigms. Employs selected schools of thought and individual philosophers within philosophy of science to closely examine health and healing paradigms. Discusses concepts such as "life" and "death". Explores questions: What is science? What is health? Examines the way in which philosophy of science informs perceptions and definitions of health and healing in individuals and populations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): any PHI course with C or better; minimum 45 hours
HCI	412	Transforming Health Care: A Systems Perspective for Innovation	Basic elements of systems thinking as a framework for innovation in addressing current and future issues in health care. Focuses on what occurs at the intersection of disciplines as being fundamental to transforming health care. Stresses the importance of collaboration to the systems perspective, in addition to the value of individual worldviews.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 311 with C or better
HCI	421	Health Care Policy: The Innovator's View	Innovation perspective on policy decision making in the health care environment. This perspective views policy-making as a fluctuating, dynamic and evolving process as seen through a lens of innovation principles. Explores the relationship between politics and policy and discusses factors influencing policy development. Identifies methods to formulate and implement policy and presents models to evaluate, analyze and modify health care policy.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 311 with C or better

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HCI	425	Facilitating Innovation to Achieve Outcomes	Principles of facilitation that promote and enable the implementation of innovation to achieve outcomes. This approach identifies facilitation as requiring input seeking, ongoing evaluation, and emergent correction of an existing plan of action. Discusses characteristics of effective teams, innovation leadership behaviors that impact change, and involvement of end-users. Compares and contrasts traditional project management processes with innovative facilitation techniques.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 311 with C or better
HCI	428	Technology: A Tool to Advance Innovation in Health Care	Analyzes the role of technology in achieving the Triple Aim: improved quality, improved patient experience, and decreased cost. Discovers tools that are defined as health information technology and those that support business services. Compares and contrasts tools of technology that hold the potential to advance innovation in health care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 311 with C or better
HCI	538	Innovation and the Individual	Introduces the role of the innovator, including the essential behaviors of risk taking, managing workload, and addressing the challenges of innovation.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	540	Understanding and Applying Principles of Evidence-Based Practice	Understanding how application of evidence-based practice principles assists healthcare professionals to provide the best care. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Admission to the Masters of Healthcare Innovation
HCI	542	Systems Thinking in a Complex Environment	Examines basic and advanced systems principles as they relate to national and international health and healing systems. Specific emphasis is given to systems thinking from a complexity science perspective and the implications for innovation.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Admission to Master of Healthcare Innovation degree
HCI	543	Approaches to Health Care Innovation	Theory-based survey course introduces approaches to lead innovation in an organization. Many change initiatives are designed by those not completing the work, leaving workers isolated, restricted and powerless. Teaches health care leaders to value collaboration with and seeking input from those who will carry out the work. Analyzes approaches to planned change: positive deviance, appreciative inquiry and creation of a learning organization. Students construct a change plan using an appropriate approach to address a health care problem.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Innovation Leadership certificate program
HCI	544	IT for Healthcare Innovation	Focuses on the information technology (IT) trends and their strategic application in healthcare. Students develop an IT strategy that addresses a specific healthcare area of concern. Students gain an understanding of the role of IT in healthcare innovation and develop skills in business process improvement, change management, strategy definition, value proposition, responding to feedback and managing resistance.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Admission to Master of Healthcare Innovation degree
HCI	545	Public Speaking for Innovation: Building Your Presence and Making the Case for Change	New ideas take a lot of explaining, and innovation often involves persuasion. Builds presence as a speaker and a leader--and gains expertise in public speaking for innovation. Public speaking for innovation is a combination of finding and building one's presence as a speaker and a leader--and translating that to an ability to explain and persuade, making the case for change. Students build their presence and gain the foundational knowledge necessary to successfully explain and persuade in innovation contexts.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	546	Communication, Technology, and Innovation	Overview of traditional, contemporary and innovative communication strategies in the 21st century.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Master of Healthcare Innovation major
HCI	548	Advanced Principles and Concepts of Innovation	Explores and analyzes the innovation in complex systems, focusing on developing specific skills for successful innovations.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	550	Healthcare Policy and Innovation	Introduces the political, organizational, and economic dimensions of healthcare policy, emphasizing strategies for innovative policy and practice.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	552	Financing for Innovation	Provides an overview of healthcare economics; develops budgeting, planning, and management skills; and culminates in financial analysis skills necessary to facilitate management decision making or writing business plans or grant proposals.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	554	Outcomes Evaluation	Outcomes measurement, management, and evaluation for healthcare practitioners and/or leaders. May be repeated once for credit.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Admission to Master of Healthcare Innovation degree
HCI	561	Innovation Methods	Capstone project to learn the active skills of healthcare innovation using an adapted IDEO model.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre-requisites: Admission to Master of Healthcare Innovation degree
HCI	562	Capstone Innovation Project II	Introduces the process of conceptualizing an innovation and building a plan or proposal to move forward with the innovation in either an entrepreneurial or intrapreneurial context.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	563	Capstone: Final Innovation Project	Applies the concepts learned in MHI core courses and presents evidence of knowledge in innovation principles, applications and strategies for implementation and evaluation. Develops an innovation project in the form of a mindmap. Provides a comprehensive methodology for completing all aspects of an innovation opportunity. Student-directed demonstrations of the application of learned leadership skills and techniques for facilitating team and individual implementation.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	5		Prerequisite(s): degree- or nondegree-seeking graduate student

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HCI	570	Innovation Proposal: Culminating Experience for Health Care Innovation Certificate	Applies concepts learned and operationalizes skills acquired throughout the Health Care Innovation certificate. Students envision emerging paths toward an outcome by first presenting a problem they have identified within a health care organization, and creating collaborative relationships and developing strategies to initiate change in their chosen setting.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): HCI 538; HCI 542; HCI 554; HCI 561
HCI	571	Health Care Innovation Leadership Portfolio: Culminating Experience	Examines and applies personal leadership potential. Focuses on the effective development and facilitation of human networks to advance innovation in the health care space. Challenges students to appraise and analyze personal leadership strengths, challenges and opportunities. Explores strategies to evaluate students' current networks; develops the students' emergent professional networks. Gives focus to building relationships necessary to advance innovation in the health care space. Students develop and implement an action plan to advance their personal leadership growth and network utilization.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCI 538; HCI 543; HCI 545; NLM 562
HCI	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HCI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		
HCR	210	Clinical Health Care Ethics	Healthcare ethics emphasizing analysis and ethical decision making at clinical and health policy levels for healthcare professionals.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	HU	Pre-requisite: ENG 102, 105 or 108
HCR	220	Introduction to Nursing and Health Care Systems	Introduces the social, political, and economic contexts in which the nursing profession and health care systems in the United States evolved.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	H	
HCR	230	Culture and Health	Cultures of diverse groups and health/illness. Cross-cultural communication, awareness of own cultural influences, indigenous and alternative healing practices.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	C & G	
HCR	240	Human Pathophysiology	Chemical, biologic, biochemical, and psychological processes used in study of structural and functional alterations in health with selected therapeutics.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s) with C or better: BIO 201 and 202; CHM 101 or higher; MIC 205 and 206
HCR	260	Health Care Industry and Regulation	Overview of the complex system of regulations that frame the oversight and monitoring of the U.S. health care industry. Provides a foundational understanding of federal and state regulations as well as private health care regulatory agencies' requirements as they relate to physicians and other health care professionals, hospitals and other health care institutions, and insurance companies.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
HCR	261	Health Care Compliance	Introduces health care compliance as an industry and a profession. Explores federally legislated mandates for formal compliance programs, program elements and organizational steps for program implementation in specific health care settings.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
HCR	262	Health Care Licensure, Professional Development and Practice	Introduces interprofessional practice, professional licensure, education and training, certification and scope of practice within the health care industry. Explores compliance standards and accreditation as they relate to the authority and scope of licensure boards, which are designed to safeguard the public health.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
HCR	263	Introduction to Medical Billing and Compliance	Introduces the complex process of medical coding and billing practices and related federal regulations and programs. Provides learners with a fundamental understanding of medical coding and billing processes including terminology, stakeholders and regulatory impact.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 260
HCR	264	Regulatory Essentials of Compliance Program Design I	Offers a comprehensive overview of the regulations that impact the health care delivery industry. These regulations include: protections against fraud and abuse, patient rights and privacy, protected health information (PHI) and electronic protected health information (ePHI), and occupational health and safety.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 261
HCR	265	Regulatory Essentials of Compliance Program Design II	Comprehensive study of the creation, management and evaluation of all aspects of a formal health care compliance program. Learners investigate and discuss roles of the compliance officer and compliance committee, risk analysis, recommendations for and implementation of corrective action.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 264
HCR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		
HCR	301	Research Methods for the Health Care Professional	Explores basic concepts of qualitative and quantitative research design utilizing methods of assessment, planning, implementation and evaluation.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): STP 226 or PSY 230 or SOC 390 or SWU 321 with C or better; TWC 347 or 362 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HCR	302	Social Determinants of Health	Addresses issues of social determinants and health disparities at the local, national and global levels.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): TWC 347 or 362; Corequisite(s): HCR 301
HCR	303	Assessing Needs, Assets and Capacity for Health Education	Assesses needs, assets and capacity for health education at the individual, family and community levels.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): CDE 232 with C or better; HCR 210 and 230 with C or better
HCR	320	Foundational Concepts for Health Care Coordination	Focuses on the foundational elements of health care coordination. Discusses the health care coordination process including assessment, implementation and evaluation.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 220 with C or better
HCR	321	Advanced Concepts for Health Care Coordination	Presents advanced concepts for health care coordination, including: interprofessional teamwork, medication reconciliation, patient/family engagement and other tools that facilitate best practices for health care coordination. Students also learn models for health care coordination, and concepts and practices to facilitate transitions of care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 320 with C or better
HCR	330	Fundamentals of Community Health	Provides a framework for understanding community health concepts.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): minimum 45 hours
HCR	331	Communication within Communities	Focuses on the integral nature of communication in health care, including the role communication plays in shaping individual, social and cultural beliefs and expectations about health. Provides skills for effective communication when working with individuals, groups and the media.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): minimum 45 hours
HCR	335	Program Development and Management for Community Health	Incorporates models, research and resource management to plan, strategize and evaluate community programs that promote healthy lifestyle choices in various, as well as specific, geographic communities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): General Studies Literacy course; minimum 45 hours
HCR	336	Environmental Community Health	Examines the interdependent relationship between the health of the environment and the health of communities. Includes a focus on specific communities, as well as agencies and laws involved in the health of communities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 330 with C or better
HCR	340	Foundations of Integrative Health	Discusses the similarities and differences of the biomedical and integrative health care systems providing an overview of integrative health.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): ENG 102, 105, 108 or FYC MET
HCR	341	Biological, Manipulative, and Body-Based Therapies	Analyzes the principles and practices of select biological and body-based therapies and modalities and their use in the health care system.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): any BIO course or any CHM course
HCR	342	Mind-Body and Energy Therapies and Modalities	Analyzes the principles and practices of select mind-body and energy therapies and modalities and explains and distinguishes their use in the health care system.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): any BIO course or any CHM course
HCR	343	Historical and Cultural Foundations of Integrative Health Care	Distinguishes commonalities and differences between early healing traditions and investigates the utility for today's health care system.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 340 with C or better
HCR	350	Introduction to Clinical Research	Provides an introduction to the biomedical and clinical research field and associated operational processes. Examines clinical trial development phases, regulatory protections for human subjects, clinical research team specializations, research organizations, good clinical practice, institutional review board functions, and research funding mechanisms. Explores specialized career positions for nursing and allied health professionals.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Minimum 45 hours; Credit is allowed for only HCR 350 or 394 (Introduction to Clinical Research Management)
HCR	360	Data Security and Privacy in Health Care Compliance	Focuses on administrative practices that ensure the security of computerized systems and the protection of health information. Topics include communication and reporting, as well as specific regulations and authorities such as the Health Insurance Portability and Accountability Act (HIPAA) Privacy and Breach rules, and HIPAA Security and Meaningful Use Attestation.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 260; HCR 261
HCR	361	Risk Management in Health Care Compliance	Risk management practices as they relate to the oversight of operations and processes within the health care industry. Utilizes various tools to predict, analyze and mitigate practices that may lead to industry noncompliance.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 260; HCR 261
HCR	362	Monitoring and Auditing for Health Care Compliance	Ongoing health care compliance evaluation process critical to a successful compliance program. Provides the knowledge to utilize monitoring and auditing systems to ensure health care operations conform to established standards or comply with federal, state or local rules and regulations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 260; HCR 261
HCR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		
HCR	400	Evidence-Based Practice for the Health Care Professional	Methods of clinical and scientific inquiry. Focuses on the application of an evidence-based practice approach.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 301; TWC 347 or 362, OR Applied Science (Health Innovation) BAS major
HCR	402	Advocacy for Health and Health Education	Discusses and analyzes existing or proposed policies on health and strategies for influencing the policy-making process.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 303 with C or better

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HCR	406	Health Literacy for Health Care Professionals	Prepares students to use best practices for health communication that promote consumer health literacy.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 210 or HSC 320; HCR 230 or HSC 210 OR Applied Science (Health Innovation) BAS major; Pre- or corequisite(s): HCR 301 with C or better if completed or Applied Science (Health Innovation) BAS major
HCR	420	Professional Role Development: Health Care Coordination	Professional role development including role transition, leadership and project management for health care coordination.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 320 with C or better; HCR 321 with C or better
HCR	422	Policy and Financial Principles in Health Care Coordination	In-depth look at the history of health care policy in the United States from World War II to the present focusing on how Medicare, Medicaid and the Affordable Care Act impact health care system and patient reimbursement. Also discusses elements of insurance, managed care and universal care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 320 with C or better
HCR	426	Health Care Coordination Capstone	Applies higher-level critical thinking, teamwork, effective communication, informatics and design process required to develop a "real-world" health care coordination solution that will be a catalyst for change by improving safe patient-centered transitions, lowering readmission rates, increasing patient safety, and/or decreasing the cost of care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 321 with C or better; HCR 400 with C or better; HCR 422 with C or better
HCR	430	Foundation to Health Care Systems	Explores the impact of the current U.S. health care system on the health of individuals, families and communities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 330 with C or better
HCR	435	Leaders in Community Health	Prepares students to assume a leadership role in health promotion in communities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 330 with C or better; HCR 335 with C or better
HCR	439	Community Health Seminar	Provides the opportunity to explore the health status of communities and to develop strategies for community health improvement.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s) with C or better: HCR 330, 331, 335, 336. Pre- or corequisite(s): HCR 430, 435 with C or better if completed
HCR	440	Interprofessional Approaches to Integrative Health Care	Prepares learners to develop and lead interprofessional teams with a focus on roles and responsibilities of integrative health care providers and practitioners.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 340 with C or better
HCR	441	Legal and Ethical Issues Impacting Integrative Health Care	Examines current laws, government regulations, ethical principles and case studies to understand issues and consumers' use of integrative modalities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 340 with C or better
HCR	449	Integrative Health Care Capstone	Provides the opportunity to design a healing environment project that reflects the philosophy, mission and values of a health care organization in relation to underlying philosophy and beliefs of integrative health care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 340 and 341 and 342 and 343 and 400 and 440 all with C or better; Pre- or corequisite(s): HCR 441; TWC 443
HCR	460	Investigations and Disclosures in Health Care Compliance	Types of disclosures required by and investigations conducted by regulatory and accrediting agencies overseeing health care entities. Introduces oversight activities, enforcement and potential penalties incurred by health care entities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 362
HCR	461	Corrective and Preventive Action Plans	Use of corrective and preventive actions (CAPA) in meeting the challenges of a compliant health care services operation. Covers design and implementation of CAPA to respond to deviations or errors in the health care environment. Identifies problems, implements corrective actions, evaluates consequences and employs preventive measures.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 362; HCR 460
HCR	462	Specialty Topics in Health Care Compliance	Provides a comprehensive review of case studies and recent enforcement action involving litigation and enforcement of health care law, including review of landmark and contemporary cases brought by the United States Office of Inspector General, the Office of Civil Rights and state attorney generals. Applies knowledge and skills acquired from earlier coursework to real-world situations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): HCR 260; HCR 261
HCR	463	Capstone Project Health Care Compliance	Culminating course integrating all components of health care compliance core courses and demonstrating knowledge and competency in the field of health care compliance.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 460; HCR 461
HCR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
HCR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		
HCR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-7		
HCR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HCR	545	Foundations of Biospecimen Repository Administration	Examines the biospecimen repository industry from a business perspective. Students learn the scientific basis, collaborative nature, required personnel, timelines and processes that underlie the business environment of biospecimen repositories and their administration.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	546	Management of Biospecimen Repository Operations	Examines the biospecimen repository industry from an operational perspective. Students learn the process aspects of repository start-up through collection, maintenance and disbursement of specimens. Key elements include personnel training, planning, quality control, risk management, project management and safety implementation.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 545
HCR	547	Biospecimen Resource and Technology Management	Examines the biospecimen repository industry from a technology and resource perspective. Students learn the planning and selection of technology and resources for the support of the start-up and long-term maintenance of a biospecimen repository. Key elements include technology and resources assessment and choice, cost-benefit analysis, initial budget, long-term and short-term planning.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 545
HCR	548	Regulation and Ethics in Biospecimen Repository Administration	Examines the biospecimen repository industry from an ethical and regulatory perspective. Students learn the ethical and consenting challenges of biospecimen collection, storage and disbursement. Examines relevant historical case histories to inform current policies and practices.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	549	Scientific Innovation and Biospecimen Repository Administration	Explores the driving effects of scientific innovation on biospecimen administration management. Students learn how scientific advancements increase the demand of high-quality biospecimens and high-quality data, referred to as next-generation biorepository research. Examines tracking pre-analytical variables, adequate preservation and storage methods, controlled biospecimen and data custodianship, governance with ethical and scientific oversight of operations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 545
HCR	551	Clinical Research Monitoring	Introduces clinical trial monitoring processes and procedures.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	552	Medical Device Development and Regulation	Comprehensive examination of the regulatory framework for the design, development, approval/clearance and marketing of medical devices in the United States throughout the product lifecycle.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): MS Clinical Research Management or MS Regulatory Science and Health Safety major
HCR	553	Quality Assurance and Clinical Research	Explores basic quality assurance techniques, standards and applications in the clinical research arena.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Clinical Research Management major or certificate
HCR	554	International Regulatory Affairs	Principles of international regulatory affairs and requirements for marketing regulated products globally. Key regulations that relate to medical product safety, the origins of these regulations, and marketing applications in major foreign markets. Covers similarities and differences among global regulations and those in the United States.	N	LEL	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Nursing Regulatory Science & Health Safety student
HCR	555	Pharmaceutical Safety and Risk Management	Comprehensive examination of regulatory, legal, and scientific factors in pharmacovigilance and risk management and risk mitigation.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Regulatory Science and Health Safety Master of Science student
HCR	557	Clinical Research Design and Methods	Explores basic clinical trial biostatistical methods in concert with clinical trial design and methods.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): MS Clinical Research Management, Nursing or Clinical Research Management (Grad Certificate)
HCR	558	Technical Writing for the Regulatory Professional	Focuses on teaching and applying writing and presentation skills critical for regulatory professionals	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Clinical Research Management MS or Clinical Research Management (Regulatory Science) MS or Regulatory Science and Health Safety MS student or Clinical Research Management certificate
HCR	559	Regulatory Science Internship	Internship in the field at a regulatory agency or in a regulated industry. Practicum.	N	PRA	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-3		Pre-requisite: Regulatory Science and Health Safety Master of Science student
HCR	560	Regulatory Science Capstone	Culmination course integrating all components of regulatory core courses demonstrating knowledge and competency in the field of regulatory science.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-3		Pre-requisite: Regulatory Science and Health Safety Master of Science student
HCR	561	Responsible Conduct of Clinical Research	Introduces concepts and policies for the responsible conduct of research (RCOR), institutional review boards, and dissemination of findings.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	562	Clinical Research Data Management and Technology Implementation	Orientation to database design and management, technology assessment methods, auditing procedures for continuous quality improvement (CQI), and cost-effectiveness analysis (CEA).	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	563	Fundamentals of Regulatory Affairs	Principles of clinical research management and regulatory affairs. Overview of national/international regulatory systems and agencies, and trends in conducting clinical research.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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HCR	564	Capstone Clinical Research Management Project	Culmination course integrating all components of CRM core courses demonstrating knowledge and competency in designing and managing clinical trials. Students must have documentation of unencumbered professional license in the state where the capstone project will be completed, if required.	N	REC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Clinical Research Management Master of Science or Clinical Research Management Certificate student
HCR	565	Clinical Research Operations	Development, implementation, and operations of FDA clinical research trials, including budgeting, contract negotiations, site evaluation, marketing, project management, and reporting.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	566	Capstone Clinical Research Management Project II	Culmination course integrating CRM degree coursework by demonstrating knowledge and competency in clinical research management planning, operations, and implementation processes.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	567	Research Management and Contemporary Research Topics	Management and leadership principles integrated with contemporary research topics will be introduced.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Clinical Research Management Masters student or Nursing Graduate student
HCR	568	Health Care Project Management	Designed for graduate students and managers who desire to improve their effectiveness as project managers in the health care context.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	570	Introduction to International Health Systems, Professions, and Research	Introduces systems of international healthcare delivery, professions that provide healthcare delivery, and international research principles and practices.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	571	Cultural Diversity and Healthcare Delivery	In-depth exploration of culturally diverse aspects of population health, including culture-bound syndromes, folk practices, assessment approaches, and interactions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	572	International Healthcare Delivery Capstone	Culminating course integrating all International Health requirements that produce culturally responsive implementation and evaluation plan for the student's clinical practice. A portion of the course will be held in Mexico.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): degree- or nondegree-seeking graduate student
HCR	574	Scientific and Research Review Boards	The role and responsibilities of Scientific and Research Review Boards in the conduct of human research.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): HCR 561
HCR	575	Contracting and Budgeting for Industry-Sponsored Clinical Trials	Examines best practices in contracting, negotiating and budgeting for industry-sponsored clinical trials.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Clinical Research Management MS major or certificate
HCR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	101	ASU & Herberger Institute Experience	Introduces all new first-time ASU students to the unique elements, culture, challenges and opportunities of their university and the Herberger Institute for Design and the Arts. Explains and defines success with integrity, ASU resources and involvement, the importance of arts to society and the community, personality and learning style, and success in college and beyond.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Pre-requisites: Herberger Institute for Design and the Arts BA in the Arts or BA in Design Studies major; Credit is allowed for only HDA 101 or 194 (ASU Herberger Inst Experience)
HDA	111	Art and Society	Introduces the interplay between art and society, particularly how one influences the other.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		
HDA	125	Fashion Design I	Introduces designing a collection of marketable apparel for a targeted merchandise category. Includes instruction in using inspiration to synthesize garments in a collection, editing a collection for the most marketable ideas, sourcing, fabric selection, costing, and an introduction to pattern development and garment production.	N	LEL	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		
HDA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	210	Creativity and Innovation in Design and the Arts	Designed to get students thinking in a focused manner about creative practice and process. Many young designers and artists arrive at higher education in their discipline having taught themselves or having received a piecemeal education in the directed application of ideas. Aids students in knowing why and how they are creative. Covers types of creativity, how inspiration happens, how to take a project from idea to reality, how to work creatively in teams and how to fuse creative ideas with an understanding of environment to help realize work in socially useful ways.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Credit is allowed for only HDA 210 or 294 (Creativity & Innovation for Design and the Arts)
HDA	225	Fashion Design II	Expands upon fashion design fundamentals learned earlier to encompass additional aspects of the fashion industry, which includes fashion as business, and as a sociological and cultural phenomenon.	N	LEL	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): HDA 125 with C or better
HDA	252	Foundations of Arts Entrepreneurship	Develops entrepreneurial knowledge and skills supporting the self-actualization, self-efficacy, and market acumen of artists.	N	LEL	N	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): Herberger Institute student
HDA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	310	Socially Engaged Practice	Students gain a wide literacy in the community arts field through reading, discussion and technical practice. Examines theories and techniques of community-based project development. Pairs artists with communities to create art rooted in the needs, values, desires, triumphs and challenges of that community. Helps prepare the artist of the 21st century with skills to apply artistic practices in diverse contexts.	N	LEL	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisites: Minimum 42 hours; Credit is allowed for only HDA 310 or 494 (Public Practice: Engagement & Community)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HDA	311	Work and Careers in the Cultural and Creative Industries	Introduces fundamental questions in the study of work and careers in the cultural and creative industries, including an overview of historical changes in the relationship between the individual and his or her work environment; comparisons between different types of work arrangements (part-time, freelance, internships); and practical implications for contemporary workers.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): minimum 45 hours
HDA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	397	Capstone Development	Prepares students for a successful capstone project. Students develop a formal proposal and identify a mentor for the project.	N	LEL	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Prerequisite(s): The Arts BA major; minimum 56 hours
HDA	410	Seminar in Socially Engaged Practice	Discussion-based seminar revolves around readings aimed at describing and understanding the nature of society, culture and the circulation of ideas. Investigates art as a way of knowing, as a profound humanitarian gesture, as a form of disciplined research and a way of building community and confirming shared values. Explores specific strategies and approaches to socially engaged art practices through readings, visiting artist presentations and direct engagement with community-based projects. Illustrates and underscores how artists--creative practitioners of all sorts--are key to the giant collaborative projects we call culture, language and the entirety of cumulative artistic and scientific knowledge. Provides a solid bulwark for the recognition that we really are all in this together and are making it up as we go along.	N	SEM	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisites: HDA 310; Credit is allowed for only HDA 410, 494 (Seminar in Socially Engaged Practice), 510 or 598 (Seminar in Socially Engaged Practice)
HDA	420	Design and the Arts Business Administration	Design and the arts business seminar course that covers core business principles for design or arts businesses such as human resources, legal issues, accounting and finance. Asks with each of these areas how these disciplines uniquely work within design or arts settings. Investigates global business topics and discusses why ethics is integral to every design or arts business enterprise. Provides a broad understanding of design or arts business activities and practices, allowing more effective participation in business discussions in the future.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisites: Minimum 45 hours; Credit is allowed for only HDA 420 or 494 (Design & the Arts Bus Admin)
HDA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		
HDA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-6		Prerequisite(s): Barrett Honors student
HDA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-6		Prerequisite(s): Barrett Honors student
HDA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		
HDA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-7	L	
HDA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-3		
HDA	510	Seminar in Socially Engaged Practice	Discussion-based seminar revolves around readings aimed at describing and understanding the nature of society, culture and the circulation of ideas. Investigates art as a way of knowing, as a profound humanitarian gesture, as a form of disciplined research, and a way of building community and confirming shared values. Explores specific strategies and approaches to socially engaged art practices through readings, visiting artist presentations and direct engagement with community-based projects. Illustrates and underscores how artists--creative practitioners of all sorts--are key to the giant collaborative projects we call culture, language and the entirety of cumulative artistic and scientific knowledge. Provides a solid bulwark for the recognition that we really are all in this together and are making it up as we go along.	N	SEM	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HDA 410, 494 (Seminar in Socially Engaged Practice), 510 or 598 (Seminar in Socially Engaged Practice)
HDA	511	Leadership in the Creative Industries	The creative industries construct and principles of leadership as applied within and affecting it through curated interaction with leaders in the field.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1		Prerequisite(s): Creative Enterprise and Cultural Leadership MA student
HDA	512	Strategy: Problem Identification and Opportunity Recognition in the Creative Industries	Through a combination of short lectures and collaborative exercises, students learn to identify challenges and opportunities for entrepreneurial interventions in the creative industries and arts and culture sectors.	N	LEL	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	2		Prerequisite(s): Creative Enterprise and Cultural Leadership MA student
HDA	513	Creativity and Design Thinking	Activates abilities as a creative thinker and problem solver for the cultural and creative industries through short lectures and collaborative workshop activities.	N	LEL	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): Creative Enterprise and Cultural Leadership MA student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HDA	521	Arts, Culture and the Economy	Builds understanding of economic concepts as applied to the arts and culture sector, with specific attention to how art and culture enterprises work as businesses, how such enterprises function in our wider economic system, which are growing and which disappearing (and why), all toward the goal of building the student's capacity to lead arts and culture enterprise in a complex economic environment.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	522	Media Literacy and Distribution	Addresses the impact that digital distribution has had on traditional media business models and the way media and our culture are changing because of it. Also looks at the way in which industries are adapting to this change in the media landscape. Three distinct sections: content literacy, production and distribution metrics, economic and cultural implications.	N	LEC	N	GNA	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	592	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HDA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	Dean, Herberger Institute for Design and the Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HEB	101	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
HEB	102	Elementary Modern Hebrew	Reading, writing, speaking, and understanding of basic modern Hebrew, with emphasis on pronunciation and grammar.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: HEB 101 with C or better
HEB	131	Biblical Hebrew I	Offers an introduction to Biblical Hebrew, the language in which most of the books of the Hebrew Bible/Old Testament have been written. Provides the basic tools to understand and translate Biblical Hebrew texts. Covers the Hebrew alphabet, basic vocabulary, morphology and syntax. Students learn idiomatic expressions, basic literary techniques in narratives and poetry, as well as specificities of Semitic languages. Emphasizes a critical approach to the ancient text. Also introduces the evolution of the biblical text, from ancient manuscripts to contemporary editions and translations. Includes an introduction to the development of writing and to the evolution of Hebrew, from earliest inscriptions to its revival in modern Israel. The texts translated in class are situated in the history of Israel, but also in their Jewish and Christian cultural and religious contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I)
HEB	132	Biblical Hebrew II	Completes the study of basic Biblical Hebrew grammar and vocabulary (Futato's Beginning Biblical Hebrew, chapters 21-40). Prepares students to translate narrative and legal texts from Hebrew Bible. Students learn to use dictionaries, grammars, paradigms and critical editions of the biblical text.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I) with C or better; Credit is allowed for only HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II)

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HEB	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HEB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	201	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: HEB 102 with C or better
HEB	202	Intermediate Modern Hebrew	Intensive review of grammar, with emphasis on the development of the skills of speaking, listening comprehension, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Pre-requisites: HEB 201 with C or better
HEB	231	Biblical Hebrew III	Advanced study of Biblical Hebrew. Deepens understanding of the grammar and composition of the Hebrew Bible. Translates texts of different literary genres (narrative, legal, poetic, prophetic) and different periods. Introduces the basic principles of textual criticism and different approaches to interpret the texts of the Hebrew Bible.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II) with C or better; Credit is allowed for only HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III)
HEB	232	Biblical Hebrew IV	Addresses advanced topics in Biblical Hebrew grammar and interpretation. The first half of the semester is devoted to texts from the Hebrew Bible; the second half on extra-biblical texts written in ancient Hebrew (for example: Dead Sea Scrolls, Rabbinic texts, ancient Hebrew poetry). Topics and texts change annually.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III) with C or better; Credit is allowed for only HEB, JST, REL 232 or HEB 294 (Biblical Hebrew IV)
HEB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	313	Advanced Modern Hebrew	Continues developing speaking, reading, and writing skills in modern Hebrew, with a focus on different aspects of the Israeli culture studied in literature, cinema, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: HEB 202 with C or better
HEB	314	Advanced Modern Hebrew	Continues developing speaking, reading, and writing skills in Modern Hebrew, with a focus on different aspects of the Israeli culture studied in literature, cinema, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: HEB 202
HEB	316	Literary Readings of the Hebrew Bible	Literary analysis of two of the main genres of the Hebrew Bible: narrative art and poetry. Students learn the main literary conventions of biblical prose and poetry, and how these conventions are applied or subverted. Each class comprises the study of a literary aspect, close readings, and thematic discussions. Biblical texts are read only in translation. They are situated in the religious, literary and artistic traditions that have developed on their basis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only ENG 316, HEB 316, JST 316, REL 316 or HEB 394 (Literary Readings of the Bible)
HEB	347	Modern Israeli Literature in Translation	Modern Hebrew, or Israeli Hebrew, started at the end of the 19th century in Europe and today it is the language of the State of Israel. During this short period modern Hebrew developed literature with its unique local characteristic, as well as universal ideas. Reads and examines four books against their social and historical background.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HEB 347 or JST 347 or SLC 347 or ENG/HEB/JST/SLC 394 (Modern Hebrew Literature in Translation)
HEB	348	Israeli Society and Culture	Different partitions of the Israeli society, based on ethnic origin, by religious affiliation or by political association. Depicts how Israel is an absorbing immigration state. Israel is a welfare state and the course covers aspects of a welfare state, such as health, retirement, public transportation, art, higher education and more.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only HEB 348, 394 (Israeli Culture and Society), JST 348, REL 311, or SLC 348
HEB	375	Contemporary Culture of Israel	Intense study of aspects of historical, social, political, and cultural modern life in Israel. Beginning of Zionism to present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	
HEB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	411	Judaism and the Beginnings of Christianity	Studies the beginnings of Christianity in relation to Judaism: their common context, the process of their distinction and their mutual influence. Through a historical and thematic approach, explores the parallel construction of Jewish and Christian identities. Combines readings from primary sources (Hellenistic Judaism, Qumran, New Testament, Early Christianity, Rabbinic Judaism) and up-to-date scholarly literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 or 108 or HST 100 or 102 or REL 100 or SLC 142 or 202 with C or better; Credit is allowed for only HEB/JST/REL 411 or HEB 394 (Judaism and the Origins of Christianity) or HEB 494 (Judeo-Hellenistic Literature)
HEB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HEB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HEB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HEB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
HED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
HED	510	Introduction to Higher Education	Overview of American higher education, including philosophical, political, and social aspects.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	527	Seminar: Student Affairs Administration	Organizational models, administrative competencies and skills, and emerging challenges of student affairs administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	573	Applied Inquiry in Higher Education	Provides an overview of research, evaluation and assessment practices in higher education and strategies for utilizing these practices as professionals in higher education. Focuses on learning about and demystifying the process of scientific inquiry, with the intent of translating that knowledge to regular practice in a higher education professional career. It is not a highly technical methods course--no advanced knowledge of statistics or qualitative techniques is assumed--but instead gives practitioners a foundation in educational research design as well as the tools to be literate, thoughtful, critical and frequent consumers of research.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): MEd Higher and PostSecondary Education major. Credit is allowed for only HED 573 or HED 591 (Applied Inquiry)
HED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	603	Foundation of Data Analytics in Higher Education	How decisions are made in higher education and how data and analytics can support university leaders.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	604	Analytics Process and Technology in Higher Education	Process and technology used to facilitate data-informed decision making in higher education.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	2		Prerequisite(s): degree- or nondegree-seeking graduate student; HED 603

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HED	605	Data Management and Preparation for Higher Ed Analytics	Data preparation and management for data-informed decision making in higher education institutions.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; HED 603
HED	606	Advanced Analytic Methods for Higher Education	Advanced analytic methods, including data mining, in support of data-informed decision making in higher education institutions.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; HED 603
HED	607	Visualization and Presentation for Higher Education	Principles of effective presentation and visualization of data for exploratory, predictive and persuasive purposes.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; HED 603
HED	608	Trends in Advanced Analytic Methods for Higher Education	Emerging advanced analytic method in use within higher education.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; HED 603
HED	620	Diversity in Higher Education	Overview of the demographic profile of college students, faculty, and staff. Addresses issues of access, retention, and development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	634	The American Community College	Philosophy, history, curriculum, faculty, students, organization, financing, research, policy and current issues.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	644	Higher Education Finance and Budgeting	Financial planning and budgeting in higher education institutions. Issues related to financing public and private colleges and universities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	649	Law of Higher Education	Analyzes legal issues related to higher education; examines key court decisions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	679	The American College Student	Overview of American college student from demographic, background characteristics, and values/attitudes/perspectives. Includes access, persistence, and degree completion.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	688	Organizational Theory	Major views of organizations and their influence on role definition and participant behaviors in educational organization.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	689	Leadership in Higher Education	Theory and practice of leadership and administration in higher education institutions.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	701	Higher Education Doctoral Proseminar	Students read and discuss recent writings on the sociology of higher education and explore research interests as well as identities as educational researchers. Visits to several types of higher education institutions in the state of Arizona to meet various program faculty who introduce their interests as researchers and practitioners. Learn better understanding of the challenges and promise of higher education as an academic field and of themselves as researchers and practitioners. Time also spent discussing the dissertation and the writing process.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Higher and Postsecondary Education Doctoral student
HED	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HES	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
HHE	510	Design and Health	Introduces health design core concepts while focusing on evidence-based design research to demonstrate how healthcare environments impact well being.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	540	Current Issues in Health Design	Explores and systematically investigates current issues in health that are driving the current and future directions of the healthcare industry, including the design of healthcare and healing environments.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Degree- or Nondegree-seeking graduate OR Senior with minimum 108 hours
HHE	566	The Healing Experience Research Lab	Connects spatial relationships and healthcare user needs through design, clinical delivery, and architecture. Applying research outcomes to the built environment.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Master of Science in Design or Master of Healthcare Innovation student; HHE 510 and HHE 540 with B or better OR Master of Architecture, Bldg Des(Energy Perform/Bldgs) MS, Master of Landscape Architecture, or Master of Urban Design
HHE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	591	Seminar	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HHE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Herberger Institute of Design and the Arts Graduate student
HIN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
HIN	494	Special Topics		N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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HON	171	The Human Event	Landmarks in the social and intellectual development of the human race, with emphasis on critical thinking and argumentative writing. Enrollment restricted to Barrett students.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	L or HU	Prerequisite(s): Barrett Honors student; maximum 75 hours
HON	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-3		Prerequisite(s): Barrett Honors student
HON	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisites: Barrett Honors students; Maximum 60 earned hours
HON	272	The Human Event	Covers the Renaissance through the modern period.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	(L or HU) & H	Pre-requisite: HON 171 with C or better
HON	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Prerequisite(s): Barrett Honors student
HON	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Barrett, The Honors College	Barrett, The Honors College	1-6		Prerequisite(s): Barrett Honors student
HON	310	Justice and Law	Philosophical study of theories of justice in relation to law and morality. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): Barrett Honors student
HON	366	International France	Offered in France, course utilizes the "city as text" to analyze the construction of national identity.	N	PRA	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	3	HU & H & G	Prerequisite(s): Barrett Honors student
HON	370	History of Ideas	Advanced and intensive survey of key social and intellectual currents in the development of humanity as reflected in both philosophical and creative works with an emphasis on critical thinking and discussion, as well as argumentative writing.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3	L or HU	Prerequisite(s): Barrett Honors student; junior or senior standing; Credit is allowed for only HON 171 or HON 272 or HON 370 or HON 394 (History of Ideas)
HON	378	Culture and Society in England, Ireland, and Scotland	Chronologically explores texts, events, and sites for historical and cultural impact on development of England, Ireland, Scotland, and their countries' relationships with each other.	N	SEM	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	HU & H & G	Prerequisite(s): Barrett Honors student
HON	379	Romantics, Victorians, and Moderns	Examines the development and impact of various literatures, arts, and ideas in England, Ireland, and Scotland from the Romantic through the Modern period.	N	SEM	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3	HU & G	Prerequisite(s): Barrett Honors student
HON	380	Aesthetics and Society	Advanced, interdisciplinary seminar explores the unique roles of aesthetics in society through philosophy, cultural studies, art, music, literature, film, and/or other media forms, with themes such as the politics of beauty, art and emotion, or creative production and reception.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3	HU	Prerequisite(s): Barrett Honors student; HON 171; HON 272 (or HON 273 or 274) or HON 370 or HON 394 (History of Ideas); Credit is allowed for only HON 380 or HON 394 (Aesthetics and Society)
HON	381	Science and Social Worlds	Advanced multidisciplinary seminar examining the historical, cultural and political roles of science in society, including the politics of scientific knowledge production, the ethics of new technologies, and philosophical approaches to the study of health and medicine.	N	SEM	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): Barrett Honors student; HON 171 and 272 (or HON 370 or 394: History of Ideas); Credit is allowed for only HON 381 or 394: Science and the Self
HON	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisite: Barrett Honors student; Minimum 30 hours
HON	410	Philosophy, Politics, and Law	Topics in political and legal philosophy, including political authority, obligation and disobedience, the nature of crime and punishment. Required for Certificate in Philosophy, Politics, and Law.	N	SEM	N	OPT	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): Barrett Honors student
HON	447	Lean Launch	Students learn lean and customer development methodologies to test assumptions made about a new business concept that they wish to explore or launch. Teaches how to effectively utilize business models and critically assess the assumptions made through the testing of hypotheses to create innovative and market-ready ventures. Includes weekly presentations of learning points and team activities outside of the classroom. Open to students in any major of study with the required prerequisite.	N	LEC	N	GNA	Barrett, The Honors College	Barrett, The Honors College	3		Prerequisite(s): W.P. Carey BA or BS major; ACC 241 or 242 or 271 with C or better OR non-Business student with minimum ASU 2.50 GPA; minimum 56 hours. Credit is allowed for only HON 447 or MGT 447 or MGT 494 (Lean Launch)
HON	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	0-12		Prerequisite(s): Barrett Honors student
HON	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-6		Prerequisite(s): Barrett Honors student
HON	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Barrett, The Honors College	Barrett, The Honors College	1-6	L	Pre-requisite: Barrett Honors student; Minimum 75 hours
HON	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Pre-requisites: Barrett Honors student; Minimum 45 hours
HON	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HON	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-7	L	Prerequisite(s): Barrett Honors student
HON	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-7	L	
HON	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-3		Prerequisite(s): Barrett Honors student
HON	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Barrett, The Honors College	Barrett, The Honors College	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HPS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	311	Origins, Evolution, and Creation	History of opposition to evolutionary thinking with special reference to American creationism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
HPS	312	History of Women in Science and Medicine	In-depth inquiry into the history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU or SB	Pre-requisite: ENG 102, 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only HPS or HST 312
HPS	313	Probability, Evidence, and Decision	Philosophical topics in epistemology and practical reasoning; probability and its use in representing and reasoning about belief, evidence, and rational choice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: MAT 119 or higher; Minimum 30 hours; Credit is allowed for only HPS or PHI 313
HPS	314	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU	Credit is allowed for only HPS 314 or PHI 314
HPS	322	History of Science	Development and application of scientific thinking from ancient times through the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H	
HPS	323	History of Science	Development and application of scientific thinking from the 18th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H	Prerequisite(s): minimum 45 hours; Credit is allowed for only BIO 317 or HPS 323
HPS	325	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only CHI 335, HPS 325, HST 385 or SLC 335
HPS	330	History of Biology: Conflicts and Controversies	Focuses on 19th and 20th centuries, considering biology as a discipline. Evolution, problems of heredity, development, and cell theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	H	Credit is allowed for only BIO 316 or HPS 330
HPS	331	History of Medicine	Scientific study of the human body, changing theories of disease, evolution of practical opinions on treatment, and the emerging institutionalization of medical practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	HU & H	Credit is allowed for only BIO 318 or HPS 331
HPS	332	The Darwinian Revolution	Origin, nature, and subsequent history of the ideas of Charles Darwin.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
HPS	336	Exploration and Science	500-year survey of exploration as a historical process and cultural activity of Western civilization, with emphasis on its links with modern science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	SB & H	
HPS	340	Biology and Society	Explores interactions between biological sciences and society, e.g., biomedical, environmental, ethical, historical, legal, philosophical, political, and social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 188 or both PLB 200 and PLB 201) with C or better OR BIO 281 and 282 with C or better; Credit is allowed for only BIO 311 or HPS 340
HPS	347	Science and Social Change	Modern science and technology are rapidly and radically transforming our society in innumerable ways, from how we process food to altering the very core of what it means to be human. Explores historical, philosophical, sociological, ethical, economic and political topics and consequences of modern science in society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Credit is allowed for only BIO 347, BIO 394 (Science and Society) or HPS 347
HPS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		

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HPS	410	Biomedical Research Ethics	Considers issues related to values in science such as collaboration, finances, legal issues, media, mentoring, ownership of ideas, scientific integrity.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only for BIO 416 or HPS 410
HPS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
HPS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
HPS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
HPS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
HPS	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
HPS	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): junior or senior standing; Credit is allowed for only BIO 496 or HPS 496 or MBB 496 or MIC 496
HPS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
HPS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
HPS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
HPS	511	History of Science	Teaches crucial skills needed for graduate-level research in history of science, including (1) critical analysis of primary sources from different periods in the history of science and (2) critical analysis and familiarity with important trends in the secondary literature ("historiography of science").	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	512	Philosophy of Science	Serves as a graduate-level introduction to five central themes in philosophy of science, and as a means to begin to investigate new topics.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	516	History of Biology	Covers themes such as the voyages of discovery, systematics, and classification; morphology and embryology; Darwin and evolutionary biology; the rise of genetics; molecular and organismal approaches of post-WWII biology; recent history of biology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 518, HPS or HST 516
HPS	520	Masters of Nonfiction	Students read and critically discuss works by well-known nonfiction writers to improve their own writing skills. Consists of weekly writing exercises, reviewed with workshop-style discussions centered on individual authors, themes or genres such as history, journalism, personal essays, biography, character profiles, travelogues, book reviews and op/ed commentary.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only HPS or HST 520
HPS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HPS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	615	Biology and Society Lab	This course brings together graduate students, postdocs, and faculty members in biology and society. Sessions include panel discussions of biology and society topics from multiple perspectives, student-led discussions of important literature, practice presentations of papers for national meetings, discussion of dissertation and thesis ideas, and other activities that help to forge an active intellectual lab group.	N	LAB	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	620	Research Prospectus Writing	Workshop-style course where students develop and peer review graduate-level project prospectuses, such as those for NSF grant proposals, journal articles, theses, and dissertations. Appropriate for graduate students in Biology and Society, History and Philosophy of Science, the life sciences, and related programs.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only HPS 620 or BIO 620
HPS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HPS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HRC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HRC	200	Introduction to Social and Cultural Analysis	Introduces social and cultural analysis. Focuses on key terms and analytical categories for interdisciplinary work in social and cultural analysis and related fields such as American studies, ethnic studies, women and gender studies and Latin American studies. Examines a range of forms of oppression and privilege from a social justice perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
HRC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HRC	310	Social and Cultural Studies: Method and Theory	Covers how scholars in social and cultural studies think, argue, research and write. Traces the changing definition of fields such as American studies, ethnic studies, and women and gender studies. Studies these fields in relationship to 20th-century social movements and related theoretical categories including Marxism, cultural studies and class; feminism, gender and sexuality; and post-Colonialism, race and ethnicity. Covers basic archival and ethnographic research techniques underlying interdisciplinary research methods in these fields.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: Minimum 36 hours
HRC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HRC	480	Capstone: Practices and Approaches	Examines theoretical, methodological and epistemological issues in American studies, women and gender studies, and ethnic studies. Studies a wide variety of interdisciplinary theories, methodologies and epistemologies from an intersectional analysis of race, class, gender and sexuality in national and transnational contexts. Places special emphasis on historical definitions and debates on the relationship among theory, activism and praxis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): AMS 201 or ETH 100 or HRC 200 or WST 100
HRC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
HRC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HRC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
HRC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HSC	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
HSC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
HSC	210	Cultural Aspects of Health	Examines how culture influences health, healthcare practices, barriers to health care, interactions with healthcare professionals, and health disparities in the U.S. Addresses the need for cultural competence among health practitioners.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	C	
HSC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
HSC	300	Complementary Health Care	Evaluates the major components of complementary and alternative healthcare models and evidenced-based recommendations related to complementary healthcare.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 56 hours
HSC	304	Health Communication	Focuses on communicating topics related to health through an examination of theoretical frameworks, communication techniques, and different technologies including ehealth and mhealth. Addresses communication through channels that promote the health of individuals and communities. Topics may include clinician to client communication, peer to peer communication, health literacy, health in the media, and effective public health communication.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only HSC 304 or HSC 394 (Health Communication)
HSC	310	Health Literacy: Creating Healthy and Active Schools	Signature course for elementary educators and special education educators in order to prepare future teachers with the knowledge, skills, and dispositions to teach healthy and active content knowledge and to create healthy and active school environments.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only HSC 310 or PPE 310
HSC	320	Applied Medical/Healthcare Ethics	Integrates the theory and practice of ethics within health-related disciplines and the application of bioethics by health science professionals, including health disparities.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	HU	Prerequisite(s): PHI 101 (or PHI 103, 306 or 314) OR Medical Studies major with PSY 101 (or SOC 101)
HSC	340	Changing Health Behaviors	Comprehensive review of the theoretical bases of health behavior change. Students gain the knowledge to identify behaviors associated with optimal health and wellness and to develop theory-based intervention strategies and techniques to effectively influence behavior change.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 230 or HSC 210; PSY 101 (or PGS 101); Credit is allowed for only HSC 340 or HSC 394 (Changing Health Behaviors)
HSC	355	Eating for Lifelong Health	Examines dietary choices throughout the life span and how they impact personal health and wellness. Prepares health and wellness team members to evaluate consumer and professional materials on dietary choices.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Prerequisite(s): NTR 100 or NTR 241
HSC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
HSC	400	Practicum in Health Sciences	Supervised experience in area of student specialization. Students are placed with an agency, organization, business, and/or facility that meets their specific academic goals.	N	PRA	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Health Sciences Senior student
HSC	401	Professions and Practices in the Health Sciences	Provides the opportunity to explore career options within the health sciences, compare credentialing/licensure requirements across the U.S., describe professional organizations and societies related to the health sciences, evaluate employment trends in the health sciences, and interview professionals currently active in a health sciences-related field.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: HSC 320
HSC	410	Supporting the Health of Older Adults	Focuses on community and national policies and programs that affect the health of older adults, programs to improve access to healthcare as well as to improve overall health, issues related to family and professional caregiving, and future challenges related to caring for older adults.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 230 or HSC 210 or Medical Studies major; Credit is allowed for only HSC 410 or HSC 394 (Supt Health Older Adult)
HSC	412	Health Issues in Later Life	Focuses on health issues that primarily affect adults ages 50 years and over as related to nutrition, physical activity, environmental toxins. Focuses on exploring those factors known to promote healthy aging.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 230 or HSC 210; Credit is allowed for only HSC 394 (Health Issues in Later Life) or HSC 412
HSC	420	Evaluation of Health Sciences Research	Investigates methods of inquiry in health sciences and techniques for critiquing and interpreting research within the context of evidence-based practice.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): POS 401 (or PSY 230 or 231 or SOC 390 or STP 226 or 231 or 420) OR Medical Studies major with HCD 300 (or HSC 320)
HSC	432	Legal Issues in Health Care	Legal doctrines provide protection of consumers, health care providers, and health care institutions with regard to health care delivery including access and cost. Provides an overview of the legal obligation and rights of private and public stakeholders in the delivery and receipt of health care services.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 220 or HSC 330 or HSC 332

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HSC	435	Environmental Health Issues in the U.S.	Environmental health designed to address public health issues.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCR 230 or HSC 210; Credit is allowed for only HSC 394 (Envrnmtal Hlth lss in U.S.) or HSC 435
HSC	440	Health Coaching Concepts and Skills	Health coaching techniques and skills for health promotion professionals with emphasis on the practical application of brief intervention and motivational interviewing skills to promote healthy lifestyle changes.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite: HSC 210; PGS 101; Credit is allowed for only HSC 440, 498 (Health Coaching Concepts Skill) or NTR 500
HSC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	YGB	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): minimum 3.00 GPA
HSC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-6		Prerequisite(s): Barrett Honors student
HSC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6	L	Prerequisite(s): Barrett Honors student
HSC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
HSC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-7	L	
HSC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
HSD	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	501	Science and Technology Policy	Provides an in-depth introduction to theoretical perspectives on the role and place of science in democratic societies and democratic governance. Emphasizes how the ideas, ideologies, and practices of science are integrated into the design and implementation of government decision making, as well as how science both shapes and is shaped by the political organization and ordering of society. Pursues such questions in the context of U.S. politics, comparatively between the U.S. and Europe, and in emerging regimes of international governance.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only HSD 501 or POS 571
HSD	502	Advanced Science and Technology Policy	Focuses on the role of knowledge and expertise in political and policy decision making. Particular emphasis is placed on the analysis of knowledge systems (formalized institutional approaches to the production, validation, and use of knowledge and expertise in policy decision making), their modes of failure, and the design of approaches that may be able to prevent, avoid, or reduce the frequency of such failures.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): HSD 501 or POS 571 with B or better; Credit is allowed for only HSD 502 or POS 572
HSD	503	Governing Emerging Technologies	Examines the governance of science and technology through a focus on emerging technologies whose potential consequences in society are apparent only in anticipation and whose manifestations are still being shaped by local, domestic, and international institutions. These emerging technologies include nanotechnologies, synthetic biology, and other technologies associated with genetic modification, and information and cognitive science and neuro-technologies.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only PAF 550 or HSD 503 or POS 573
HSD	504	Analysis of Large-Scale Socio-Technological Systems	Provide skills and methods to analyze the design and management of large-scale socio-technological systems and the societal impacts of large-scale technological systems change. Emphasizes assessing the intertwining of lives and livelihoods in large-scale technological systems and the risks and vulnerabilities associated with large-scale systems failures, including the effects of both technological failures and natural hazards.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	505	Science and Technology Policy Workshop	Provides the capstone experience for the Professional Science Master's in Science and Technology Policy. Builds on theoretical and analytical work carried out in the program's required courses, providing an integrative experience that requires students to synthesize knowledge gained in prior coursework and apply it to real-world policy problems and settings. By blending exposure to national science and technology policy officials and nationally recognized academic experts, the workshop both advances student learning beyond that possible in the classroom while encouraging students to expand their abilities to connect theoretical and practical insights. At the same time, the workshop provides a natural transition from the student's formal classroom learning to their required applied policy internships, which commences upon the end of the workshop.	N	SEM	N	YGB	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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HSD	515	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BIO 515 or GLG 547 or HSD 515 or PAF 547 or SOS 516
HSD	517	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
HSD	540	Responsible Innovation and Research	Movements throughout Europe and increasingly the U.S. are beginning to consolidate the recognition of the profound effects that research outcomes have upon the world under the idea of responsible innovation and research. The responsible innovation and research pushes beyond the responsibilities of the individual researchers and addresses larger issues such as research agenda setting, management of large-scale research and innovation enterprises, funding priorities and innovation as a national policy priority. Explores the idea of innovation as a national policy; the practical and theoretical underpinnings of responsibility in the research world; the history, current state and future trajectories of responsible research and innovation. Focuses on the current literature in the field.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		
HSD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	601	HSD I: Human Dimensions of Science and Technology	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	4		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only HSD 601 or POS 671
HSD	602	HSD II: Science, Power and Politics	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology. Continuation of HSD 601.	N	SEM	N	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	4		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only HSD 602 or POS 672

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HSD	610	Colloquium	Regular meeting for the entire HSDST community. Includes outside speakers, student and faculty member presentations, and community discussions.	N	SEM	Y	OPT	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	GRD	Future of Innovation in Society	School for the Future of Innovation in Society	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Future of Innovation in Society	School for the Future of Innovation in Society	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Future of Innovation in Society	School for the Future of Innovation in Society	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HSD	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Future of Innovation in Society	School for the Future of Innovation in Society	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	101	Introduction to Human Systems Engineering	Introduces basic principles, methods and theories of psychology and applications to engineering problems relevant to human systems. Gives particular attention to the intersection of psychology and engineering. Students learn brain anatomy and physiology, sensation and perception, cognition, social systems and research methods so that they are able to design systems consistent with human capabilities and limitations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	
HSE	223	Applied Biology of Human Behavior	Introduces the biological basis of human behavior and implications for human systems engineering. Structure and function of the nervous system as well as the behavioral effects of the physiological processes outside the brain (for example, hormones secreted by glands). Biological processes involved in many aspects of our behavior such as eating, sleeping, sexual behavior, emotional responses, sensory perception, learning and memory, language and cognitive functions, mental illness and drug abuses. Introduces a wide range of techniques and methods used to investigate the biological foundations of behavior. Prepares students for advanced courses in neuroscience, psychology or related fields.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): HSE 101 or PSY 101
HSE	224	Applied Social Science	Covers social behaviors, social cognition and emotion critical for engineered systems that interact with humans (artificial intelligence, robots). Students learn how human beings behave, think and feel in daily social situations and think about how that information can be used to create effective human systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): HSE 101 or PSY 101
HSE	225	Human Systems Integration	Reviews human systems integration (HSI), which is basically systems engineering from a human-centered perspective. Research, theory and methodological approach as applied to a variety of systems ranging from transportation systems to medical and military systems. Discusses handbook chapters and specific examples of human systems integration.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): HSE 101 or PSY 101
HSE	230	Statistics for Human Systems Research I	Basic methods of exploratory data analysis (including graphics) and statistical computing methods, including a detailed look at hypothesis testing, effect size and power analysis, as well as some methods for dealing with categorical and discrete data. Introduces both correlation/regression and analysis of variance (ANOVA), as well as common statistical software.	N	LEL	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	CS	Prerequisite(s): HSE 101 or PSY 101 (or PGS 101) with C or better; MAT 117 or 170 or 265 with C or better
HSE	290	Experimental Methods for Human Systems Research	Introduces the basics of research methodology as applied in human systems engineering. Quantitative and experimental design from an applied perspective. Guided study of the process of conducting research within human systems engineering. Project topics range from research question generation and literature review to reporting of results.	N	LEL	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	L	Prerequisite(s): HSE 101 or PSY 101; HSE 230 or PSY 230

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HSE	323	Perceptual Systems	In-depth exploration of methods by which humans receive and interpret information from the world by vision, audition, taste, smell, touch and movement. Emphasizes the integration of behavioral and neural research with potential applications to engineering practice. Topics cover a wide range from the biological basis of sensory information processing to the behavioral aspects of perception, and to the applications of perceptual theories to disciplines like computer vision, display technologies, graphic design and sound processing. Solid foundation for further coursework and research in neuroscience or psychology; students also gain knowledge that could be useful in various professions.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): HSE 101 or PSY 101; junior or senior standing
HSE	324	Applied Cognitive Science	Human cognition and how it bears on the design of technological and social systems. Although focuses on applications, requires student to delve into the basic literature that informs these applications and produce a literature review that draws on both applied and theoretical work. Many weeks involve a hands-on experience with a method or technique, and weekly quizzes emphasize critical thinking about these examples.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): HSE 101 or PSY 101; junior or senior standing
HSE	325	Human-Computer Interaction	Theories, methods, and findings concerning the usability of computer systems and the design of effective user interfaces.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): HSE 101 or PSY 101 (or PGS 101) with C or better
HSE	390	Qualitative Research Methods	Basics of qualitative research as it is implemented within the human systems engineering area. Covers methods of implementing core concepts such as validity and techniques of interviews; questionnaire and observation within various human system methodologies (e.g., cognitive task analysis, protocol analysis, and usability). All concepts taught with an applied focus with emphasis on how the methods can be implemented in real-world settings.	N	LEL	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	L	Prerequisite(s): HSE 290 or PSY 290
HSE	422	Human Factors in Sport	Examines how psychological principles can be applied to enhance the performance of athletes and coaches.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): HSE 101 or PSY 101 (or PGS 101) with C or better
HSE	423	Human Factors in Transportation	Examines human performance and human-machine design issues in aviation and ground transportation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): HSE 101 or PSY 101 (or PGS 101) with C or better
HSE	424	Human Automation Interaction	Explores the application of human systems engineering to automation. Human-automation interaction in domains of cyber security, remotely piloted aircraft systems, synthetic teammates, and human-robot interaction. Reading and discussion related to current articles describing research, methodology and theory.	N	SEM	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): HSE 101 or PSY 101; HSE 290 or PSY 290; HSE 324 or PSY 324
HSE	425	Human Factors in Medical Systems	Comprehensive introduction to human factors issues related to healthcare systems, medical training, and medical device design. Topics range from psychological and physiological aspects of human behavior like perceptual and cognitive functions, motor behavior, learning, motivation, physiology, and ergonomics to applied issues in the context of medicine and healthcare like human-computer interactions in medical information systems, the ergonomic design of medical devices, evaluation of medical device usability, team training in healthcare and the organization of medical environment.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3		Pre- or corequisite(s): HSE 101 or PSY 101; HSE 290 or PSY 290; HSE 324 or PSY 324
HSE	426	Training and Expertise	Theories, methods, and findings concerning the acquisition of skilled performance and the design of effective training systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): HSE 101 or PSY 101 (or PGS 101) with C or better
HSE	427	Designing for Learning	Learning as applied within the human systems engineering area. Overview of the theoretical areas relevant to learning (behavioral, social cognitive, cognitive, emotion and motivation). Applies these perspectives to enhance the design of systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3		Pre- or corequisite(s): HSE 101 or PSY 101; HSE 290 or PSY 290; HSE 324 or PSY 324
HSE	428	Judgment and Decision Making	Covers human judgment and decision making as it applies to the design of intelligent systems or decision aids, tools for augmenting human judgment, and understanding consumer decision making. Covers judgment and decision making approaches, theories, biases, heuristics with applications to engineered systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3		Pre- or corequisite(s): HSE 101 or PSY 101; HSE 290 or PSY 290; HSE 324 or PSY 324
HSE	429	Product Design and Evaluation	Applies human systems engineering methods to product design and evaluation. Consumer behavior, consumer research methods, systems and design thinking, how to conduct interviews, observational research, contextual analysis, questionnaire design and analysis, opportunity identification, usability testing and creativity.	N	LEC	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3		Pre- or corequisite(s): HSE 101 or PSY 101; HSE 290 or PSY 290; HSE 324 or PSY 324
HSE	430	Statistics for Human Systems Research II	Statistical methods commonly used in human systems engineering research. Emphasizes (1) connecting research designs and statistical analysis, (2) interpreting and breaking down significant effects, (3) addressing practical problems associated with doing research in applied contexts, (4) using statistical methods to understand the connection between variables in a complex system, and (5) the use of statistical software. Primarily focuses on analysis of variance (ANOVA) but introduces other techniques (including mediation analysis, structural equation modeling and cluster analysis). Recommended for preparation for both graduate study and careers in related industry.	N	LEL	N	GNA	Ira A. Fulton Engineering	Human Systems Engineering	3	CS	Prerequisite(s): HSE 230 or PSY 230 or PSY 231

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HSE	477	Human Systems Engineering Capstone Experience	Applied psychology from a systems perspective. Requires a report based on research and/or applied work as a culminating experience.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): senior standing
HSE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
HSE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-6		Prerequisite(s): Barrett Honors student
HSE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-6		Prerequisite(s): Barrett Honors student
HSE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-3		
HSE	520	Methods and Tools in Applied Cognitive Science	Provides a hands-on approach to understanding and using advanced methodologies commonly implemented in the field of cognitive science.	N	SEM	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	521	Methods and Tools in Human Systems Engineering	Introduces specific methods and tools used in the field of modeling and simulation, with computer-based experience through both writing and using simulation software.	N	SEM	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	540	Foundations of Applied Cognitive Science	Provides a critical background in the theory and organization of the field of cognitive science.	N	SEM	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	542	Foundations of Human Systems Engineering	A wide variety of methodologies utilized by and applications of the broad field of human systems engineering.	N	SEM	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Human Systems Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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HSE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HSE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Human Systems Engineering	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	220	Health Care Organizations	Overview of United States healthcare delivery systems; financing, health policy, basic principles of budgeting, cost-benefit analysis, and resource management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3	H	
HSM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
HSM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Prerequisite(s): Barrett Honors student
HSM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
HSM	502	Health Care Organization	Concepts, structures, functions, and values that characterize contemporary healthcare systems in the United States.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	505	Managerial Epidemiology I	Basic constructs and measures of epidemiology. Epidemiologic study designs. Potential impact of chance, bias, confounding, on an epidemiologic study. Causal criteria; levels of evidence in epidemiological studies, implications and limitations of statistical association.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 561 or ECN 501 with C or better.
HSM	512	Healthcare Economics	Economics of production and distribution of healthcare services, with special emphasis on the impact of regulation, competition, and economic incentives.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	522	Health Sector Information Management	Information technology and knowledge management applications in the health sector, including care delivery and financing institutions and in the pharmaceutical and biotechnology industries.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	542	Healthcare Law	Legal aspects of healthcare delivery for hospital and health services administration. Legal responsibilities of the hospital administrator and staff.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	561	Biostatistics	Aspects of descriptive statistics and statistical inference most relevant to health issues, including data, rates, and confidence intervals.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	564	Health Care Finance	Overview of the acquisition, allocation, and management of financial resources by healthcare providers. Focuses on economic, financial, and accounting principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	565	Introduction to Health Policy	Current policy issues in health through concepts of access, cost, and quality; issues relating to disease trends and policy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	589	Healthcare Strategic Management	Capstone assessment of current policies, problems, and controversies across the broad spectrum of health services administration.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Economics	3		Pre-requisites: HSM 502 with C or better
HSM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HSM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	100	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H & G	

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HST	100	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	
HST	100	Global History to 1500	Surveys human origins; early civilizations in Africa and Eurasia; the ancient Mediterranean; the pre-Columbian Americas; the rise of Islam and Muslim empires; medieval Europe; the Indian sub-continent and imperial China, to 1500.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H & G	
HST	101	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H & G	Credit is allowed for only HST 101 or SGS 111
HST	101	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST 101 or SGS 111
HST	101	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H & G	Credit is allowed for only HST 101 or SGS 111
HST	102	Western Civilization: Ancient and Medieval Europe	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	
HST	102	Western Civilization: Ancient and Medieval Europe	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST	102	Western Civilization: Ancient and Medieval Europe	Origins and development of Western societies and institutions from the ancient world through the Middle Ages.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	
HST	103	Western Civilization: Renaissance to Enlightenment	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & H	
HST	103	Western Civilization: Renaissance to Enlightenment	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	
HST	103	Western Civilization: Renaissance to Enlightenment	Traces origin and development of Western societies and institutions from the Renaissance and Reformation through Age of Enlightenment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	
HST	104	Western Civilization: French Revolution to European Union	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & G & H	
HST	104	Western Civilization: French Revolution to European Union	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G & H	
HST	104	Western Civilization: French Revolution to European Union	Traces origin and development of Western societies and institutions from the French Revolution to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & G & H	
HST	106	Asian Civilizations	Civilizations of China, Japan, and India from antiquity to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G & H	
HST	107	Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	
HST	107	Asian Civilizations	Civilizations of China, Japan, India, and Southeast Asia from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	
HST	108	Introduction to Japan	Historical survey of the people, culture, politics, and economy of Japan, supplemented by audiovisual presentations. Intended for nonmajors.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	
HST	108	Introduction to Japan	Historical survey of the people, culture, politics, and economy of Japan, supplemented by audiovisual presentations. Intended for nonmajors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G & H	
HST	109	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & H	
HST	109	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	
HST	109	United States to 1865	Growth of the Republic from colonial times through the Civil War period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	
HST	110	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	
HST	110	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST	110	United States Since 1865	Growth of the Republic from the Civil War to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	
HST	111	Introduction to Asia	Offers a basic introduction to the geography, history, cultures, states, and societies of South and Southeast Asia as well as China, Japan, and Korea.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST or REL 111
HST	112	Foundations of Democracy	Introduces an interdisciplinary study of democracy with special attention to its historical development as a form of government.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Credit is allowed for only HST, POS 112 or HST 194 (Foundations of Democracy)
HST	113	United States and Arizona Social Studies	Introduction to the United States and Arizona from the integrated social science perspectives of history, geography, and government.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Credit is allowed for only GCU 113, HST 113, or GCU 194, US & AZ for Aspiring Elmtary Ed
HST	114	World Social Studies	Introduction to the world from the integrated social science perspectives of history, geography, and government.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Credit is allowed for only GCU or HST 114

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	130	The Historian's Craft	Introduces the ways historians ask questions and propose answers.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Credit is allowed for only HST 130 or HST 330
HST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
HST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HST	200	Historical Themes	General introduction to selected themes in history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST	201	Historical Themes in Asia	General introduction to selected themes in Asian history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
HST	203	Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	
HST	203	Historical Themes in Latin America	General introduction to selected themes in Latin American history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	
HST	204	Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
HST	204	Historical Themes in the US	General introduction to selected themes in United States history. May be repeated for credit when topics vary.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
HST	210	American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H	
HST	210	American Social History	American society from the colonial period to the present. Ethnicity, race, age, and sex as factors in historical experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	
HST	211	Jews and Judaism in America	Chronological analysis of Jews and Judaism in American history and letters.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Credit is allowed for only HST 211 or JST 211 or REL 211
HST	230	Introduction to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST, JST or REL 230
HST	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
HST	245	Introduction to South Asia	Provides an introduction to the history and major contemporary political, economic, social, religious and cultural features of the South Asia region at large and of selected South Asian nations in particular.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HST 245 or POS 245 or REL 245 or SGS 245 or SLC 245
HST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
HST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
HST	300	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU or SB) & H	Prerequisite(s): History, History minor or Secondary Education - History, students; Minimum 45 earned hours; ENG 102, 105 or 108 with C or better
HST	300	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU or SB) & H	Prerequisite(s): History, History minor or Secondary Education - History, students; Minimum 45 earned hours; ENG 102, 105 or 108 with C or better
HST	300	Historical Inquiry	Introduces the methodological and theoretical tools of history as a scholarly discipline for History majors. Course is organized thematically.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU or SB) & H	Prerequisite(s): History, History minor or Secondary Education - History, students; Minimum 45 earned hours; ENG 102, 105 or 108 with C or better
HST	301	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 301 or HST 301 or SSH 301
HST	302	Studies in History	Specialized topics in history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours

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HST	303	Studies in Asian History	Specialized topics in Asian history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	304	Studies in European History	Specialized topics in European history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 304 or JST 304
HST	305	Studies in Latin American History	Specialized topics in Latin American history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	305	Studies in Latin American History	Specialized topics in Latin American history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	
HST	306	Studies in United States History	Specialized topics in United States history. Explores regions, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	306	Studies in United States History	Specialized topics in United States history. Explores regions, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	307	Studies in African History	Specialized topics in African history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	308	History and Philosophy of Sustainability	Examines sustainability issues in a broadly interdisciplinary way, but with a special emphasis on humanities perspectives, focusing on human ideas, values and institutions as they have evolved over time.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours; Credit is allowed for only HST 308 or PHI 322 or SOS 309 or BIO/HST/PHI/SOS 394 (History & Philosophy of Sustainability)
HST	309	Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	309	Exploration and Empire	Surveys European discovery, exploration, and imperialism in the early modern and modern periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	310	Film as History	In-depth study of moving image media as recorder, object, and writer of history.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	310	Film as History	In-depth study of moving image media as recorder, object, and writer of history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	312	History of Women in Science and Medicine	In-depth inquiry into the history of gender issues in Western science and medicine from Greco-Roman antiquity through the beginning of the 21st century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU or SB	Pre-requisite: ENG 102, 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only HPS or HST 312
HST	313	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 320 or HST 313
HST	313	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 320 or HST 313
HST	313	American Cultural History to 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the nation's colonial and early national periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 320 or HST 313
HST	314	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 321 or HST 314
HST	314	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 321 or HST 314

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HST	314	American Cultural History Since 1865	Culture, including ideas, ideals, the arts, and social and economic standards, from the age of industrialism to modern U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours. Credit is allowed for only AMS 321 or HST 314
HST	315	Political History of the U. S.	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	315	Political History of the U. S.	American political history since independence, focusing post-1865. Evaluates major trends in issues, presidential leadership, elections, and state politics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	316	20th-Century U.S. Foreign Relations	U.S. relations with foreign powers from the late 19th century to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	316	20th-Century U.S. Foreign Relations	U.S. relations with foreign powers from the late 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	317	History of Postwar U.S. Conservatism	Traces the origins of U.S. conservatism as it developed in the work of U.S. and European thinkers, intellectuals and authors after WWII.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only HST 294 (American Conservatism), 317 or POS 317
HST	318	History of Engineering	The history of engineering from the earliest record to modern times, examining the social, cultural, and economic effects on society.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & G	Pre-requisite: ENG 102, 105, 108 or ENG 112 with C or better; Minimum 45 hours
HST	318	History of Engineering	The history of engineering from the earliest record to modern times, examining the social, cultural, and economic effects on society.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & G	Pre-requisite: ENG 102, 105, 108 or ENG 112 with C or better; Minimum 45 hours
HST	319	History of Aviation	The history of aviation, focusing on technical, political, economic, social and cultural aspects.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 45 hours; Credit is allowed for only HST 319 or HST 306 (Aviation History)
HST	320	U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	320	U.S. Urban History since 1850	History of the city in American life from the mid-19th century to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	321	Constitutional History/US to 1865	Origin and development of the American constitutional system from colonial period through the Civil War.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	322	Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	H	
HST	322	Constitutional History of the United States Since 1865	Development of the U.S. constitutional system from Reconstruction to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H	
HST	323	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101 with C or better; ENG 102 with C or better; Credit is allowed for only AFR 335 or HST 323 or TCL 335
HST	325	Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H & C	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	325	Immigration and Ethnicity in the United States	Origins, historical development, and future of a multiethnic society, 1492 to 2050.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H & C	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	326	The Global History of the Trans-Atlantic Slave Trade	Reading- and writing-intensive course that employs critical thought to look at the origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or HST 109 or minimum 45 hours; Credit is allowed for only AFR 305 (or AFH 305) or HST 326
HST	326	The Global History of the Trans-Atlantic Slave Trade	Reading- and writing-intensive course that employs critical thought to look at the origins, development, abolition, and impact of Atlantic slave trade as a global economic enterprise and great human tragedy; slavery experience.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or HST 109 or minimum 45 hours; Credit is allowed for only AFR 305 (or AFH 305) or HST 326
HST	327	Women in U.S. History, 1600 to 1880	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours

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HST	327	Women in U.S. History, 1600 to 1880	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	328	Women in U.S. History, 1880-1980	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	328	Women in U.S. History, 1880-1980	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	328	Women in U.S. History, 1880-1980	Historical discussion of American women of diverse racial, religious, and ethnic groups and classes; focuses on changing definitions of women's roles.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	329	Women in 20th-Century U.S. West	Nuanced exploration of how women of various cultures have contended for and shaped the U.S. West, including the West of imagination.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	H & C	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	330	Historical Thinking	Advanced examination of the ways historians ask questions and propose answers.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 130 or HST 330
HST	331	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H & C	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST or TCL 331
HST	332	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H & C	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST or TCL 332
HST	333	African American History to 1865	In-depth examination of African Americans' roles in American history, thought, and culture from slavery to 1865.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H & C	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 363 (or AFS 363) or HST 333
HST	334	African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
HST	334	African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
HST	334	African American History Since 1865	In-depth examination of African Americans' role in American history, thought, and culture from 1865 to present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours; Credit is allowed for only AFR 364 (or AFS 364) or HST 334
HST	335	History of Black Women in America	Advanced examination of the challenges that black women have faced historically in America and how they have responded to those challenges socially, politically, economically, and culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 302 (or AFS 302) or HST 335 or WST 302
HST	337	American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	337	American Indian History to 1900	Cultural, economic, political, and social continuity and change of American Indian communities to 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	338	American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	338	American Indian History since 1900	Cultural, economic, political, and social continuity and change of American Indian communities from 1900 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	340	American Military History	Studies the role of the military in American life during war and peace from colonial times to the present day.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	340	American Military History	Studies the role of the military in American life during war and peace from colonial times to the present day.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	341	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 341 or HIS 320
HST	341	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 341 or HIS 320
HST	341	U.S. West 19th Century	Social, political, and economic development of the trans-Mississippi West, beginning with the Louisiana Purchase and ending in 1900.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 341 or HIS 320
HST	342	U.S. West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	342	U.S. West 20th Century	Role of the western states in U.S. history since 1890 emphasizing politics, the environment, industry and labor, and ethnic minorities.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	343	American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	343	American Southwest	Development of the region from 1848 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	344	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	344	Arizona	Emergence of the state from early times to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	345	Environmental History	Examines the interaction between humans and the natural world in the United States from the late 19th century to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	345	Environmental History	Examines the interaction between humans and the natural world in the United States from the late 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Pre-requisite: ENG 102, 105, 108 or 112 with C or better
HST	346	Ancient Greece II: Late Classical and Hellenistic Period	Traces the transformation of the Greek world between the end of the Peloponnesian War (404 B.C.) and the absorption of the last major Greek state by growing power of Rome (30 B.C.), with special attention to how Greeks in this period lived and thought and how the period's political and economic changes helped to create new forms of culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only GRK 346 or HST 346 or SLC 346
HST	346	Ancient Greece II: Late Classical and Hellenistic Period	Traces the transformation of the Greek world between the end of the Peloponnesian War (404 B.C.) and the absorption of the last major Greek state by growing power of Rome (30 B.C.), with special attention to how Greeks in this period lived and thought and how the period's political and economic changes helped to create new forms of culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only GRK 346 or HST 346 or SLC 346
HST	347	Ancient Greece I: Bronze Age through the Peloponnesian War	Traces Greek History from its prehistoric beginnings through the Peloponnesian War (431-404 B.C.), with a special focus on the Archaic (ca. 800-480 B.C.) and Early Classical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-reqs for HST 347
HST	347	Ancient Greece I: Bronze Age through the Peloponnesian War	Traces Greek History from its prehistoric beginnings through the Peloponnesian War (431-404 B.C.), with a special focus on the Archaic (ca. 800-480 B.C.) and Early Classical periods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-reqs for HST 347
HST	348	Rome	History and civilization of Rome from the beginning of the Republic to the end of the Empire.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	348	Rome	History and civilization of Rome from the beginning of the Republic to the end of the Empire.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	349	Early Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 5th through 10th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	350	Later Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 11th through 15th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	350	Later Middle Ages	Political, socioeconomic, and cultural developments of Western Europe from the 11th through 15th centuries.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	351	Renaissance Europe	Culture of the Renaissance in Italy and Northern Europe from the 14th to the early 16th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	352	Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	352	Europe's Reformations	Causes and implications of the major Protestant, Catholic, and Radical religious reformations in 16th- and 17th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU or SB) & H	
HST	353	Old Regime in Europe	Society and culture of Europe during the 17th and 18th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	354	Revolutionary Europe	Political, social, economic, and intellectual currents in Europe from the French through the Russian Revolutions.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	354	Revolutionary Europe	Political, social, economic, and intellectual currents in Europe from the French through the Russian Revolutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	355	Total War and the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	355	Total War and the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	355	Total War and the Crisis of Modernity	Forces of change and instability in early 20th-century Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	356	Europe since 1945	Europe in its world setting since World War II, emphasizing major political and social issues from 1945 to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	356	Europe since 1945	Europe in its world setting since World War II, emphasizing major political and social issues from 1945 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	357	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite: ENG 102, 105 or ENG 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357 or PHI 391 or REL 391
HST	357	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite: ENG 102, 105 or ENG 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357 or PHI 391 or REL 391
HST	358	Jewish History from Antiquity to 1492	Continuity and change in political, legal, economic and sociocultural history of the Jews from ancient through medieval times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	359	Jewish History from 1492 to 1948	Jewish history from early modern through modern times, highlighting emancipation, enlightenment, and Jewish responses to modernity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	360	The Crusades: Religion & Conflict in the Middle Ages	Examines the origins, the development, and the outcomes of the movement that we call "crusades" by connecting the military aspect of the crusades to broader developments. Focuses primarily, but not exclusively, on the period 1095-1453. Geographically covers chiefly the Mediterranean, and, to a lesser extent, northeastern Europe.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with a C or better and minimum 30 hours; Credit is allowed for only HST 360 or 394 (Crusades in the Middle Ages)
HST	361	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours. Credit is allowed for only HST 361 or REL 374
HST	361	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours. Credit is allowed for only HST 361 or REL 374
HST	362	Sex and Society in Classical and Medieval Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and religious change in classical and medieval Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	362	Sex and Society in Classical and Medieval Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and religious change in classical and medieval Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	363	Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	363	Sex and Society in Early Modern Europe	Family life, sex roles, and marriage and their relationship to political, economic, and religious change in early modern Europe.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	364	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	364	Sex and Society in Modern Europe	Family life, sex roles, and marriage, and their relationship to political, economic, and social changes in modern Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	365	World Wars I and II: Europe's Eastern Front	In-depth study of the history of the Eastern Front in Europe in the two world wars.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 365 or 394 (WWI and WWII Eastern Front)
HST	366	England to 1689	In-depth examination of the political, economic, and social development of the English people to the late 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	367	Modern Britain	In-depth examination of the political, economic, and social development in Britain from 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	368	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	368	Culture and Imagination in European History	Topics in European cultural and intellectual history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	369	History and Memory of the Holocaust	In-depth study of the history of the genocide of Jews, the rise of modern antisemitism within the context of Nazi Germany, and the memory and memorialization of the Holocaust post 1945.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 369 or JST 369 or REL 312 or HST 304 (Shoah: History, Memory, and Representation) or HST 394 (History of the Holocaust)
HST	370	Eastern Europe in Transition	Democratization, privatization, and identity transformations since the fall of communism in contemporary Eastern Europe and the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	371	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 371 or REL 377
HST	372	Modern Middle East	In-depth examination of the effect of the West and modernization on Middle Eastern governments, religion, and society in the 19th and 20th centuries.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	Pre-requisite: Minimum 24 hours
HST	372	Modern Middle East	In-depth examination of the effect of the West and modernization on Middle Eastern governments, religion, and society in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: Minimum 24 hours
HST	373	Roman History I: Foundations and Republic	Traces the growth of Roman power from Rome's humble beginnings in the eighth century B.C. to its domination of the Mediterranean and the transformation of the Roman Republic into the Roman Empire after the Battle of Actium (31 B.C.).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 373 or LAT 373 or SLC 373
HST	374	Roman History II: The Roman Empire	The Roman Empire from the reign of the first emperor, Augustus (27 B.C.-A.D. 14), to that of Justinian (A.D. 527-565), focusing on the lives of the Roman emperors, the society and culture of the empire, and the profound changes that eventually contributed to the empire's collapse.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 374 or LAT 374 or SLC 374
HST	375	Colonial Latin America	Ancient civilization, exploration and conquerors, and colonial institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	375	Colonial Latin America	Ancient civilization, exploration and conquerors, and colonial institutions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	376	Modern Latin America	In-depth examination of the development of independent Latin American republics since 1821.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	376	Modern Latin America	In-depth examination of the development of independent Latin American republics since 1821.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	378	Latin American Women: The National Period	In-depth study of the history of women, gender relations, and state policies in a broad continental setting, from independence to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	383	China	Political, economic, social, and cultural history of the Chinese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 333, HST 383 or SLC 333
HST	384	China	Political, economic, social, and cultural history of the Chinese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	385	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only CHI 335, HPS 325, HST 385 or SLC 335
HST	386	Interpreting China's Classics	Study of selected Confucian and/or Taoist classics and ways they have been read in both Asian and Western scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 336, HST 386 or SLC 336
HST	387	Japan	Political, economic, social, and cultural history of the Japanese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	388	Japan	Political, economic, social, and cultural history of the Japanese people from the 17th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	389	Japan Society and Values/Premod	Effects of economic and social transitions on personal and social values as reflected in the dramatizations of contemporary events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 30 hours
HST	390	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
HST	390	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
HST	391	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 391 or SGS 381
HST	392	Modern India	In-depth study of modern India and its neighboring countries from the 18th century to the present.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 392 or HST 303 (Modern South Asia) or HST 394 (Modern South Asia)
HST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours
HST	397	Greece and Rome at War	Familiarizes students with the major battles, leaders and tactics of Classical Greece and Rome. Supplements lectures with student participation including study of original sources, group presentations, and gaming battle simulations. This multifaceted approach gives a greater sense of the evolution of the leaders, armies and tactical systems of the Greeks and Romans.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 360, HST 397, LAT 360, SLC 360 or SLC 394 (Greece and Rome at War)
HST	400	Topics in American Historical Periods	Focuses on specific periods in American history. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		

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HST	404	Conquest and Encounters in Colonial Latin America	How did Hernan Cortés and Francisco Pizarro defeat the Aztec and Inca Empires? Despite numeric inferiority, limited provisions, and little knowledge about the Americas, Cortés and Pizarro defeated advanced civilizations that had experienced warriors and millions of inhabitants. Possible explanations include the conquistador's valor, advanced weaponry, superior military strategy, Indian allies, and biological attacks. In their encounters with native peoples of the Americas, Europeans were not always conquerors. Álvaro Núñez Cabeza de Vaca and Lope de Aguirre failed both in their attempt to conquer a large Indian civilization and in their effort to find mineral wealth. A few Europeans such as Bartolomé de Las Casas spoke out against the abuses committed against the Indians during the conquest. Explores these issues from the perspective of both Europeans and native peoples and looks at the long-term impact for Latin America and its peoples.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 404 or HST 494 (Conquest & Encounters)
HST	405	Colonial American History to 1763	Political, economic, social, and cultural history of the colonial era. Concentrates on English colonies, with some consideration of Spanish, French, and other colonial regions in North America.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	405	Colonial American History to 1763	Political, economic, social, and cultural history of the colonial era. Concentrates on English colonies, with some consideration of Spanish, French, and other colonial regions in North America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	406	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	406	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	406	American Revolution/1763-1789	Causes, course, and consequences of the American Revolution culminating in the ratification of the Constitution.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	407	Early U.S. Republic/1789-1850	Political, social, economic, and cultural development of the United States from the Revolution to 1850.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	407	Early U.S. Republic/1789-1850	Political, social, economic, and cultural development of the United States from the Revolution to 1850.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	408	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	408	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	408	Civil War and Reconstruction	Explores the causes, conduct, and consequences of the American Civil War, concentrating on the years 1848 to 1877.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	409	Emergence Modern U.S. 1877-1918	Triumph of modern political, social, and economic structures and values, 1877-1918; role of region, religion, race, and ethnicity.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	409	Emergence Modern U.S. 1877-1918	Triumph of modern political, social, and economic structures and values, 1877-1918; role of region, religion, race, and ethnicity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	410	Modern U.S., 1918 to 1945	1920s boom and the crash, the Depression and the New Deal response. The Second World War at home and abroad.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	411	Postwar U.S., 1945-1973	Cold War, prosperity, reform, and immense social and political change in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	412	Contemporary U.S., 1973-Present	End of the Cold War, political crises, and cultural transformations in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	413	Contemporary America	The United States from 1945 to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	413	Contemporary America	The United States from 1945 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	413	Contemporary America	The United States from 1945 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or SB) & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	414	Political Thought and Leadership	Research seminar in political values and leadership. Combines lecture, readings and guest lectures by leaders in business, public affairs and the media. Culminates in a substantial written research effort.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; HST 112 with C or better; minimum 55 hours; Credit is allowed for only HST 414 or POS 414
HST	415	Unequal Sisters: Women and Political and Cultural Change	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or SB) & H & C	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	415	Unequal Sisters: Women and Political and Cultural Change	Examines race, ethnic, and class differences among women, focusing on the political and cultural experiences of women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or SB) & H & C	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	416	Western Rivers	Examines the relation between rivers, culture, and environment in the American West.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L & H	Pre-requisites: ENG 102, 105, 108 or 112 with C or better; Minimum 55 hours
HST	418	The Hispanic Southwest	Development of the Southwest in the Spanish and Mexican periods to 1848.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	
HST	419	20th Century Chicano/a History	Historical development of the Chicano community in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only HST 419 or LAS 419
HST	423	The Tudor Monarchy	Political, cultural, and social foundations of 16th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	424	The Stuart Monarchy	Political, social, economic, and cultural developments in 17th-century England.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	426	The British Empire	British imperialism and colonialism in Africa, the Americas, Asia, and the South Pacific.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	427	French Revolution/Napoleonic Era	Conditions in Pre-Revolutionary and Revolutionary France; organization of France under Napoleon and impact of French changes upon Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	428	Modern France	Social, political, economic, and cultural transformations of French society, 1815-present. Impact of industrialization, war, and revolution on people's lives.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	428	Modern France	Social, political, economic, and cultural transformations of French society, 1815-present. Impact of industrialization, war, and revolution on people's lives.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	429	Modern Germany	Germany since 1871.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	429	Modern Germany	Germany since 1871.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	430	The Ottoman Empire in the Classical Period	Focuses on the largest and most powerful Islamic polity from the late Middle Ages until the early twentieth century: its formation, institutions, social and cultural life, and its multifaceted impact on Europe and the Near East.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 430 or HST 495 (The Ottoman Empire in the Classical Period) or HST 498 (The Ottoman Empire in the Classical Period)
HST	431	Eastern Europe and the Balkans, Pre-1914	Empire and nation in Eastern Europe and the Balkans before World War I, emphasizing Hapsburg and Ottoman lands.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	432	Eastern Europe the Balkans, 20th Century	Politics and culture in Eastern Europe and the Balkans from World War I to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	435	The Russian Empire	Development of Russian imperial institutions and civil society from the 17th to the early 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	436	The Soviet Experiment	In-depth study of Communist revolutionaries' rule of Russia, focusing on utopian culture, Stalinist terror, heroism in war, and the breakup of the former Soviet Union.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	438	Modern Spain	Cultural, economic, political, and social development of modern Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	439	Athenian Democracy	Discussion-based seminar familiarizes participants with the origins, characteristic institutions and political ideology of the Athenian democracy of the 5th and 4th centuries BCE. Engages selected topics in the study of Athenian democracy and gives participants an idea of the substance of contemporary debates within scholarship. Topics will include: The origins of the Athenian democracy; women, slaves, and other subordinate social groups within the democracy; elite critique of democratic ideology and episodes of outright civil war; leaders and masses; the role of the court system within the democracy; democracy and the Athenian empire; and violence in Athenian society. The goal of the course, in addition to a greater familiarity with the Athenian democracy, will be a research paper with a well-chosen topic and a distinctive thesis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 439 or HST 494 (Athenian Democracy)

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HST	441	Latin America and the World Economy	Globalization did not begin in the late twentieth century, but rather global trade has linked Latin America with the rest of the world for over five hundred years. The region has been an active and important participant in the world economy since Columbus's first voyage in 1492. This course explores the social, cultural, economic, and environmental impact of such participation on both Latin America and the rest of the world. It is organized both chronologically and thematically. We will study both colonial and post-colonial trade. The commodities studied include sugar, rubber, bananas, and cocaine.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L & G & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 441 or HST 305 (Latin America and the World Economy) or HST 494 (Latin America and the World Economy)
HST	443	The United States and Latin America	Latin American struggle for diplomatic recognition, attempts at political union, participation in international organizations since 1810, and relations between the United States and Latin America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	444	Latin American Independence	History of independence movements throughout the Western hemisphere from the late 18th century until the mid-19th century.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & G	Pre-requisites: ENG 102, 105, 108 or 112 with C or better; Minimum 55 hours
HST	445	20th-Century Cuba	History of Cuba from colonial era to formation of the early republic; political, economic, social development in late 20th century.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	447	Modern Mexico	In-depth examination of political, economic, social, and cultural developments in Mexico from 1810 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 55 hours. Credit is allowed for only HIS 423 or HST 447
HST	447	Modern Mexico	In-depth examination of political, economic, social, and cultural developments in Mexico from 1810 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 55 hours. Credit is allowed for only HIS 423 or HST 447
HST	448	Mexican/U.S. Border	Analyzes the evolution of the Mexican/U.S. border region from the mid-19th century to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: ENG 102, 105, 108 with C or better; Minimum 55 hours
HST	449	Mexican Immigration to the U.S.	Assesses the evolution of immigration and emigration public policy since the mid-19th century. Seeks to contextualize the relationship between immigration and other elemental nation-state issues as the economy, education, identity, and civil rights.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & H & C	Pre-requisites: ENG 102, 105, 108 with C or better; Minimum 55 hours
HST	450	Postmodern Mexico	Challenges historical myths about the evolution of the nation state and calls into question that globalization and transnationalism are only recent phenomena of the postmodern world.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & G	Pre-requisites: ENG 102, 105, 108 with C or better; Minimum 55 hours
HST	451	Chinese Cultural History I	China's classics in translation studied both for their intrinsic ideas and for the origins of Chinese thought.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 451, HST 451 or SLC 451
HST	452	Chinese Cultural History II	Evolution of Confucian thought, its synthesis with Taoism and Buddhism, and modern reactions against, and uses of, Confucian traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 452 or HST 452 or SLC 452
HST	453	The People's Republic of China	Analyzes major political, social, economic, and intellectual trends in China since the founding of the People's Republic in 1949.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	454	History of Genocide	Examines the individuals and institutions responsible for the most infamous episodes of state-sanctioned violence in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G & H	Prerequisite(s): minimum 45 hours. Credit is allowed for only FOR 454 or HST 45
HST	456	The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	456	The Vietnam War	Intersection of American and Asian histories in Vietnam, viewed from as many sides as possible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	459	Gandhi and the Politics of Nonviolence	In-depth study of Gandhi and the Ghandian political philosophy and practice of nonviolence.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 55 hours. Credit is allowed for only HST 459 or HST 498, Gandhi: Politics of Non-Violence
HST	465	Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & H	Pre-requisite: ENG 102, 105, 108 with C or better; Minimum 55 hours
HST	465	Women in Europe, 1750 to Present	European women's diverse religious, ethnic, national, and economic roles in society, culture, and politics, 1750 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & H	Pre-requisite: ENG 102, 105, 108 with C or better; Minimum 55 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	480	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): admission to Professional Teacher Preparation Program; Credit is allowed for only HST 480 or HST 530
HST	480	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): admission to Professional Teacher Preparation Program; ENG 102, 105, or 108 with C or better; minimum 55 hours; Credit is allowed for only HST 480 or HST 530
HST	480	Methods of Teaching History: Classroom Resources	Methods in instruction, organization, and presentation of the subject matter of history and closely allied fields.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): admission to Professional Teacher Preparation Program; Credit is allowed for only HST 480 or HST 530
HST	481	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): HST 480 or SED 480 with C or better; admission to Professional Teacher Preparation Program
HST	481	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): HST 480 or SED 480 with C or better; admission to Professional Teacher Preparation Program
HST	481	Methods of Teaching History: Community Resources	Identify community-based resources for teaching history, work with resources, and learn how to integrate them into the secondary classroom.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): HST 480 or SED 480 with C or better; admission to Professional Teacher Preparation Program
HST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
HST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
HST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
HST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
HST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Pre-requisites: Barrett Honors student; HST 300 (HIS 300) or 495 with C or better
HST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
HST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
HST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Pre-requisites: Barrett Honors student; HST 300 (HIS 300) or 495 with C or better
HST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
HST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 55 hours
HST	495	Methods of Historical Inquiry	Capstone course in history as an academic discipline, including formulation of research questions, use of primary and secondary sources to evaluate, form and support historical arguments. Students draft and revise a scholarly research paper.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): History or Secondary Education (History) or History (Secondary Education) major; ENG 102, 105, or 108 with C or better; minimum 55 hours, Credit is allowed for only HST 300 or HST 495 or JST 490

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HST	495	Methods of Historical Inquiry	Capstone course in history as an academic discipline, including formulation of research questions, use of primary and secondary sources to evaluate, form and support historical arguments. Students draft and revise a scholarly research paper.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Prerequisite(s): History or Secondary Education (History) or History (Secondary Education) major; ENG 102, 105, or 108 with C or better; minimum 55 hours. Credit is allowed for only HST 300 or HST 495 or JST 490
HST	495	Methods of Historical Inquiry	Capstone course in history as an academic discipline, including formulation of research questions, use of primary and secondary sources to evaluate, form and support historical arguments. Students draft and revise a scholarly research paper.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L	Prerequisite(s): History or Secondary Education (History) or History (Secondary Education) major; ENG 102, 105, or 108 with C or better; minimum 55 hours. Credit is allowed for only HST 300 or HST 495 or JST 490
HST	496	South, Southeast, and East Asia in the Global Matrix	In this capstone seminar, majors in Asia Studies take up broad comparative themes, integrating knowledge from the major's three tracks (East, South, and Southeast Asia) and executing a research project culminating in a major paper.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s) with C or better: ASB 240 (or GCU 240 or HST 111 or 240 or 245 or POS 240 or REL 240 or 245 or SGS 240 or 245); ENG 102 (or ENG 105, or 108); minimum 55 hours
HST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
HST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7	L	Pre-requisites: HST 200 or 300 (HIS 300) with C or better; History major with senior standing or Education-History student with minimum 75 hours
HST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7	L	Pre-requisites: HST 200 or 300 (HIS 300) with C or better; History major with senior standing or Education-History student with minimum 75 hours
HST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: HST 200 or 300 (HIS 300) with C or better; History major with senior standing or Education-History student with minimum 75 hours
HST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
HST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
HST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
HST	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	502	Public History Methodology	Introduces historical research methodologies, techniques, and strategies used by public historians. Readings, short papers, and guest speakers. Required for students in the public history concentration.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student
HST	515	Studies in Historiography	Methods and theories of writers of history.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
HST	520	Masters of Nonfiction	Students read and critically discuss works by well-known nonfiction writers to improve their own writing skills. Consists of weekly writing exercises, reviewed with workshop-style discussions centered on individual authors, themes or genres such as history, journalism, personal essays, biography, character profiles, travelogues, book reviews and op/ed commentary.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only HPS or HST 520
HST	525	Historical Resource Management	Identification, documentation, and interpretation of historic period buildings, sites, and districts. Emphasizes interdisciplinary efforts among historians, architects, and anthropologists.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student
HST	527	Historical Administration	Preparation of historians in administration of archives and historical sites, museums, societies, and offices in government agencies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student
HST	532	Community History	Techniques and methods of community history emphasizing local resources. Required for community history option.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: History MA or PHD student
HST	573	Museum Administration	Formal organization and management of museums, governance, personnel matters, fund raising and grantsmanship, legal and ethical issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ASB 573 or HST 573
HST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: History MA or PHD student
HST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: History MA or PHD student
HST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-15		Pre-requisite: History MA or PHD student
HST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Pre-requisite: History MA or PHD student
HST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	640	Historical Methods	Core readings course engages key historical monographs focused on historical methods. Provides core content knowledge and an understanding of debates and trends in the field. Provides a basic understanding of existing literature in the field. Develops ability to analyze historical methods and develop scholarly historical arguments.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): History MA or PhD student; Credit is allowed for only HST 640 or HST 500 (Historical Methodology)

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HST	641	North American History	Core readings course engages key historical monographs focused on historical methods. Provides core content knowledge and an understanding of debates and trends in the field. Provides a basic understanding of existing literature in the field. Develops ability to analyze historical methods and develop scholarly historical arguments.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): History MA or PhD student; Credit is allowed for only HST 641 or HST 598 (US to 1877)
HST	642	European History	Core readings course engages key historical monographs focused on European history. Provides core content knowledge and an understanding of debates and trends in the field. Provides a basic understanding of existing literature in the field. Develops ability to analyze historical methods and develop scholarly historical arguments.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): History MA or PhD student; Credit is allowed for only HST 642 or HST 598 (European Core I: Pre-Modern Europe) or HST 598 (Medieval and Early Modern Europe) or HST 598 (Pre-Modern Europe and the World)
HST	643	Global History	Core readings course engages key historical monographs focused on global history. Provides core content knowledge and an understanding of debates and trends in the field. Provides a basic understanding of existing literature in the field. Develops ability to analyze historical methods and develop scholarly historical arguments.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): History MA or PhD student; Credit is allowed for only HST 643 or HST 598 (World and Global History)
HST	682	Advanced Research Skill	Designed for students who are demonstrating a non-linguistic skill such as: quantitative methods of analysis, geographic information system mapping, documentary editing, training in archival management, oral history interview techniques and historic preservation, or interdisciplinary training in fields relevant to the student's research interests such as geography, anthropology, sociology, political science or public administration, literature, ethnic studies, women's studies, ecology.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Prerequisite(s): History MA or PhD student; Credit is allowed for only HST 682 or HST 692 (Documentary Editing Advanced Research)
HST	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Pre-requisite: History MA or PHD student
HST	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HST	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: History MA or PHD student
HST	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HST	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Pre-requisite: History MA or PHD student

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HST	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		Pre-requisite: History MA or PHD student
HUD	301	Housing and Community Design and Development	Single- and multifamily housing, residential neighborhoods, and planned communities. Affordability in owner-occupied and rental housing. First-time, move-up, and adult markets.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	302	Housing Production Process	Development feasibility analysis, finance, contracts, land acquisition, community and permit presentation and negotiation, scheduling, cost control, marketing, and sales.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	361	Housing and Urban Development Studio I: Residential Design and Development	Affordable residential design, development, and production process.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Housing & Community Developmnt student; Passed Milestone; Co-requisites: HUD 301; HUD 363
HUD	362	Housing and Urban Development Studio II: Community Design and Development	Neighborhood and new community design and development process.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Housing & Community Developmnt student; HUD 361 with C or better; Co-requisite: HUD 302; HUD 364; HUD 403
HUD	363	Housing and Urban Development Seminar I: Residential Design and Development	Affordable residential design, development, and production process.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Housing & Community Developmnt student; Co-requisites: HUD 301; HUD 361
HUD	364	Housing and Urban Development Seminar II: Community Design and Development	Neighborhood and new community design and development process.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Housing & Community Developmnt student; Co-requisites: HUD 302; HUD 362; HUD 403
HUD	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
HUD	401	Assisted Housing	Publicly subsidized and nonprofit housing. Policy, implementation, and administration. FHA, Section 8, FmHA, projects and scatter site, and tax considerations.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	402	Community Revitalization: Problems and Strategies	Public policy and strategies for neighborhood revitalization and community renewal. Preservation and adaptive reuse, gentrification, neighborhood safety, and related socioeconomic concerns.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	403	Advanced Topics in Housing and Urban Development	Varying topics, such as manufactured housing, homelessness, mortgage and finance in housing, housing abroad, marketing housing, and sustainable community development.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	3		
HUD	461	Housing and Urban Development Studio III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction, cost management, and marketing.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Housing & Community Developmnt student; HUD 362 with C or better; Co-requisites: HUD 401; HUD 463
HUD	462	Housing and Urban Development Studio IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Housing & Community Developmnt student; HUD 461 with C or better; Co-requisites: HUD 402; HUD 464
HUD	463	Housing/Urban Dev Seminar III	Comprehensive development process simulation. Feasibility analysis, finance, design, community and permit presentation, construction and cost management, and marketing.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Housing & Community Developmnt student; HUD 302 and HUD 364 with C or better; Co-requisites: HUD 401; HUD 461
HUD	464	Housing and Urban Development Seminar IV: Neighborhood Revitalization Process	Housing rehabilitation, neighborhood revitalization, and urban infill. CDBG, empowerment-enterprise zoning, code enforcement, citizen participation.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Housing & Community Developmnt student; Co-requisites: HUD 402; HUD 462
HUD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Housing & Urban Developmnt BSD student
HUD	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
HUD	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
HUD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
HUD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
HUM	530	Pop Culture America		Y	LEC	Y	CNV	Liberal Arts and Sciences	Division of Humanities	3		

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HUM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
HUM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
HUM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IAP	101	Art, Artist, and Culture	Provides an approach to art, creativity, and culture in global, historical, and contemporary contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
IAP	102	Foundations I: Performance Techniques and Composition	Focuses on practice-based studies of contemporary presentational strategies and techniques.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	103	Foundations I: Interdisciplinary Digital Media	Digital media studies and application of contemporary artists, processes, and presentation practices in Interdisciplinary arts.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	104	Foundations I: Fundamentals of Sound Art	Investigates late 20th- and 21st-century sound art and our relationship with it.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	105	Foundations I: Fundamentals of Visual Art	Focuses on contemporary aesthetic concepts and language for interdisciplinary visual arts application. Introduces core concepts of visual design: the elements and principles of design and the creative process, the basics of drawing, color theory, typography and 2D design. Engages student in the fundamental aspects of design to build an adequate foundation and prepares for the next level of the study of interdisciplinary arts practice.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAP	201	Introduction to Interdisciplinary Arts	Considers interdisciplinarity in practical terms in all art forms. Also considers antecedents and cross-cultural issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
IAP	202	Perspectives on Interdisciplinary Arts and Performance	Social, cultural, and historical examination of interdisciplinary art and performance and a survey of current interdisciplinary work and approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
IAP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAP	301	Energetic Systems of Art: Collaboration in the Arts	Identifies and explores the energetic systems at work in the creation, performance, and perception of art.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	302	Cross-Cultural Perspectives on the Arts	Social and cultural perspectives of art and performance through a survey of historical and contemporary attitudes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	304	Traditions of the Avant-Garde and Experimental Art	Surveys 20th-century art movements and isms, including futurism, dada, surrealism, constructivism, realism, the Bauhaus, abstract expressionism, minimalism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	305	20th and 21st Century Art, Performance, and Media	Surveys artists, movements, and trends in the arts with an emphasis on interdisciplinary performance, media, and technology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	307	Art and War	Global interdisciplinary survey of the range of work created by artists in response to war, through time.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	
IAP	310	Women in Art	Cultural, historical, and social issues relating to the seeming scarcity of women artists and changing social contexts for women artists.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre/Co-requisite: ENG 101 or 105 with C or better; Credit is allowed for only IAP or IAS 310
IAP	321	Music Composition I	Study and implementation of specific compositional theories and procedures. May be repeated for credit when topics vary.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	322	Multitrack Digital Recording	Introduces students to theory and practice of Musical Instrument Digital Interface (MIDI) technology.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IAP	324	The Voice and Performance	Involves all aspects of the human voice, including research, creation, and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	325	Sound Performance: Exploring Alternative Performance Groups	Utilizes innovative sound ensembles to explore all aspects of sound and its place in various art forms.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: BA Digital Culture major or BA Interdisciplinary Arts and Performance major; Pre/Co-requisite: IAP 201 or 202
IAP	331	Performance, Acting, and the Individual	Explores the concepts of the self, the subject, and the author as each pertains to the solo artist.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Minimum 45 hours
IAP	332	Technical Production for Interdisciplinary Arts	Develops basic technical knowledge and application of fundamental stagecraft techniques used in the creation and presentation of performance works.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	333	Directing for Performance	Explores various strategies for performance. Emphasizes nontraditional staging and performance.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	334	Conceptual Development in the Arts	Conceptual development processes in the arts from initial idea to formal project proposals, grants, and production plans.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): BA Digital Culture major or BA Interdisciplinary Arts and Performance major or BA Performance and Movement major. Corequisite(s): IAP 201 or IAP 202
IAP	352	Seeing and Drawing	Develops drawing and seeing skills that are important not only to visual arts but also to music, dance, and theatre.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	354	Visual Representation	Explores materials, processes, and aesthetic concepts of art making through various media with readings on cultural perspectives and contemporary theory.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: BA Digital Culture major or BA Interdisciplinary Arts and Performance major; Co-requisite: IAP 201 or 202
IAP	355	Illusion and Vision	Inquiry into 2-D surfaces for visual representation and personal expression; includes readings on color theory, visual perception, and historical/cultural patterns.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	361	Digital Editing and Media Literacy	Investigates the approaches used in digital editing with a focus on interactivity, graphics, audio, and desktop video.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	CS	Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing or BA Digital Culture student
IAP	362	Games & Narratology	Focuses on design techniques for the writing of nonlinear and interactive stories in the video game development process. Compares and contrasts game writing with other creative writing such as short story, song writing, oral history, poetry, fiction and film. Examines, deconstructs and questions the game design approach commonly referred to as narratology. Inspects key texts in media and cultural studies for attitudes, ideas and thoughts on games and narrative in games. Uses materials, processes, and aesthetic concepts of level design and visual skills needed to create a video game using a game engine. Knowledge of introductory computer science recommended.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: ENG 101 and 102 with C or better; IAP 105 with C or better
IAP	363	Sound, Image, and Media	Interdisciplinary arts projects for experimental approaches to relating sound and visual image, accompanied by survey of historical and contemporary material.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	364	Documentaries	Media arts projects exploring new and experimental forms of visualization based upon an interdisciplinary survey of historical and contemporary examples.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	365	Digital Interactivity	Combines graphics, video, and animation with digital authoring tools for creation of interactive multimedia Web sites.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing or Digital Culture student
IAP	368	Digital Graphic Technologies	Employs technology used in contemporary graphic designs to design concepts and techniques for modeling and representation applications.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing or Digital Culture student
IAP	371	Verbal Art	Examines varieties of verbal art in everyday life, literature, oral and literate cultures. Considers diverse cultural forms and values.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	375	Contemporary Performance: Theories and Practice	Performance course focusing on elements of contemporary and digital performance in relationship to stage, new technologies, video, installations, and public art. Through interdisciplinary strategies, students gain tools to deepen their knowledge and range of performance. Requires students to engage in research, conceptualization, and the creation of new original work, combining classroom workshops, various readings, fieldwork, and production to emphasize interdisciplinarity, collaboration, and personal vision. Once theories and concepts are explored, students work in a conceptually based and physically rigorous environment toward producing new work, culminating in a final performance project.	N	STO	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): BA Digital Culture major or BA Interdisciplinary Arts and Performance major or BA Performance and Movement major. Corequisite(s): IAP 201 or 202

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IAP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAP	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
IAP	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
IAP	421	Composition: Process, Technique, and Style II	Advanced study of specific compositional theories and procedures; in-depth analysis of individual work.	N	LEL	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	431	Perspectives on Performance and Acting	Focuses on the interaction of the performer with media, alternative stagings, and collaboration with other performers.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	433	Directing Workshop	Applies experimental directorial techniques to presentations and deconstruction of classical works including European and cross-cultural traditions.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Credit is allowed for only IAP 433 or MAS 598 (Directing Workshop)
IAP	434	Production Laboratory	Develops original scripts into showcase productions. Students function as theatrical ensemble, participate in all phases of performance and production values.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	441	Movement for Performance	Explores the relationship of movement as it relates to performance, both historically and cross-culturally.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	462	Games and Play	Focuses on a study of play and game design. Discusses what play is and why humans need it as it pertains to game design. Considers and analyzes an examination of the dark side of play. Scrutinizes the concept of what critical play is and how games are working within social, political and cultural systems. Studies these concepts as the students design and execute a serious or artistic game demo using the materials, processes, aesthetic concepts of art making and scripting skills needed to create a video game using a 3D game engine. Knowledge of introductory computer science recommended.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: IAP 105 with C or better
IAP	464	Media and Diversity	Interdisciplinary art projects exploring identity, perception, and technologies from a basis of class, race, ethnicity, gender, sexuality, and ecology.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	
IAP	465	Media Technologies and the Arts	Practical explorations of media arts interrelated with cultures, society, and technology, addressed through readings, discussion, research, and student arts projects.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	466	Digital Interactivity, Advanced	Advanced multimedia authoring skills for creation of interactive works in DVD, CD ROM, and other media formats.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing students
IAP	467	Acoustic Ecology	Investigations into the relationship between audio art and ecology; covers field recording, oral histories, digital editing, and designing audio Web site and databases.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	468	Digital Graphic Applications	Targeting, planning, design, authoring, development, and presentation of professional digital media graphics for Internet and print.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Interdisciplinary Arts and Performance or Applied Computing students
IAP	469	Advanced Audio Production	Engages advanced media students in the technical, logistical, and aesthetic concerns specific to audio in all forms of digital media.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAP	471	Language, Culture, and Performance	In-depth examination of language in myth, poetry, social and aesthetic performance genres.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	473	Aesthetic Research	Investigates how artists, in all disciplines and from different historical periods, conduct or participate in research.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	474	Art and Film	Focuses on film as an art form in relation to the arts through aesthetics, cinematic theory, period study.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
IAP	480	Senior Project	Capstone course. Students develop an exit project for the IAP degree under the guidance of an advisor.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3-6		
IAP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
IAP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
IAP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
IAP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
IAP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		

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IAP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IAS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
IAS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAS	220	Psychology, Multicultural Narratives, and Religion	Examines contemporary multicultural life narratives that explore diversity in America and the authors' constructions of psychological identity and religious values.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Pre-requisite: ENG 101 or 105 with C or better
IAS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
IAS	300	Adult Career Development	Analysis of sociological and economic factors of 21st-century work environments, integrated with a psychological understanding of adult development.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or SB	Pre-requisites: ENG 101 or 105 with C or better or Applied Science student
IAS	305	Work and Identity	Explores the relationship between work and identity, as well as the search for meaning in work across generations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	
IAS	324	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
IAS	340	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prereqs for IAS 340. Credit is allowed for only BIO 312 or IAS 340 or PHI 340
IAS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAS	401	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Credit is allowed for only IAS 410, MAS 598 (Sacred Scriptures & Social Choices) or REL 401
IAS	406	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 101 or 105 or 107 with C or better. Credit is allowed for only FOR 406 or IAS 406 or PHI 406
IAS	407	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisite: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
IAS	409	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Credit is allowed for only IAS 409 or PHI 409
IAS	410	Evolution of Ideas	Investigates ideas (paradigms) and revolutions (paradigm shifts). Examines several topics from perspectives of science, arts, humanities, social sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisite: ENG 101 or 105 with C or better
IAS	411	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Credit is allowed for only IAS 411 or MAT 411
IAS	415	Life in the Universe	Examines the search for life in extreme environments on Earth and in remote locations beyond Earth.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAS	416	Black Holes and Beyond	Explores developments in understanding nature's most basic force-gravity-from Aristotelian concepts to modern theories of curved space-time.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
IAS	420	Multicultural Autobiographies	Examines the human experience via autobiographies and personal narratives. Multicultural, literary, and psychological perspectives on individual lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C	Pre-requisites: ENG 200 with C or better and one 200-level literature course with C or better OR New College undergraduate student and minimum 45 credits; Credit is allowed for only ENG or IAS 420
IAS	430	Science and Religion	Examines evolving relationships between scientific thought and Western and Eastern religious thought. Explores cosmologies, worldviews, and epistemologies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisite: ENG 101 or 105 with C or better; Credit is allowed for only IAS 430 or MAS 510
IAS	477	World Literature	Introduces world literature, mostly outside the United States and England.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better, or Integrative Sciences and Arts or New College undergraduate student with minimum 45 earned hours; Credit is allowed for only ENG 477 or IAS 477

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IAS	480	Capstone: Practices and Approaches	Individualized projects developed by the student under the guidance of the capstone coordinator based upon the student's area of concentration. Provides an opportunity to apply the knowledge and skills developed in the course of their program to real-world situations.	N	RSC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): Interdisciplinary Arts and Sciences BA or Philosophy, Religion, and Society BA or Applied Science BAS major
IAS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
IAS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
IAS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
IAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
IAS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
IAS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
IAS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	410	Behavioral and Mental Disorders	Common co-occurring mental and behavioral health issues related to patients' chronic medical conditions and evidence-based assessment strategies to address behavioral health needs in primary care and other medical settings.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours
IBC	415	Behavioral Health Over the Lifespan	Common issues and concerns faced throughout the different life stages and the associated behavioral health needs. Presents evidence-based strategies for primary prevention and early intervention. Provides case examples to effectively illustrate the application of the key constructs addressed in the course.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours
IBC	420	Population Health Management	Population health management as it applies to the triple aim. Discusses identifying patient populations (through electronic medical records (EMR) and other strategies), using groups (including group dynamics) to manage health, engagement strategies, and risk stratification strategies.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours
IBC	425	Cognitive and Behavioral Counseling	Frameworks for conceptualizing health behavior change. Reviews evidence-based approaches that address patient's behavioral health needs in primary care and other medical settings.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours
IBC	430	Clinical Medical Pathophysiology	Provides an overview of pathophysiology and medical treatment of common medical conditions in primary care (e.g., diabetes, coronary heart disease, hypertension, asthma, cancer). Emphasizes medical terminology, pathophysiology, common medical treatments and behavioral health issues associated with those conditions that students can expect to see in integrated medical settings, especially integrated primary care. Students learn appropriate medical terminology for symptoms, diseases, treatments and medical tests so they can communicate effectively with inter-professional medical teams. Discusses the role of the behavioral health provider as it relates to these conditions as well.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours
IBC	520	Integrated Health: The Patient-Centered Medical Home (PCMH)	Provides an introduction to the Patient-Centered Medical Home (PCMH); alignment of PCMH within primary care systems; and the importance of PCMH within integrated health care design, implementation and relevancy to the triple aim.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	530	Evidence-Based Integrated Health Care	Provides a management-level introduction to evidence-based guidelines for the management of health care concerns through an integrated health care design and delivery system meeting the triple aim.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	540	Integrated Health Care Process Improvement	Help students evaluate, measure, analyze, change and lead improvement in health care systems. Students learn how to apply principles of quality improvement based on Lean Six Sigma health care to effectively shape and create sustainable health care systems that meet "triple aim" of improved patient experience of care, improved population health, and reduced utilization and cost of care. Based on principles of value-based health care delivery in which achieving high value for patients is the overarching goal of health care delivery, defined as health outcome achieved per dollars spent.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	550	Integrated Care Business Operations	Provides a management-level introduction to operationalizing integrated health care delivery systems meeting the triple aim.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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IBC	560	Strategic Business Planning and Big Data	Provides a survey of emerging use of "big data" in health care, a term used to describe data sets that contain massive amounts of health care information that are beyond the capacity of commonly used software programs that can be analyzed for the purpose of health care analytics. Covers analytical tools that can be used to leverage health information technology (HIT) from health care systems and applies quality improvement methodologies such as Lean and Six Sigma to make strategic improvement in health care. Covers approaches to big data business intelligence and health care analytics to design, implement and evaluate sustainable health care systems that meet the "triple aim" of improved patient experience of care, improved population health, and reduced utilization and cost of care. Based on principles of value-based health care delivery in which achieving high value for patients is the overarching goal of health care delivery, defined as health outcomes achieved per dollar.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	570	Financial Management	Provides a management-level introduction to financial management of integrated health care.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	585	Interprofessional Consultation, Leadership and Teamwork in Integrated Health Care	Integrates the closely related topics of consultation, leadership and teamwork in integrated health care. Integrated care settings are characterized by interprofessional teams representing diverse stakeholders such as clinical (e.g., PCP, nurse); management (CEO, CFO, Quality) and administrative. External stakeholders such as health plans, specialty care providers and community resources may also need to participate in the integrated care strategic plan. The integrated care consultant must effectively consult with and engage these stakeholders to develop integrated care teams committed to achieving the "Triple Aim" of improved patient experience of care, improved population health and decreased cost. Emphasizes consultation skills designed to engage stakeholders such as networking, marketing and negotiation. Teamwork emphasizes strategies and techniques of building effective and efficient teams across multiple systems of care.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		
IBC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded and no grade is assigned.</u>	Y	RSC	Y	Z3	College of Health Solutions	College of Health Solutions	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, <u>highly specialized courses responding to unique student demand.</u>	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	602	Healthcare Statistics	Provides an overview of contemporary issues in health statistics and develops student proficiency in completing hands-on statistical analyses using Microsoft Excel. Develops proficiency in using Excel to manage data analyses as an ongoing tool to collect and analyze clinical and <u>cost-effectiveness data in primary care and related healthcare settings.</u>	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	604	Clinical Medicine/Pathophysiology	Overview of each of the main systems within the human body. Addresses the major diseases (symptoms, diagnosis, and medical treatments) within each system. Students learn appropriate medical terminology for symptoms, diseases, treatments, and medical tests so they can communicate effectively with medical practitioners (nurses and physicians). Content is equivalent to pathophysiology training in an RN program. Also addresses the role of behavioral care providers in medical settings; design and implementation of psychoeducational programs in primary care; stress management techniques for use in medical settings; chronic pain management; identification and treatment of somatization disorder; increasing compliance in noncompliant patients; alternative/complementary medicine; overview of nutrition; and the effects of exercise and nutrition on prevention and treatment of diseases.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IBC	608	Psychopharmacology for the Behavioral Care Provider	Provides overview of psychopharmacology to equip the behavioral care provider with the understanding of psychotropic medications necessary to make prescription recommendations to primary care physicians and to participate in medication management for patients being prescribed psychotropics. Basic principles of pharmacology in general, including pharmacokinetics, pharmacodynamics, medication development and the FDA approval process, interaction effects, drug company marketing strategies, appropriate and inappropriate medication usage, over-medication, and off-label medication use. Pharmacokinetics and pharmacodynamics in special populations (children, the elderly, and patients with co-morbid medical and psychological conditions). The Biodyne protocol for medication management, with emphasis on determining which psychological disorders are likely to be medication responsive. Major classifications of psychotropic medications: stimulants, antidepressants, anxiolytics, antipsychotics, mood stabilizers, narcotics.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	609	Clinical Neuropathophysiology	Presents overview of each of the basic neuroanatomy, neurophysiology, and a focus on the manifestations of neurophysiological dysfunction across the life span for Doctor of Behavioral Health (DBH) program behavioral clinicians. Covers the basic human brain anatomy, neurophysiological processes, development, and maturation. Using case studies, presents and discusses evidence-based support for theories of psychiatric disorders and neuropsychopathology. Incorporates evidence-based research findings on the role of genetics, neurophysiological adaptation, epidemiological and societal influences in order to develop understanding of disruptions in normal neurophysiological functioning.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	610	Behavioral and Psychological Assessment in Primary Care	Presents a comprehensive model of behavioral and psychological assessment for behavioral health clinicians in primary care and related medical settings. Provides behavioral health consultants with the necessary knowledge base and skills to develop an appropriate assessment and treatment plan for a variety of commonly seen complaints in primary care. Places attention on the assessment of both psychiatric and behavioral complaints across the lifespan. Students become familiar with both structured interview and empirically support quantitative measures consistently utilized to enhance our understanding of the presenting complaint.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	612	Introduction to Behavioral Interventions	Provides a foundational understanding of behavioral health interventions for primary care settings for those students intending to work in administrative, management or allied health positions. Provides a theoretical basis for various psychological schools of thought, as well as an overview of the empirical evidence for those approaches. Reviews models of therapy including: psychodynamic, brief strategic, cognitive-behavioral and solution-focused. Also reviews two intervention strategies typically used in integrated settings: Acceptance and Commitment Therapy (ACT) and Motivational Interviewing (MI). Explores the ways that these approaches serve as the theoretical framework of the Biodyne model.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 612 or IBC 780 (Introduction to Behavior Intervention)
IBC	613	Cognitive/Affective Bases of Health	Provides an overview of cognitive and affective theories and their intersection with health and health behavior change among individuals and communities. Covers topics including (but not limited to): Health Belief Model, self-efficacy, attribution theory, social-cognitive theory, and the transtheoretical model of change.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	615	Innovative Technologies in Behavioral Health	Provides a quick overview and answers to basic questions related to both online therapy and telemental health. Gives a downloadable audio recording (MP3) and access to the accompanying video clips that augment a rich sampling of pages extracted from our other coursework. As a composite, this experience introduces our multi-modal learning environment and, more importantly, gives an idea of the issues involved with establishing an online or otherwise remote practice.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	1		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 616 or IBC 780 (Innovative Technologies in Behav. Health Intervention)
IBC	620	Psychosomatic Illness: Diagnosis & Treatment	Teaches how to successfully diagnose and treat physical illness caused by various forms of psychosocial stress (psychophysiological disorders, PPD). Because patients are often unaware of the nature or degree of stresses that are responsible for their illness, places emphasis on learning how to detect and use clues that patients provide to develop a more complete understanding of the struggles than they are able to perceive for themselves. Focuses on selecting, assessing and treating a patient known to the student who has medically unexplained physical symptoms.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	1		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 620 or IBC 780 (Psychosomatic Illness: Diagnosis and Treatment)
IBC	624	Integrated Behavioral Health Care for Children and Adolescents	Integrates developmental psychology with pediatric psychology in order to prepare behavioral clinicians to provide screening, assessment, and intervention for children and adolescents in primary care and other medical settings. Presents an overview of developmental stages with an emphasis on critical tasks, while contrasting normal versus abnormal development. Develops societal, familial, and cultural influences.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	634	Strategies and Techniques for Behavior Change in Primary Care	Examines and discusses the theoretical and applied health-related research changing nutrition, smoking and physical activity behaviors in clinical practice.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IBC	660	Healthcare Legal, Ethical, and Professional Issues	Integrate three key areas of healthcare ethics, law, and professional issues for the Doctor of Behavioral Health (DBH) clinician in primary care: (1) the code of ethics for psychologists; (2) legal and ethical issues in medicine; and (3) technological issues and the behavioral health provider.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	670	Integrated Behavioral Health Interventions for Substance Use Disorders	Focuses on the theoretical foundations, research and strategies for identifying, intervening and/or referring patients in primary care and other healthcare settings that present with substance use disorders or problem use. Provides detailed information about the clinical model of SBIRT (Screening, Brief Intervention, and Referral to Treatment), along with strategies for implementing sustainable business models for SBIRT in healthcare environments.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 670 or IBC 780 (Integrated Behavioral Health Interventions for Substance)
IBC	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	701	Models of Integrated Primary Care	Provides an overview of the primary care environment as well as current models of integrated primary behavioral health care. Reviews and critiques models of health care based on their success in impacted patient health outcomes and improving physician satisfaction, along with fiscal and care delivery systems for each.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	702	Brief Interventions in Primary Care	Provides an overview of evidence-based care for the integrated primary care environment. In particular, reviews and applies the most common approaches to addressing co-morbid behavioral and medical conditions, including but not limited to brief psychotherapy, adherence enhancement, lifestyle medicine, and others, using cognitive-behavioral, acceptance and commitment therapy, solution-focused, and motivational interviewing approaches.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only IBC 691 (Brief Interventions in Primary Care) or IBC 702
IBC	704	Psychopathology & Personality in Integrated Primary Care	Covers the basic principles of the Biodyne Model, which are applicable to all behavioral health cases, both in outpatient mental health settings and in integrated care settings. Core knowledge forms the basis for success as a behavioral care provider in integrated medical settings. Includes common psychotherapist mistakes, evidence-based treatment, basics of the Biodyne Model, survey of integrated care approaches, defense mechanisms, case conceptualization strategies for maximum efficiency, and when to refer a patient for specialty care. Presents in detail common conditions (anxiety and depression), with a focus on how these conditions can be subcategorized for maximum treatment efficiency. Emphasizes the development of comprehensive treatment plans (including psychotropic medications, group programs, and other modalities). Presents didactic material in the context of actual cases. Strong focus on case examples, both illustrative cases provided by the instructor and the students' cases (past and/or current).	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	708	Evidence-Based Behavioral Intervention III	Covers advanced principles of evidence-based integrated behavioral care in primary care and other medical settings. Continuation and third course in the Evidence Based Behavioral Intervention I and II sequence. Further develops evidence-based approaches in the assessment and treatment of children and families and deepens and expands the skills in specific applications of assessment and treatment modalities for adults.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	712	Population-Based Behavioral Health Management	Overview epidemiology for health care followed by population-based approaches to behavioral intervention. Epidemiology includes concept of populations; descriptions and definitions of health and disease; measurement of health (measures, morbidity, mortality and health); designs for studying the health of populations and standardization of population health measures. Population-based management includes definitions of medical management; planning health care for populations and population health outcomes; quality of care and economic analysis of population-based interventions; adjunctive treatments as a core component of population-based interventions. Also, advanced application of population-based behavioral interventions with a focus on design, measures, analysis, results and discussion of current approaches. Includes predictive modeling methods for defining populations; interventions focusing on stepped-care approaches; engagement strategies, interventions, measurement, and follow-up.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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IBC	714	Quality and Performance Measurement, Improvement, and Incentives in Health Care	Overview of healthcare quality management, emerging models of healthcare performance measurement, and models of pay for performance incentives in healthcare designed to reward providers for attaining quality of care goals. Prepares behavioral clinicians to provide services that are consistent with best practices in quality management and performance measurement in healthcare and to provide care that is consistent with performance incentive programs that are present or on the horizon. A key characteristic of healthcare reform is increased focus on provider quality of care, accountability for quality via performance measurement, and aligning provider incentives to meet national and regional quality of care performance targets.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	718	Healthcare Systems: Organization, Delivery and Economics	Provides an overview of the U.S. healthcare system with a focus on economics and policy. Primary goals of the course are to enable students to recognize the relevance of economics to healthcare and to apply economic principles to better understand health-related issues; understand the U.S. healthcare delivery system in the context of social, policy, and economic factors; evaluate the evolving nature of healthcare reform initiatives and their implications for clinical practice, financing, research and policy; analyze public healthcare policy from an economic perspective. Students also focus on behavioral healthcare economics and policy and the economics of behavioral health services in medical settings. Students also understand the medical cost offset effect, including economic benefits of behavioral interventions for co-morbid medical and behavioral conditions, measurement of medical cost-offset, and cost-offset for psychopharmacology and specific behavioral conditions.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	720	Behavioral Health Entrepreneurship	Provides an introduction to the essential entrepreneurship skills for the behavioral healthcare clinician. Focuses on entrepreneurial skills designed to prepare the behavioral clinician to start a new business venture or revitalize an existing organization or business, to meet the needs of the evolving healthcare system and marketplace.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	724	Behavioral Health Management	Presents an introduction to the roles and responsibilities of supervisor/manager in a healthcare organization. Provides behavioral health professionals moving into management with the necessary knowledge base and skills to be an entry-level manager and focuses on the further knowledge acquisition needed to become an experienced, effective manager and leader. In addition, discusses the larger context in which healthcare businesses operate—healthcare reform, regulations and technological changes. Participants take time to look at personal characteristics, interpersonal styles and presentation that affect how one is perceived and responded to in an organization. Too often we have observed individuals with high-level clinical skills moving into management without the requisite skills and understanding of issues, restricting their ability to be successful.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only IBC 724 or IBC 780 (Behavioral Health Management)
IBC	728	Cultural Diversity, Health and Illness	Focuses on the relationship among cultural diversity, health and illness, and multicultural psychotherapy in primary care and other healthcare settings. Prepares behavioral clinicians to identify the relationship between cultural diversity and health and illness and to use effective psychotherapy informed by cultural diversity in primary care and related medical settings.	N	LEC	N	OPT	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IBC	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IDN	101	Elementary Indonesian I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
IDN	102	Elementary Indonesian II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		Pre-requisites: IDN 101 with C or better
IDN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
IDN	201	Intermediate Indonesian I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: IDN 102 with C or better
IDN	202	Intermediate Indonesian II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: IDN 201 with C or better
IDN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
IDN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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IDN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
IDN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IED	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		
IED	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
IED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
IED	410	History American Indian Education	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H & C	Credit is allowed for only IED 410 or 510
IED	430	Lang/Literacy-Indig Peoples	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(HU or SB) & C	Credit is allowed for only IED 430 or 530
IED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
IED	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
IED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
IED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
IED	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
IED	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7		
IED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
IED	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	510	History of American Indian Education	Philosophical and historical review of the development of American Indian education policies in both traditional and contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only IED 410 or 510
IED	530	Language/Literacy-Indig People	Examines issues, policies, theoretical foundations, and practices of indigenous peoples and other language minority communities from a sociolinguistics and language reclamation perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only IED 430 or 530
IED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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IED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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IED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
IEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		
IEE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	210	Introduction to Industrial Engineering	History of IE: IE career paths; ethical, social, and contemporary issues; introduces IE techniques, methods, and their application; case studies.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: IEE 100(or BME100,CHE100,CEE100 ,CSE101, ECE100,EEE101,EGR101, FSE100,MAE100,MSE 100, or SES 100) with C or better; MAT 265 (or MAT 270) with C or better
IEE	220	Business and Industrial Engineering	Introduces business for industrial engineers, including business/financial structures, fundamentals of cost and accounting, role of business/engineering in society.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student: Introduction to Engineering course with C or better OR Engineering Management Minor/Concentration: minimum 25 earned hours
IEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	300	Economic Analysis for Engineers	Economic evaluation of alternatives for engineering decisions, emphasizing the time value of money.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student: MAT 265 or 270 with C or better and Introduction to Engineering course with C or better OR Engineering Management Minor/Concentration: MAT 265 or 270 with C or better
IEE	305	Information Systems Engineering	Overview of computer and information systems applications. Topics include client/server; distributed computing; networks; process modeling; e-commerce; enterprise applications; Internet.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	CS	Prerequisite(s): Fulton Engineering undergraduate student and CSE 205 OR other majors with minimum 3.00 GPA and CSE 205
IEE	320	Extreme Excel	Today's workplace environment for engineers demands advanced skills in using worksheet applications such as Microsoft Excel. Course addresses this important gap in the curriculum to provide support for students who are in need of training on the various capabilities of the software. In particular, students become familiar with various functionalities that are critical for performing their jobs as engineers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1		Prerequisite(s): minimum 45 hours; Credit is allowed for only IEE 320 or IEE 394 (Extreme Excel)
IEE	369	Work Analysis and Design	Planning, analysis, and design of methods of accomplishing work. Emphasizes human factors, work planning, methods analysis and design, and work measurement. Applications in diverse fields.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): Fulton Engineering undergraduate student or Engineering Management Minor/Concentration; FIN 300 or IEE 300 with a C or better
IEE	376	Operations Research Deterministic Techniques/Applications	Industrial systems applications with deterministic operations research techniques. Resource allocation, product mix, production, transportation, task assignment, networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): CSE 205 with C or better; MAT 242, 342 or 343 with C or better; or Industrial Engineering graduate student
IEE	380	Probability and Statistics for Engineering Problem Solving	Applications-oriented course with computer-based experience using statistical software for formulating and solving engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	CS	Prerequisite(s): Fulton Engineering undergraduate or Engineering Management minor; MAT 266 (or 271) with a C or better; or Industrial Engineering graduate student

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IEE	381	Lean Six Sigma Methodology	Define, measure, analyze, improve and control (DMAIC) steps of six sigma methodology for business and quality improvement. Reviews the necessary statistical tools and illustrates their integration into the problem-solving process. Overview of lean principles and design for six sigma. Unique features of applying six sigma and DMAIC in transactional and service organizations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: IEE 380 with C or better; Credit is allowed for only IEE 381, 498 (Six Sigma Methodology) or 498 (Six Sigma Green Belt)
IEE	382	Probability and Statistics Lab	Applied modeling and data analysis using Excel and Minitab.	N	LAB	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1		Pre-requisites: Industrial Engineering or Engineering Management BSE student; Co-requisite: IEE 380
IEE	385	Engineering Statistics: Probability	Conditional probability, common probability models, Goodness-of-fit tests and reliability models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): undergraduate Fulton Engineering major or Engineering Management minor with IEE 380 with C or better OR graduate Industrial Engineering major
IEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		
IEE	405	Developing Information Systems Applications	Analysis and design of distributed information system applications using object and relational architectures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student
IEE	412	Introduction to Financial Engineering	Intensive exploration course of three phases: (1) a preparation phase for the terminology and financial lingo to be used throughout the semester, (2) introduction of more advanced financial topics such as portfolio formation, assessment and traditional portfolio theory, (3) several financial engineering topics such as the application of stochastic models to stock and derivatives pricing and financial risk management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): IEE 300 and 380 with C or better
IEE	421	Urban Operations Research	Covers a sample of operations research (OR) techniques that can be used to model urban problems. Studies two main areas: (1) deterministic decision making, including linear programming and network flow problems, facility location, travel salesman and vehicle routing problems, and scheduling; (2) stochastic decision making, including probabilistic modeling, discrete Markov chains, Poisson process, queuing theory, spatially distributed queues and optimization under uncertainty.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): IEE 376 with C or better; IEE 380 with C or better; IEE 385 with C or better; Credit is allowed for only IEE 421 or IEE 498 (Urban Operations Research) or IEE 521 or IEE 598 (Urban Operations Research)
IEE	426	Operations Research in Healthcare	Quantitative methods for modeling and analysis of healthcare systems to address operational and tactical decision-making problems. Topics include forecasting, scheduling, decision making, facility location and layout, staffing, quality control and supply chain management in hospitals and healthcare delivery facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: IEE 376 and 380 with C or better; Credit is allowed for only IEE 426, 498 (OR in Hospitals), 526 or 598 (OR in Hospitals)
IEE	431	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): Fulton Engineering undergraduate, Digital Culture (Media Processing) BA, or Engineering Management minor or concentration; junior or senior standing. Credit is allowed for only IEE 431 or IEE 541
IEE	437	Human Factors Engineering	Studies the human psychological and physiological factors that underlie the design of equipment and the interaction between people and machines.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student OR other majors with minimum 3.0 GPA; Credit is allowed for only IEE 437 or 547
IEE	454	Risk Management	Methods and tools for identifying, assessing, mitigating and controlling risk in business and engineering design activities. Decision tools include cost-benefit analysis, decision trees, value of information, Bayesian statistical decision making, fault trees, and failure modes and effects analysis (FMEA).	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: ECN 221 or IEE 380 with C or better; Engineering major OR Engineering Management Minor/Concentration; Junior or Senior student
IEE	456	Introduction to Systems Engineering	Foundation course addressing the concepts needed for successful system planning, design and build process. Topics include successfully bringing large-scale systems to completion on schedule and on budget, modeling and cost estimating techniques, risk and variability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Junior or senior Engineering student OR Engineering Management Minor/Concentration; Credit is allowed for only IEE 456 or 556

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IEE	458	Project Management	Life-cycle processes for selecting and managing large-scale projects to ensure successful completion. Topics include project phases, defining milestones, work breakdown structure, group decision making and teamwork, organizational structure, human resource management, technological and economic feasibility, configuration management, budget control, and resource allocation and scheduling. Use of modern tools for planning and controlling project performance.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): ECN 221 or IEE 380 with C or better; junior, senior, or postbaccalaureate in Engineering OR Engineering Management minor or concentration
IEE	461	Production Control	Techniques for the planning, control, and evaluation of production systems. Forecasting, inventory control, scheduling, enterprise requirements planning, supply chain design, and coordination.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Fulton Engineering undergraduate student; IEE 376 with C or better; IEE 380 with C or better
IEE	470	Stochastic Operations Research	Modeling and analysis with emphasis on stochastic operations research. Models for stochastic processes, including Markov chains, queueing and decision analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Industrial Engineering, Engineering Management or Computer Science undergraduate; IEE 376 and IEE 385 with C or better; or Industrial Engineering graduate; Credit is allowed for only IEE 470 or 598 (Stochastic Operations Research)
IEE	474	Quality Control	Basic statistical process control techniques, capability analysis, design of experiments, and acceptance sampling plans.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: IEE 380 with C or better
IEE	475	Simulating Stochastic Systems	Analyzes stochastic systems using basic queuing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	CS	Prerequisite(s): Fulton Engineering undergraduate student or other majors with minimum 3.00 GPA; CSE 205 and IEE 380 with C or better; Credit is allowed for only IEE 475 or IEE 545
IEE	477	System Dynamics and Thinking	Methods for the modeling and analysis of system dynamics; metrics to measure business performance; continuous simulation tools for evaluation of system performance over time.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: CSE 205 with C or better; IEE 380 with C or better; Credit is allowed for only IEE 477 or 498 (System Dynamics Engineering)
IEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		
IEE	485	Systems Design Capstone I	Senior capstone project provides students with the skills required to effectively complete a capstone project in design and development.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): Engineering Management BSE major with IEE 458 with C or better or Industrial Engineering BSE major with IEE 376 with C or better; Pre- or corequisite(s): IEE 475 or IEE 477
IEE	486	Systems Design Capstone II	Project in design and development. Individual or team capstone project in creative design and synthesis.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): Engineering Management BSE or Industrial Engineering BSE major; senior standing or postbaccalaureate; IEE 485 with C or better
IEE	490	Project in Design and Development	Individual or team capstone project in creative design and synthesis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3	L	Prerequisite(s): BSE Industrial Engineering major; IEE 376 with C or better and pre- or corequisite(s): IEE 475 OR BSE Engineering Management major; pre- or corequisite(s): IEE 475
IEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6		Prerequisite(s): Barrett Honors student
IEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-6	L	Prerequisite(s): Barrett Honors student
IEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		

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IEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-7		
IEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-3		
IEE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	505	Information Systems Engr	Studies information systems application engineering. Topics include information technology, data modeling, data organization, process mapping, application and database engineering, and user interface development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	506	Web-Enabled Decision Support Systems	Development and analysis of Web-enabled applications for decision support. Topics include: (1) Web application development using ASP.NET; (2) design for computing scalability, interface usability and cyber security; and (3) use of application development skills and design concepts to develop a decision support system consisting of database, analytical data processing, expert knowledge and reasoning, and user-friendly interface for enabling transitions from data to information, knowledge and decisions. Knowledge of database development is necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering graduate student; Credit is allowed for only IEE 506 or 598 (Design of Computational Systems)
IEE	511	Analysis of Decision Processes	Methods of making decisions in complex environments and statistical decision theory; effects of risk, uncertainty, and strategy on engineering and managerial decisions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only IEE 498 (Analysis of Decision Processes) or 511
IEE	512	Introduction to Financial Engineering	Introductory course on financial engineering covering traditional portfolio theory, forwards, futures, financial stochastic models, option pricing, and risk management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	520	Statistical Learning for Data Mining	Surveys data analysis methods for massive data sets and provides experience in analysis with computer software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student; BMI 515 or IEE 572 or IEE 578; Credit is allowed for only BMI 555 or IEE 520
IEE	521	Urban Operations Research	Probabilistic modeling and analysis of transportation systems (car, bus, train) and emergency service systems (fire, police, ambulance) using functions of random variables, geometric probability, queueing theory, location theory, network analysis and graph applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only IEE 421, 498 (Urban Operations Research), 521 or 598 (Urban Operations Research)
IEE	526	Operations Research in Healthcare	Quantitative methods for modeling and analysis of healthcare systems to address operational and tactical decision-making problems. Topics include forecasting, scheduling, decision making, facility location and layout, staffing, quality control and supply chain management in hospitals and healthcare delivery facilities.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Graduate Engineering student; Credit is allowed for only IEE 426, 498 (OR in Hospitals), 526 or 598 (OR in Hospitals)
IEE	530	Enterprise Modeling	Focuses on social, economic, and technical models of the enterprise with emphasis on the management of technological resources. Includes organization, econometric, financial, and large-scale mathematical models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	533	Scheduling	Provides the basic theory of scheduling and introduction to the applications domain.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	534	Supply Chain Modeling and Analysis	Techniques for modeling and analysis of supply chains. Inventory management, transportation/location models, value of information, channel alignment, risk pooling, contracts.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): IEE 574 or 620
IEE	535	Intro Intl Logistics Systems	Exploratory project-oriented course that addresses domestic and international logistics practices from a high-level descriptive perspective and an analytical model-based perspective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	541	Engineering Administration	Introduces quantitative and qualitative approaches to management functions, engineering administration, organizational analysis, decision making, and communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student; Credit is allowed for only IEE 431 or 541
IEE	545	Simulating Stochastic Systems	Analyzes stochastic systems using basic queuing networks and discrete event simulation. Basic network modeling, shared resources, routing, assembly logic.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only IEE 475 or 545

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IEE	547	Human Factors Engineering	Study of people at work; designing for human performance effectiveness and productivity. Considerations of human physiological and psychological factors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only IEE 437 or 547
IEE	552	Strategic Technological Planning	Studies concepts of strategy, strategy formulation process, and strategic planning methodologies with emphasis on engineering design and manufacturing strategy, complemented with case studies. Presents and uses an analytical executive planning decision support system throughout course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	556	Introduction to Systems Engineering	Foundation course addressing the concepts needed for successful system planning, design and build process. Topics include successfully bringing large-scale systems to completion on schedule and on budget, modeling and cost estimating techniques, risk and variability. Graduate students are expected to have a background in and understanding of large-scale systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Engineering graduate student; Credit is allowed for only IEE 456 or IEE 556 or IEE 598 (Intro to Systems Engineering)
IEE	561	Production Systems	Understanding how factories operate, how performance is measured, and how operational changes impact performance metrics. Operational philosophies, increasing production efficiency through quantitative methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	570	Advanced Quality Control	Process monitoring with control charts (Shewhart, cusum, EWMA), feedback adjustment and engineering process control, process capability, autocorrelation, selected topics from current literature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	571	Quality Management	Total quality concepts, quality strategies, quality and competitive position, quality costs, vendor relations, the quality manual, and quality in the services.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	572	Design Engineering Experiments	Analysis of variance and experimental design. Topics include strategy of experimentation, factorials, blocking and confounding, fractional factorials, response surfaces, nested and split-plot designs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	573	Reliability Engineering	Nature of reliability, time to failure densities, series/parallel/standby systems, complex system reliability, Bayesian reliability, and sequential reliability tests.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	574	Appl Deterministic Oper Rsch	Develops advanced techniques in operations research for the solution of complex industrial systems problems. Goal programming, integer programming, heuristic methods, dynamic and nonlinear programming.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Industrial Engineering MS, MSE or PhD student
IEE	575	Appl Stochastic Oper Rsch Mdls	Formulate and solve industrial systems problems with stochastic components using analytical techniques. Convolution, continuous-time Markov chains, queues with batching, priorities, balking, open/closed queueing networks.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	578	Regression Analysis	Regression model building oriented toward engineers and physical scientists. Topics include linear regression, diagnostics, biased and robust fitting, nonlinear regression.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Engineering Graduate student
IEE	579	Time Series Analy/forecasting	Forecasting time series by regression-based, exponential smoothing, and ARIMA model techniques; uses digital computer programs to augment the theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Engineering Graduate student
IEE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	581	Six Sigma Methodology	The six sigma process improvement strategy of define, measure, analyze, improve, and control (DMAIC). Integrates and deploys statistical methods and other six sigma problem solving via the DMAIC framework. Requires background in undergraduate engineering statistics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Engineering Graduate student
IEE	582	Response Surfaces/Process Opt	Classical response surface analysis and designs including steepest ascent, canonical analysis, and multiple responses. Other topics include process robustness studies, robust design, and mixture experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering MS, MSE or PHD; IEE 572 with C or better
IEE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	585	Six Sigma Capstone.	The DMAIC (define, measure, analyze, improve, control) improvement strategy is applied in the formulation and execution of a six sigma project.	N	PRA	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): Engineering Graduate student
IEE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IEE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-4		Pre-requisite: Engineering Graduate student
IEE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	605	Foundations of Information Systems Engineering	Introduces science and engineering technologies of information systems design and analysis with focus on industrial engineering applications. Topics include: design and analysis of computational algorithms; and data mining techniques for classification, clustering, feature extraction and data reduction problems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: Industrial Engineering Graduate student; Credit is allowed for only IEE 598 (Found Info Syst Engr) or 605
IEE	620	Optimization I	First course of the PhD-level deterministic course series. Covers foundations of optimization and linear programming. Prior working knowledge of linear algebra and knowledge of how to formulate linear programs is required for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	622	Optimization II	Introduces computational methods to solve optimization problems with integer variables and the mathematical theory behind them. Follows formulation of integer programming models with a survey of relaxation, decomposition and cutting-plane methods. Discusses various practical problems such as facility location, transportation and distribution problems. Assigns computational examples using the software IBM ILOG OPL.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: IEE 620; Credit is allowed for only IEE 622 or 598 (Optimization II)
IEE	640	Probability & Stochastic Processes	Presents fundamentals of probability and stochastic processes from a non-measure theoretic point-of-view to develop (a) basic model building and probabilistic reasoning skills, and (b) an understanding of important qualitative characteristics of some basic stochastic processes used to model dynamical systems with noise. Topics include a review of probability theory with particular attention to conditional probability and expectation; Markov chains; Renewal theory and the Poisson process. Considers applications in reliability, inventory theory, queueing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisite: IEE 470, Graduate Industrial Engineering major; Credit is allowed for only IEE 598 (Prob & Stoch Model) or 640
IEE	670	Mathematical Statistics	Introduction to the field of mathematical statistics at a level intended for first-year PhD students in Industrial Engineering. Builds a solid background in the principles, concepts, and techniques of mathematical statistics. Prepares students for advanced study and research in statistics, and is useful for understanding statistical data analysis techniques and developing statistical thinking. Completion of at least one course in probability and statistics is required prior to taking this class.	N	LEC	N	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	672	Adv Topics-Experimental Design	Multilevel and mixed-level factorials and fractions, design optimality, incomplete blocks, unbalanced designs, random effects and variance components, analysis of covariance.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	3		Pre-requisites: Engineering MS, MSE or PHD student; IEE 572 with C or better
IEE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Pre-requisite: Industrial Engineering MS, MSE or PHD student
IEE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student

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IEE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IEE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Industrial, Systems & Operations Engineering Prgm	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	100	Introduction to Information Technology	Project-based introduction to the key concepts, tools and devices underlying today's technologies. Introduces computer hardware, software and system architecture, the Internet, the World Wide Web and information technology ethics. Forms a foundation for future courses offered in the Information Technology major and the information technology discipline.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		
IFT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-3		
IFT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-4		
IFT	200	Information Modeling, Storage and Retrieval	Notations, tools and languages for modeling, representing and manipulating information; database creation, access and management in the context of a controlling application. Analyzes information storage needs and design of an appropriate representation. Project-based access to information through tools and languages such as structured query language.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): SER 102 or CST 200 or SER 200
IFT	201	Computer and Network Systems: Organization and Administration	Fundamentals of computer networks, computer organization and computer operating systems. Components, tools and languages for configuring and administering computer systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): CST 100 or SER 101; IFT 100; Corequisite(s): CST 200 or SER 102 or SER 200
IFT	250	Introduction to UNIX Utilities	Technical overview (introduction) of the UNIX/Linux operating system. Emphasizes using the command line UNIX or Linux system. Covers fundamental UNIX commands and utilities including the use of a text editor and a mail handler, configuring a shell, the UNIX file system organization, pipes and filters, shell environment and simple shell scripts. Additional topics include UNIX GUIs and Windows Active Directory. Assumes no previous experience with the UNIX operating system.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 100; SER 101 or CSE 110 or CST 100 or SER 100
IFT	259	Introduction to Internet Networking	Introduces the OSI model and the protocol layers associated with information communication technology. Describes the role and purpose of each layer. Provides an overview of how the Internet is structured and used to support networking in a modern information technology structure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 100; IFT 201
IFT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-5		
IFT	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	1-6		Prerequisite(s): Barrett Honors student
IFT	301	Introduction to Interactive Media	Human-computer interaction design for rich media systems. Introduces design processes, tools and principles for applications that are highly interactive with their users and which include multiple input/output modalities and multimedia. Project-driven course.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Pre-requisites: IFT 100 and 200
IFT	302	Foundations of Information and Computer System Security	Introduces information technology (IT) security aspects and how technology can be vulnerable to unwanted intrusions. Project-based introduction to privacy, authentication and malware incursions for information technology. Principles of information security and assurance and their implications on access. Tools and methods to identify intrusion, best security practices. Includes securing communications and applications, including symmetric and asymmetric encryption and Hash functions.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 201; IFT 259 (or IFT 359); MAT 243; Pre- or corequisite(s): IFT 383
IFT	333	Introduction to Big Data	Architecture of Hadoop clusters at both the hardware and system software levels. Applies Hadoop and related Big Data technologies such as MapReduce, Pig, Hive and Impala in developing analytics and solving the types of problems faced by enterprises today. Expects programming experience in Java or Python and a general understanding of databases, networking and distributed systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 200; IFT 259
IFT	358	Network Information Communication Technology	Focuses on the physical layer and data-link layer of the OSI model. Concentrates on data communications, including signals, noise, modulation, demodulation and transmission media. Incorporates digital transmission, including pulse-coded modulation. Includes data-link protocols, network topologies and local-area networks involving access control, addressing at the network and subnetwork layer. Incorporates network layer protocols (IPv4 and IPv6), as well as Internet Control Messaging Protocols and configuration and domain name protocols.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 259

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IFT	372	Wireless Networking	Systems-level coverage of advanced information communication technology (ICT) topics including both digital and analog wireless communications systems used in today's ICT networks. Transmission systems covered include microwave, satellite, cellular radio, Bluetooth and wireless fidelity communications systems. Topics include: PCM, TDM, antennas, transmission lines, microwave radio, satellite radio, Bluetooth, cellular and wireless fidelity systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 201 or IFT 358; Credit is allowed for only EST 372 or IFT 372
IFT	383	Shell and Script Programming with UNIX	UNIX operating system programming of shells, environment and 4th-generation languages and tools, such as sed, awk, perl, grep, make.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): CST 100 or IFT 250 or SER 101
IFT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-4		
IFT	401	Information Technology Capstone Project I	First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier coursework.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): CST 200 or IFT 359 or IFT 372 or IFT 394 (Wireless Networking); senior standing
IFT	402	Information Technology Capstone Project II	Second half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier coursework.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Pre-requisite: IFT 401
IFT	433	Intermediate Database Management Systems	Fundamental methods in managing data-oriented systems. Relational, object and hierarchical data architectures. Query languages including SQL. Semantics of transaction processing. Database system architectures including cloud-based, client-server and embedded databases. Security and privacy issues associated with SQL-structured databases. Modern trends in data management including unstructured data type management, data mining and business analytics. Describes NoSQL data management platforms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): CST 200 or SER 102 or SER 200; IFT 200; MAT 243; Credit is allowed for only IFT 433 or SER 322
IFT	443	Analyzing Big Data	Data mining and statistical techniques that arise in data analytic applications. Students learn and practice working with big data using data analytic techniques presented in earlier coursework. Discusses one or more applications associated with data analytic techniques. Practices using advanced techniques that build on the knowledge provided in earlier coursework and knowledge gained from a statistical methods course. Familiarity with databases and statistics are essential.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 333; STP 226; Pre- or corequisite(s): IFT 433 (or CST 433); IFT 458
IFT	458	Middleware Programming and Database Security	Covers the main concepts of middleware technologies. Includes the various methodologies used to integrate applications, databases and Web services. Students develop multilevel applications using programming/scripting languages (such as PHP, Java, Python, Perl) which access data stored in a database. Middleware programs typically control database access and protect database SQL programs from security breaches. Students access the data from applications and other Web technologies such as XML, as well as protecting the data from unauthorized access.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 301; IFT 383; Pre- or corequisite(s): ACO 320 or IFT 433; Credit is allowed for only ACO 321 or IFT 458
IFT	472	Managing the Cloud	Focuses on the cloud environment. Students learn the architecture characteristics of Software as a Service (SaaS), Platform as a Service (PaaS), and Infrastructure as a Service (IaaS), including how these architectures are created and maintained in a cloud environment. Also addresses networking associated with cloud interaction, SQL programming and cloud security issues.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 200; IFT 201; IFT 302; IFT 383; Pre- or corequisite(s): IFT 433
IFT	475	Security Analysis	Processes used in cyber security analyses. Presents through exercises techniques to ensure confidentiality, integrity and availability. Includes vulnerability assessments based on faulty software design. Explores malicious code and computer crime, including operating system (OS) root kits. Students are instructed in how to conduct analyses in support of cyber security initiatives.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 302; Pre- or corequisite(s): IFT 481
IFT	481	Information System Security	Implementation, development, and analysis of computer and network security policies, legal ramifications and development and analysis of risk management measures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 259 (or IFT 359); IFT 302 (or IFT 202)
IFT	482	Network Forensics	Use and creation of advanced network forensics tools: intrusion detection and prevention, honeynets, traffic routing and management, and data reduction and graphing tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 383; IFT 481
IFT	483	Developing Security Policy	Focuses on development of security policy, risk solutions and incident response facilities. Using the information security framework, identifies strategies and processes used in governance, risk management, asset management, human resources and physical security to create, evaluate and audit security policies.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 302; Pre- or corequisite(s): IFT 481
IFT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		
IFT	488	Systems Administration of UNIX	UNIX administration of system and user services using command line and GUI tools. System security and forensics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 201 or 250; IFT 383
IFT	489	Network Administration with TCP/IP	Configuration and installation of networks: addressing, routing, naming, and LAN and MAN services. Network security checking, monitoring, and basic forensics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): IFT 259 or IFT 358 or IFT 359; IFT 383
IFT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-6		Prerequisite(s): Barrett Honors student
IFT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Information Technology	1-6	L	Prerequisite(s): Barrett Honors student

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IFT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-4		
IFT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-7	L	
IFT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-3		
IFT	510	Principles of Computer and Information Technology	Comprehensive introduction to computer and information technology (IT). Provides a detailed understanding of computer architecture, system software and important related issues in an IT context. Forms a technical foundation for understanding current technologies and how they work. Topics include principles of systems' physical architecture, operating systems and application software, storage and systems management as well as current developments in cloud computing, green IT, social networking systems, and Internet search.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	520	Principles of Telecommunication Technology	Basic communication technology concepts from an information technology perspective. Addresses signals, spectra and bandwidth; attenuation, distortion and noise; filtering, equalizing, modulation and multiplexing; information measurement, source and channel coding, channel capacity, baseband data transmission, digital modulation and spread-spectrum systems; local area networks and architecture and performance; layered network architecture, protocols, switching techniques, TCP/IP, traffic engineering and basic capacity analysis. Focuses not on detailed component design but on understanding the interrelationships of these concepts and telecommunication systems to support broad system design and management.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	530	Information Analysis, Modeling, Representation, and Communication	Teaches proven techniques for modeling information requirements and organizational data resources with a strong focus on gleaning information from data. Students learn how to discover and document database requirements, functional system requirements, and user interface requirements at a level appropriate for advanced information technology practitioner. Covers techniques including entity-relationship modeling for data analysis, functional dependency and normalization for the logical design of the database, Structured Query Language (SQL) for data management, and use cases for learning the process of requirement specification.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	540	Software Development for Information Technology	Teaches proven techniques for modeling information requirements and organizational data resources with a strong focus on gleaning information from data. Students learn how to discover and document database requirements, functional system requirements, and user interface requirements at a level appropriate for advanced information technology practitioner. Covers techniques including entity-relationship modeling for data analysis, functional dependency and normalization for the logical design of the database, Structured Query Language (SQL) for data management, and use cases for learning the process of requirement specification.	N	LEC	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Pre-requisites: IFT 530
IFT	545	Advanced Security Analysis	Advanced inspection of concepts and exercises related to security analysis. Expands analysis techniques to include wireless protocols, interception techniques, man-in-the-middle attacks, forgeries, cloned and replay attacks, cyber warfare, data corruption, data leakage and peer-to-peer networks. Through a variety of exercises, students work with tools and technologies available on the commercial market. The teaching environment is designed to impart the skills required by a corporate security professional.	N	LEL	N	GNA	Ira A. Fulton Engineering	Information Technology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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IFT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Information Technology	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, <u>highly specialized courses responding to unique student demand.</u>	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Information Technology	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IFT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Information Technology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IMD	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
IMD	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
IMD	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
IMD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IMD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IMD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IMD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, <u>highly specialized courses responding to unique student demand.</u>	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	120	Drawing for Industrial Design	Drawing as language to explore and communicate ideas. Development of drawing aptitude as language and process for industrial design thinking.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Environmental Design or Industrial Design major
IND	121	Principles for Industrial Design I	Industrial design as a language and process for creative thinking and realization.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Environmental Design or Industrial Design major. Corequisite(s): IND 122
IND	122	Principles for Industrial Design II	Continued exploration of industrial design as a language and process for creative thinking and realization.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): IND 120 with C or better; Environmental Design or Industrial Design major. Corequisite(s): IND 121
IND	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
IND	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
IND	227	Visual Methods for Problem Solving	Introduces conceptual design activity based on the mind-eye-media feedback loop. Graphic language used to represent conjecture, analysis, synthesis of objects, and their contexts.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student, IND 122 with C or better; Passed Milestone; Co-requisite: IND 260
IND	228	Imaging and Visualization	Design activities stressing graphic language abstraction practiced for presentation. Discusses structure of criticism, including description, interpretation, and evaluation.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student; IND 227 with C or better; Co-requisite: IND 261
IND	242	Materials and Design	Materials application in design. Introduces characteristics and properties of metals and organic materials, including plastics, and inorganic materials.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
IND	243	Design for Ecology and Social Equity	Explores the role of design in the ecological crisis; materials, processes, strategies and methods to design more ecologically friendly and socially equitable products.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IND	260	Industrial Design I	Introduces the method and process of the industrial designer. Determinants necessary in small product design.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student; IND 122 with C or better; Passed Milestone; Co-requisite: IND 227
IND	261	Industrial Design II	Issues of physical form development related to product and design; form development properties of paper, fibers, wood, metal, and plastics.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student; IND 260 with C or better; Co-requisite: IND 228
IND	316	20th-Century Design I	European and American design from 1850 to 2000 with thematic emphases on worldview, technology, transportation, economics and nature.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Prerequisite(s): minimum 45 hours
IND	317	20th-Century Design II	European and American design from 1850 to 2000 with thematic emphases on communication, education, material culture, politics and society.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Prerequisite(s): minimum 45 hours
IND	327	Presentation Graphics	Studies methods for portfolio and professional product presentation using graphic media for information transfer. Stresses aesthetic judgment, organization, and craftsmanship.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Industrial Design student; Co-requisite: IND 360
IND	328	Graphics for Industrial Design	Investigates and applies applications and planning to the development of an identity for a product line structured as a system.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Industrial Design student; IND 327 with C or better; Co-requisite: IND 361
IND	344	Human Factors in Design	Man-machine environment systems; human characteristics and behavior applied to design of products, systems, and their operating environment.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
IND	354	Principles of Product Design	Influences of physical and mechanical concepts in product design; mechanisms, kinematics, and fastening systems. Concepts of analysis for product design. Influences of concepts on aesthetics.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: PHY 111 with C or better; Digital Culture: Design, Industrial Design BSD, or Pre-Industrial Design major
IND	360	Industrial Design III	Methods of visual thinking, conceptualization, and ideation related to building skill levels in professional design presentation techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Industrial Design student; IND 261 with C or better; Co-requisite: IND 327
IND	361	Industrial Design IV	Emphasizes developing ideas into a complete functional product, including survey and application of aesthetics, human factors, materials, and manufacturing.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Industrial Design student; IND 360 with C or better; Co-requisite: IND 328
IND	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
IND	460	Design Project I	Complete analysis of the product unit as an element of mass production, featuring marketing, technology, human factors, and visual design. Emphasizes professional standards.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 484; IND 470
IND	461	Design Project II	Product design, with emphasis in systems interaction. Culmination of design process and technique. Encourages individual project direction.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Industrial Design BSD student; IND 460 with C or better
IND	464	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 464 or MGT 464 or SOS 474
IND	465	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 465 or IND 465 or MGT 465 or SOS 475
IND	470	Professional Practice for Industrial Design	Business procedures, management techniques, accounting systems, ethics, and legal responsibilities of the design professions.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	L	Pre-requisite: Industrial Design student; Co-requisite: IND 460 or Design Studies minor student
IND	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Industrial Design student; IND 361 with C or better; Co-requisite: IND 460
IND	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
IND	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
IND	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IND	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
IND	521	Advanced Industrial Design Studio I	Design language, motivation and inspiration, form exploration sketching, rough form study mock-ups, form development, and presentation. Product redesign. Students create new design language proposals for an existing product and redesign the product based on one of these languages. Provides instruction and opportunities to understand product design language and how to redesign existing products with different design guidelines. Results include evidence of concept development (sketches, drawings, models); functional development; human factors and ergonomic considerations; materials and process specifications; sustainability recommendations; and appearance visual materials and models (virtual and physical). Project-based course includes readings, presentations, critical analysis, discussion and the public exhibition and presentation of design work.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): Master of Industrial Design major. Credit is allowed for only IND 521 or IND 590 (Advanced Industrial Design Studio I)
IND	522	Advanced Industrial Design Studio II	New product development with emphasis on design research, problem solving and functional/aesthetic development. Preliminary research about human behavior and health promotion. Based on the research findings, students conduct design research in teams and work on individual design projects. Student project results include evidence of concept development (sketches, drawings, models); functional development; human factors and ergonomic considerations; materials and process specifications; sustainability recommendations; and final appearance visual materials and models (virtual and physical). Project-based course includes readings, presentations, critical analysis, discussion, and the public exhibition and presentation of design work.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): IND 521. Corequisite(s): DSC 501. Credit is allowed for only IND 522 or IND 590 (Advanced Industrial Design Studio II)
IND	544	Human Factors Systems and Documentation	Advanced topics associated with theory and methods of human factors in design. Individual projects stressing problem organization, evaluation, and documentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Herberger Institute of Design and the Arts Graduate student
IND	548	Design for Sustainable Development	Research on designing systems that are economically viable, ecologically friendly, and socially equitable.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	621	Advanced Industrial Design Studio III	Structured around the Design School traveling-studio model, this studio challenges students to identify new design concepts that improve society and the natural environment while also delighting users and creating value for business. For approximately one week, students travel to an off-campus location to examine a local condition there for which new design solutions are needed. Students return to ASU and continue working on the project for the semester. Project-based course includes readings, presentations, critical analysis, discussion and the public exhibition and presentation of design work.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): IND 522

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
IND	622	Advanced Industrial Design Studio IV	Challenges students to create new design concepts that improve society and the natural environment while also delighting users and creating value for business. Requires some independent direction by the student; however, instructor assigns deadlines and expectations for deliverables, and requires cooperation and collaboration among students. Project-based course includes readings, presentations, critical analysis, discussion and the public exhibition and presentation of design work.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): IND 621
IND	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
IND	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	111	Interior Design Issues and Theories	Interiors issues, theories, and philosophies. Emphasizes unique social and cultural factors that shape 20th-century design concepts.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	
INT	120	Design Fundamentals I	Development of visual literacy. Introduces drawing and graphic representation as methods of seeing and problem solving.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Architectural Studies, Environmental Design, Interior Design, or Landscape Architecture major; Credit is allowed for only ALA 121 or INT 120
INT	121	Introduction to Computer Modeling for Interior Design	Computers in interior design, including software concepts, specific packages, and problem solving, illustration, typography, modeling, and animation.	N	LAB	N	OPT	Herberger Inst Design & Arts	The Design School	3	CS	Credit is allowed for only INT 121 or 320
INT	123	Introduction to Computer-Aided Design and Building Information Modeling	Introduces AutoCAD computer-aided design and Revit building information modeling principles and strategies for designers of the built environment.	N	LAB	N	OPT	Herberger Inst Design & Arts	The Design School	3		
INT	131	Design and Human Behavior	Applies conceptual design to issues of programming and space planning, user needs, and behavior.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	SB	
INT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
INT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
INT	221	Principles of Design	Applied visual vocabulary: studio experience exploring applications, process and conceptual development of the principles of order and composition.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): INT 120 with C or better; Environmental Design or Interior Design major. Corequisite(s): INT 222
INT	222	Design Fundamentals II Lecture	Theory and applications of basic design principles, history and theory of how architecture and landscape architecture design is impacted by basic design	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): Architectural Studies, Environmental Design, Interior Design, or Landscape Architecture major; Corequisite(s): ALA 122 or INT 221; Credit is allowed for only ALA 124 or INT 222
INT	223	Drafting for Interior Design	Orthographic, paraline, axonometric, and perspective projection; shades and shadows; and basic descriptive geometry for interior designers.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 261
INT	253	Interior Materials, Finishes, and Specifications	Survey, evaluation, and specification of materials, finishes, and performance criteria for interiors.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design student; INT 261 with C or better
INT	261	Interior Design Studio I: Residential	Studio problems in interior design related to behavioral response in personal and small-group spaces.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design student; Passed Milestone; Co-requisite: INT 223
INT	262	Interior Design Studio II: Hospitality	Focuses on environments that entertain or host the public, including but not limited to nightclubs, restaurants, theaters, hotels, city and country clubs, golf facilities, cruise ships and conference facilities.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design student; INT 261 with C or better
INT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
INT	310	History of Interior Design I	Evolution of interior design as an expression of cultural influences from the ancient periods to 1835. Analysis of interior architecture, planning and lighting of interior spaces, and furniture.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Pre-requisites: ARS 102 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
INT	311	History of Interior Design II	Evolution of interior design as an expression of cultural influences 1835 to present. Analysis of interior architecture, planning and lighting of interior spaces, and furniture.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Pre-requisites: INT 310 with C or better
INT	341	Interior Codes: Public Welfare and Safety	Codes and regulations as performance criteria for interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisite: Interior Design student; Co-Requisites: INT 253; INT 262
INT	351	Ambient Environment	Surveys environmental control systems, acoustics, and lighting issues.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Interior Design major: PHY 101 with C or better. Co-requisites: INT 352, INT 362 and INT 381; OR Digital Culture: Design major
INT	352	Construction Methods in Interior Design	Design theory related to analysis, materials, and building techniques of horizontal and vertical construction in interior design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Interior Design student; Co-requisites: INT 362; INT 381
INT	354	Construction Documents	Elements of construction drawing sets, application of codes and specifications, and contract administration.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Interior Design student; Co-requisite: INT 363
INT	362	Interior Design Studio III: Hospitality and Retail	Investigates interior design issues in hospitality and retail environments.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Interior Design student; Co-requisites: INT 351, INT 352 and INT 381
INT	363	Interior Design Studio IV	Explores the poetics of materials and their assemblage in the design of public and private spaces.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Interior Design student; INT 362 with C or better; Co-requisite: INT 354
INT	381	Preinternship Seminar	Preparation of internship materials that produce and enhance a successful internship experience.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	1		Prerequisite: INT 262
INT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
INT	412	History of Decorative Arts in Interiors	Design of decorative arts as an expression of cultural influences and as an extension of interior spaces.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	Prerequisite(s): INT 311 with C or better. Credit is allowed for only INT 412 or INT 515
INT	413	History of Textiles in Interior Design	Cultural and historical expression of textiles as related to interiors.	N	PRA	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): INT 412 with C or better. Credit is allowed for only INT 413 or INT 516
INT	415	Latin American Design	The impact of Latin American culture and civilization on design throughout the Americas.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Minimum Junior standing
INT	446	Furniture Design and Production	Design, construction, cost estimating, and installation in interior furniture and millwork.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisite: Graphic Design BSD, Interior Architecture BSD or Industrial Design BSD student
INT	464	Interior Design Studio V: Work Environments	Studio problems in interior design-related issues in work environments.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Interior Design student; INT 363 with C or better; Co-requisites: INT 484; INT 471
INT	465	Interior Design Studio VI: Institutional Design	Advanced interior design problem solving related to institutional facilities.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Interior Design student; INT 464 with C or better; Co-requisite: INT 472
INT	471	Facilities Management	Facility management process in large-scale organizations. Planning, long-range forecasting, and productivity. Project management methodologies using micro-based software programs.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		
INT	472	Professional Practice for Interior Design	Business procedures, project control, fee structures, and professional product liabilities.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	2		Pre-requisites: Interior Design student; Co-requisite: INT 465
INT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Interior Architecture BSD student; DSC 483 or INT 381 with Y grade
INT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
INT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
INT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
INT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
INT	515	Decorative Arts in Historic Interiors: A Thematic Overview	A thematic overview of decorative arts used in historic interiors that explores their aesthetic, functional, and symbolic contribution.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Herberger Institute of Design and the Arts graduate major. Credit is allowed for only INT 412 or INT 515
INT	516	Textiles in Historic Interiors: Appearance, Function, Symbolism	Overview of textiles used in historic interiors that explores their aesthetic, functional, and symbolic contribution.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Herberger Institute of Design and the Arts graduate major. Credit is allowed for only INT 413 or INT 516
INT	521	Advanced Interior Architecture Studio I	Studio problems in interior architecture related to the integration of building structure and systems with the behavioral response to personal spaces.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): Master of Interior Architecture major. Credit is allowed for only INT 521 or INT 590 (Advanced Interior Architecture Studio I)
INT	522	Advanced Interior Architecture Studio II	Investigates interior architecture issues, including construction, technology, programmatic and environmental determinants.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): INT 521; Corequisite(s): INT 527; Credit is allowed for only INT 522 or INT 590 (Advanced Interior Architecture Studio II)
INT	527	Contemporary Design Theory	Aesthetic, political, economic, and social theories that have shaped modern design; theory as the basis for design philosophies.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Herberger Institute of Design and the Arts Graduate student
INT	529	Design Criticism	Applies critical methods to design as material culture and human expression; evaluates achievement versus intention.	N	SEM	N	OPT	Herberger Inst Design & Arts	The Design School	3		Herberger Institute of Design and the Arts Graduate student
INT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
INT	621	Advanced Interior Architecture Studio III	Structured around the Design School traveling-studio model, based on design problems emphasizing the global context of interior architecture as it influences interior space and architectural form.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): INT 522
INT	622	Advanced Interior Architecture Studio IV	Individual, student-initiated capstone project reflecting a culminating synthesis of interior architecture ideas.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): INT 621
INT	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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INT	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
INT	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ITA	101	Elementary Italian I	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
ITA	102	Elementary Italian II	Fundamentals of the language. Emphasizes listening, speaking, reading, writing, and cultural proficiency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
ITA	110	Intensive Italian I	Proficiency-oriented language course designed to achieve the maximum level of proficiency in an intensive and dynamic communicative environment. Class time is spent on a variety of fast-paced communicative activities focused especially on the development of speaking skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Credit is allowed for only ITA 101 or ITA 102 or ITA 110 or ITA 111
ITA	111	Accelerated Elementary Italian	Accelerated elementary Italian for experienced language learners. Emphasizes reading, writing, listening, speaking, and cultural proficiency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
ITA	112	Italian for Romance Language Speakers	15-week hybrid course: 3 hours class meetings, 1 hour student self-study. Designed for students with an active competence in Spanish or another Romance language such as French, Portuguese and/or Romanian, who wish to learn the essential elements of the Italian grammar at an accelerated pace, as well as acquire listening, speaking, reading and writing skills. Based upon the theory of "intercomprehension" which implies the speaker's ability to understand the speech of another speaker who communicates in a dialect of the same language or a related language. Due to the linguistic similarities between Spanish, other Romance languages and Italian, students master the four language skills of listening, speaking, reading and writing of in Italian at a faster pace.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Credit is allowed for only ITA 112 or ITA 194 (Italian for Spanish Speakers) or ITA 194 (Italian for Romance Language Speakers)
ITA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
ITA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	201	Intermediate Italian I	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on both spoken and written genres of Italian culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
ITA	202	Intermediate Italian II	Emphasizes reading, writing, listening, and speaking proficiency at an intermediate level. Focuses on values of Italian culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	
ITA	210	Intensive Italian II	Proficiency-oriented language course designed to achieve the maximum level of proficiency in an intensive and dynamic communicative environment. Class time is spent on a variety of fast-paced communicative activities focused especially on the development of speaking skills. Class meets four times a week.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Prerequisite(s): ITA 102, 110, or 111 with C or better; Credit is allowed for only ITA 201 or ITA 202 or ITA 210
ITA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	311	Speak Italy: Language, People, Culture	Develops oral/aural proficiency through the study of diverse voices from Italian culture and the analysis of spoken multimedia genres and cultural products.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): ITA 202 with C or better
ITA	312	Write Italy: Language, People, Culture	Develops reading/writing proficiency through the study of various texts in Italian and the analysis of written multimedia genres and cultural products.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L & G	Prerequisite(s): ITA 202 with C or better
ITA	315	Italian Culture: The Good, The Bad and The Ugly	Studies the rich diversity and complexity of Italian culture through analysis of different media, discussion and writing in Italian.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ITA 202 with C or better
ITA	319	Italian for Professions	Read and analyze texts and artifacts that represent important cultural and political movements of Italian civilization.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ITA 202 with C or better
ITA	321	Italian Renaissance Culture: Politicians, Merchants, Artists and Courtesans	Studies the new voices of Renaissance culture through analysis of different media, discussion and writing in Italian.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ITA 202 with C or better
ITA	322	Modern Italian Culture: Explorers, Scientists, Musicians and Revolutionaries	Studies the contributions of Italian thinkers to the development of modern western culture through analysis of different media, discussion and writing in Italian.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: ITA 202 with C or better
ITA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	413	Advanced Italian	Development and assessment of advanced spoken and written Italian proficiency through activities using all four skills.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: ITA 311 or 312 with C or better
ITA	420	Italian Cinema	Major trends of Italian cinema from the post-war period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
ITA	430	Italian Literature of the Middle Ages	Emphasizes Stii Novo, Dante's minor works, Petrarach, and Boccaccio.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: ITA 321 or 322 with C or better
ITA	441	Dante: Divina Commedia	Critical reading of the three Cantiche (Inferno, Purgatorio, and Paradiso).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: ITA 321 or 322 with C or better

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ITA	443	Italian Literature of the Renaissance	Emphasizes Lorenzo de'Medici, Poliziano Castiglione, Machiavelli, Ariosto, and Tasso.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H	Pre-requisites: ITA 321 or 322 with C or better
ITA	449	20th-Century Italian Literature	Major works, figures, and movements of contemporary Italian literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisites: ITA 321 or 322 with C or better
ITA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ITA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
ITA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
ITA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ITA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ITA	550	Italian for Reading Knowledge	Teaches non-speakers of foreign language, or those with only basic notions of the language, how to read in a foreign language at an advanced level. Consists of a concise overview of grammar as well as reading comprehension practice for students who plan to take the Graduate Foreign Language Exam or others who would merely like to learn to read in a foreign language. Focuses only on reading and not on listening, speaking or writing as in a traditional language course.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ITA 494 (Italian for Reading Knowledge) or ITA 550
ITA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
ITA	594	Conf And Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
ITA	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
JAC	101	Intermediate Algebra with the Maricopa County Community College District	JAC 101 is a non-credit placeholder that will facilitate enrollment in MAT 122: Intermediate Algebra offered on the ASU campus by the Maricopa Community College District. JAC 101 will display on transcripts, class schedules, and billing statements. Upon completion of the Intermediate Algebra course, MCCCDC will automatically submit transcripts for the MAT 122 course to ASU for students enrolled in this partnership. Students will be charged ASU and MCCCDC tuition and fees on their ASU billing statement. Students will submit payment for all courses directly to ASU.	N	LEC	Y	Z1	Office of the Provost	Arizona State University	0		
JHR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
JHR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
JHR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): minimum 45 hours
JHR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): minimum 45 hours
JHR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Prerequisite(s): Barrett Honors student
JHR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-6		Prerequisite(s): Barrett Honors student
JHR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): minimum 45 hours

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JHR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-3		Prerequisite(s): minimum 45 hours
JHR	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Social Justice & Human Rights MA student
JHR	501	Proseminar in Social Justice and Human Rights	Classical and contemporary theories of social justice and human rights in the context of current local, national, and international issues. Special reference made to the roles of both governmental and nongovernmental organizations in addressing social justice and human rights issues.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Social Justice & Human Rights MA student
JHR	506	Grant Writing for Social Justice and Human Rights	Seminar in grant writing and fund raising for social justice and human rights. Provide an introduction to the grassroots grant writing and fund raising process, with a particular focus on justice-oriented nonprofit and international nongovernmental organizations.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	510	Problem-Based Seminar in Social Justice and Human Rights	Interdisciplinary seminar examines current problems in social justice and human rights from several different theoretical and analytical viewpoints. May be repeated once for credit.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Social Justice & Human Rights MA student
JHR	511	Community-Embedded Seminar in Social Justice and Human Rights	Interdisciplinary seminar requiring students to be placed in community organizations dealing with the course issue during the semester. Emphasizes developing effective strategies for partnerships with relevant community organizations and evaluating institutional settings, policies, and procedures from the perspective of social justice and human rights.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Social Justice & Human Rights MA student
JHR	525	Action Research in Social Justice and Human Rights	Advanced practicum in engaged, community-embedded research and interpretive analysis. Gives students experience in the practice of engaged fieldwork as well as the writing it generates.	N	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Social Justice & Human Rights MA student
JHR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
JHR	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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JMC	101	Grammar for Journalists	Grammar course specifically designed to help journalism majors master the essentials of grammar. All majors must achieve an 80 percent in the course, indicating a mastery of grammar, before they can move on to any other journalism course.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major
JMC	105	Freshman Seminar	Exploring the impact of technology on the profession of journalism during the last 20 years.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Credit is allowed for only JMC 105 or 194 (Freshman Seminar)
JMC	110	Principles and History of Journalism	Fundamental principles of journalism and the evolution of those principles through the history of the U.S. news media. By understanding the history of journalism, students learn about the most critical values of the profession. This is the first of four "values" courses Cronkite students take during the four-year curriculum.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB	Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; Credit is allowed for only JMC 110 or MCO 120
JMC	120	Studio Production	Introduces the vocabulary of production. Develops familiarity with the studio equipment, its care and operation, and basic production procedures. Covers the ability to function as a member of a production team; sound attitudes toward assignments and constructive criticism; and an appreciation of production as a tool of the communication process. Discusses career opportunities in the diverse marketplace.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Pre-requisite: Journalism and Mass Communication major; Credit is allowed for only JMC 120 or 194 (Studio Production)
JMC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major
JMC	201	News Reporting and Writing	Introductory news writing course required for all Cronkite majors. Students learn the basic reporting and writing skills needed for further study in print, broadcasting, online or public relations. Students practice reporting and writing news stories with an emphasis on accuracy, newsworthiness, deadlines, objectivity and fairness.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	L	Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; ENG 101, 105, or 107 with C or better; JMC 101; JMC 110 or MCO 120 with C or better
JMC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major
JMC	301	Intermediate Reporting and Writing	Required of all students specializing in print, online and public relations; trains students in news reporting and writing under deadline. Students produce professional-level stories that are clear, well reported and accurate for publication. Students hone their reporting techniques and learn how to cover a beat and write news, feature and enterprise stories. They gain a deeper and more sophisticated understanding of newsworthiness, journalism ethics and law and news diversity.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	L	Prerequisite(s): Journalism and Mass Communication major; ENG 102, 105, or 108 with C or better; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA
JMC	302	Sports Reporting	Students learn how to cover a sports beat in this hands-on class. They develop story ideas and sources and report and write multiple stories on deadline. Expects students to pitch stories to professional outlets with the goal of publication.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; ENG 102, 105, or 108 with C or better; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA
JMC	305	Multimedia Journalism	Software and digital tools commonly used by multimedia journalists, including shooting and editing photos and video, social media, Web analytics, basic HTML, blogging, and design for the Web.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; ENG 101, 105, or 107 with C or better; JMC 101 or JMC 194 (Grammar for Journalists); JMC 110 or MCO 120 with C or better
JMC	310	Public Relations	Theory and practice of publicity, public relations and related techniques and procedures.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA
JMC	313	Introduction to Editing	Hands-on training in editing copy, photos and graphics and writing headlines and other display text for print and digital platforms. Emphasizes editing for accuracy, clarity, brevity, grammar and tone. Students practice AP style, develop news judgment and consider the ethical implications of their work.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA

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JMC	315	Intermediate Reporting and Writing (Broadcast)	Intermediate broadcast news reporting and writing techniques with emphasis on audio.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	L	Prerequisite(s): Journalism and Mass Communication major; ENG 102, 105, or 108 with C or better; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA
JMC	320	Newscast Producing	Principles of broadcast news producing, delivered via a combined lecture/lab experience and assignments based on editorial judgment, technical skills and industry awareness. Students emerge with strategies for total newsroom management, confidence in producing news content and newscasts under deadline pressure and prepared for a variety of producer-related roles in professional newsroom environments.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 302 or JMC 315 with C or better; minimum 2.50 GPA
JMC	325	Breaking News Multimedia Reporting	Students cover breaking news for azcentral.com, gaining practical experience in an online, multimedia environment. Students work out of a Republic Media newsroom under the direction of professional editors. Students often have the opportunity to work with full-time professional reporters on big news stories, and their work may appear on azcentral.com, in The Arizona Republic and in 12 News reports. Students must commit to two full days a week, and they earn pay in addition to class credit.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; minimum 2.50 GPA; JMC 305 with C or better
JMC	330	Television Reporting	Writing, reporting and editing for television.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 315 with C or better; JMC 345 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 330 or JMC 331
JMC	331	Television Sports Reporting	Hands-on experience reporting and producing television sports packages. Skills taught include sports writing, reporting and editing for broadcast.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 302 with C or better; JMC 346 with C or better; minimum cumulative 2.50 GPA
JMC	345	Videography	Students conceive, plan, shoot, write and edit television news packages in this hands-on class. Skills taught include sequencing, framing, lighting, sound, story structure, news judgment, storytelling and editing. Students may use school-supplied cameras and editing facilities but must provide a Flash Memory card and portable external FireWire Hard Drive.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 345 or JMC 346
JMC	346	Sports Videography	Develops an understanding of visual sports storytelling and craft compelling sports stories using video and sound.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 345 or JMC 346
JMC	351	Photojournalism I	Teaches basic skills required to compose, shoot and prepare still photos for publication. Hands-on, with students shooting a range of assignments from news events to environmental portraits, and producing a portfolio of their work. Students may share a school-supplied Canon camera or provide their own. The camera should be a digital SLR camera body with at least a kit zoom lens, and the camera body must have a manual setting and have the ability to turn off any built-in camera flash. Students need digital media cards of at least 2 GB and an external digital card reader. Students may not use point-and-shoot cameras or cameras with Flash (built-in or external) for this class.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 351 or JMC 352
JMC	352	Sports Photojournalism	Students learn photojournalism skills, including composition, shooting and preparing still photos for publication in a sports context. Hands-on, with students shooting a range of sports assignments and producing a portfolio of their work. Students may share a school-supplied Canon camera or provide their own. The camera should be a digital SLR camera body with at least a kit zoom lens, and the camera body must have a manual setting and have the ability to turn off any built-in camera flash. Students need digital media cards of at least 2 GB and an external digital card reader. Students may not use point-and-shoot cameras or cameras with flash (built-in or external) for this class.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 351 or JMC 352

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JMC	366	Journalism Ethics and Diversity	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 101 or JMC 194 (Grammar for Journalists); JMC 110 or MCO 120 with C or better; minimum 2.50 cumulative GPA; minimum 25 hours; Credit is allowed for only JMC 366 or JMC 367
JMC	367	Ethics and Diversity in Sports Journalism	Explores ethical problems related to sports media in a seminar setting. Discussion-based course applies journalistic values and principles to contemporary ethical dilemmas in sports media and helps prepare students for work in the profession.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 101 or JMC 194 (Grammar for Journalists); JMC 110 or MCO 120 with C or better; minimum 2.50 cumulative GPA; minimum 25 hours; Credit is allowed for only JMC 366 or JMC 367
JMC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisites: JMC student; Minimum 2.50 GPA; JMC 300, JMC 315, TCM 300 or TCM 315 with C or better
JMC	402	Mass Communication Law	Provides a grounding in the laws and regulations that govern various aspects of the media with a focus on First Amendment guarantees and privileges and the extent to which those have been limited by courts and lawmakers. Topics include freedom of expression, libel, privacy and obscenity.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; ENG 102, 105, or 108 with C or better; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA; minimum 56 hours
JMC	410	Turning Points in TV History	Uses historic television footage to talk about the evolution of news coverage and the ethical decisions journalists face.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 101 or JMC 194 (Grammar for Journalists); minimum 2.50 cumulative GPA; Credit is allowed for only JMC 410 or JMC 494 (Turning Points in TV History)
JMC	412	Opinion Writing	Provides hands-on experience writing and editing opinion and first-person narratives for ASU-affiliated Zocalo Public Square, an innovative LA-based publication syndicated by more than 100 publications nationwide including Time, The Washington Post, the San Francisco Chronicle and Gannett newspapers.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 301 with C or better; minimum 2.50 cumulative GPA
JMC	413	Advanced Editing	Builds on skills learned earlier. Students master editing skills that include AP style, grammar, headline writing and page layout as well as editing graphics and other visuals, editing Web content and uses of social media. Students hone their news judgment and learn to work quickly and accurately on deadline.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 313 with C or better; minimum 2.50 cumulative GPA OR graduate Mass Communication student
JMC	414	Digital Graphic Design	Theory, organization, and practice of layout, typography, and design in traditional and multimedia publishing.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 305 with C or better; minimum 2.50 cumulative GPA
JMC	415	Writing for Public Relations	Develops the professional-level writing and strategic skills expected of public relations practitioners. Students learn how to design and produce strategic plans, news releases, media kits and executive communications. They are exposed to communications approaches required for different audiences and media and learn about public relations theory as well as audience research and analysis.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 301 with C or better; JMC 310 with C or better; minimum 2.50 cumulative GPA OR graduate Mass Communication student

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JMC	417	Public Relations Campaigns	Students work with professional clients in an agency setting to research, plan and create comprehensive public relations campaign that address clients' needs. Concepts, theories and techniques relevant to public relations campaigns as well as strategic planning, campaign components and technology resources and tools. Analyzes, discusses and responds to current public relations issues and case studies.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 415 with C or better; JMC 436 with C or better; minimum 2.50 cumulative GPA OR graduate Mass Communication student
JMC	420	Reporting Public Affairs	Instruction and assignments in reporting the courts, schools, government, city hall, social problems, and other areas involving public issues.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student, JMC 301 with C or better; Minimum 2.5 GPA OR Graduate Mass Communication student
JMC	430	Sports Marketing and Campaigns	Creates a professional campaign engaging viewers and fans in new and meaningful ways solidifying Fox Sports Network's (FSN) position as a leader in sports programming. Students work within FSN's "Creative University" program to execute the campaign; FSN selects a campaign to implement.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301 or 302 or 315 with C or better; minimum 2.50 GPA; Credit is allowed for only JMC 430 or JMC 494 (Sports Marketing and Campaigns)
JMC	435	Latino and Transnational Issues	Provides background and understanding of some of the most pressing and controversial issues of the day that are taking place in the Southwest borderlands.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA; Credit allowed for only JMC 435 or 498 (Latino and Transnational Issues)
JMC	436	Public Relations Research	Students learn about the importance of research in communications, conduct research using qualitative and quantitative methods, and analyze data to understand implications within a specific communications context. They also critically evaluate published academic and professional research and are exposed to types of research and their application in the field of public relations.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; Minimum 2.50 GPA; JMC 301 and 310 with C or better; Credit is allowed for only JMC 436 or 494 (Public Relations Research)
JMC	437	Documentary Production	Students learn the fundamentals of producing documentaries, including research, script writing, production and shooting and editing video. Students produce a long-form documentary. Students become familiar with television documentary history in order to identify trends and learn about legal and ethical issues relevant to video documentary production.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 345 or JMC 346 with C or better; minimum 2.50 GPA
JMC	440	Magazine Writing	Students report and write stories suitable for magazine outlets. They develop and pitch stories, learn new reporting techniques and employ literary techniques such as description and scene setting in their writing. See class notes for additional information.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.5 GPA OR graduate Mass Communication student
JMC	445	Science and Medical Writing	Develops writing, reporting, and an understanding of key concepts in science as they relate to medical science research and practice.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: JMC student; JMC 301 with C or better; Minimum 2.50 GPA OR Graduate Mass Communication student
JMC	450	Issues in Coverage of Business and the Economy	Basics of business and economic reporting, one of the fastest-growing areas of journalism. Students learn what skills are needed to cover business and economic stories as well as the basics of how private companies operate and the factors that drive the economy. Students learn about opportunities in the field and hear from leaders in business journalism.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 450 or JMC 494 (Issues in Coverage Bus/Economy)
JMC	451	Photojournalism II	Develops photojournalism and visual storytelling skills through extensive hands-on practice shooting and editing for online and print media. Introduces shooting video with DSLR cameras and becoming proficient at image cropping, writing outlines and editing using Adobe Photoshop.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 305 with C or better; JMC 351 or 352 with C or better; minimum 2.50 cumulative GPA

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JMC	452	Visual Storytelling	Develops visual storytelling skills, working closely with a professional visual journalist to tell multimedia documentary stories that utilize video, still photos and text. In addition to the basics of storytelling, covers non-traditional techniques, including time-lapse, panos, HDR and star trails. Students should have basic skills in both still photography and videography and are expected to provide their own DSLR camera that can accommodate external mics and that have video capability.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA; JMC 345 or JMC 351 with C or better
JMC	453	Reporting on Business and the Economy	Trains in the basics of reporting about business and the economy. Helps students tell the stories behind companies, people and money, while improving competence in using numbers in stories. Offers the opportunity to have stories appear in print, online or broadcast.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; Minimum 2.50 GPA; JMC 301 (or 315) and JMC 450 with C or better; Credit is allowed for only JMC 453 or 494 (Reporting on Business/Economy)
JMC	455	Digital Media Entrepreneurship	Students identify a marketable idea and transform it into a product and/or company. In the process, they learn about key concepts of entrepreneurship and practice skills that they can employ as entrepreneurs themselves. Students are exposed to a range of national and regional entrepreneurs and emerge with a deeper understanding of entrepreneurship's importance within the media and communications landscape.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; minimum 2.50 GPA; JMC 305 with C or better; Credit is allowed for only JMC 455, JMC 494 (Digital Media Entrepreneurship), MCO 555, or MCO 598 (Digital Media Entrepreneurship)
JMC	460	Advanced Online Media	Covers online trends, Web design and usability, and copyright, legal, and ethical issues facing online journalists. Students critically examine journalistic Web sites and recognize excellence as well as mediocrity. Hands-on experience in using Photoshop, Dreamweaver, CSS, Soundslides, Final Cut, and Flash to produce original, compelling multimedia stories as well as an award-winning online magazine.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 305 with C or better; minimum 2.50 cumulative GPA
JMC	465	Telling Stories with Data	Techniques and tools of reporting using data and public records as well as how to use the Internet and other online sources to find information and sources for stories. Students get experience with computer spreadsheets, database software and statistical techniques as they develop their advanced reporting skills.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301 or 302 or 315 with C or better; minimum 2.50 GPA
JMC	470	Depth Reporting	Teaches students how to conceptualize, report and write long-form, in-depth stories. Students deeply research a selected topic through public records, interviews and investigative reporting techniques and write an in-depth article with the goal of publication.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; minimum 2.50 cumulative GPA; JMC 301 or 302 or 315 with C or better
JMC	473	The Business and Future of Journalism	Exposes advanced journalism students to broad media management problems; helps students understand how essential the bottom-line and quality journalism are to the entire journalistic enterprise; helps students think about how to balance those two concerns.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 473 or JMC 474
JMC	474	Advanced Issues in 21st-Century Sports and Media	Exposes challenges facing sports and media in the 21st century, including changing content models, revenue streams, and the evolving relationship between teams and media outlets.	N	SEM	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism major; JMC 101 or JMC 194 (Grammar for Journalists); JMC 201 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 473 or JMC 474
JMC	475	Cronkite News: Broadcast	Students increase their knowledge of the television and multimedia news industry and receive a realistic experience in field and studio newscast production.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 330 or 331 with C or better; minimum 2.50 cumulative GPA

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JMC	476	Public Relations Laboratory	Synthesizes and applies the theories, principles and techniques of public relations. This body of knowledge includes research, planning techniques, types of budgets, organizational systems, management styles, campaign components, types of campaigns, technology, ethics, diverse channels of communication and target audiences. Students: (1) analyze, discuss, then respond to public relations case studies; (2) develop an in-depth understanding of a client's needs; (3) conduct primary and secondary research; (4) work with a client in a team-based approach to prepare a comprehensive campaign proposal to address the client's problem or issue; (5) design and develop media products for client; (6) formally present the proposal to the client and the class.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication major; 2.50 cumulative GPA; JMC 417 with C or better. Credit is allowed for only JMC 476 or JMC 498 (Public Relations Lab)
JMC	477	New Media Innovation and Entrepreneurship Lab	Research and development program designed to help media companies create new and exciting multimedia products and to help students create digital media startups. Brings together students from disciplines across campus, including journalism, business, computer engineering and design. Journalism students conduct research into developing new products and creating prototypes for those products. Students learn by doing, interacting with clients or investors, the director and the lead Web developer. Students schedule meeting times with the director to discuss projects.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication major; JMC 301 or 315 with C or better; JMC 305 with C or better; 2.50 cumulative GPA; Credit is allowed for only JMC 477 or JMC 498 (Innovation and Entrepreneurship Lab)
JMC	478	Cronkite News: Phoenix Bureau	Applies and enhances reporting, writing and multimedia skills.	N	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication major; 2.50 cumulative GPA; JMC 301 or JMC 315 with C or better
JMC	479	Cronkite News: Washington Bureau	Students participate in a full-time regional reporting bureau that gives them the opportunity to work as a Washington correspondent.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication major; JMC 301 or 315 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 479 or JMC 478 (Cronkite News - Washington Bureau)
JMC	480	Cronkite News: Phoenix Sports Bureau	Students gain valuable experience in sports reporting, shooting, editing and voicing packages for partnership outlets.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301, 302, or 315 with C or better; JMC 305 with C or better; minimum 2.50 GPA; Credit is allowed for only JMC 480 or JMC 478 (Cronkite News - Phoenix Sports Bureau)
JMC	481	Cronkite News: Los Angeles Sports Bureau	Students gain valuable experience in sports journalism reporting, shooting, editing and voicing packages for partnership outlets.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 330 or 331 with C or better; minimum 2.50 GPA; Credit is allowed for only JMC 481 or JMC 478 (Cronkite News - L.A. Sports) or JMC 478 (Sports Journalism)
JMC	483	Cronkite News: Digital Production	Students produce stories and multimedia across platforms for Cronkite News and professional news outlets.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301 or 302 or 315 with C or better; JMC 305 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 483 or JMC 478 (Cronkite News Digital Production)
JMC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301 or 302 or 315 with C or better; JMC 305 with C or better; minimum 2.50 GPA

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JMC	485	Public Insight Network Bureau	Community engagement, story development, collaboration and entrepreneurship. Opportunity to build relationships with journalists in different markets and across media.	N	LEL	Y	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; JMC 301, 302, or 315 with C or better; JMC 305 with C or better; minimum 2.50 cumulative GPA; Credit is allowed for only JMC 485 or JMC 494 (Public Insight Network)
JMC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		Prerequisite(s): Barrett Honors student
JMC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Prerequisite(s): Journalism and Mass Communication or Sports Journalism major; minimum 2.50 cumulative GPA OR graduate Mass Communication student
JMC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-7		Pre-requisites: JMC student; Minimum 2.25 GPA; Successful completion of English proficiency exam OR Graduate Mass Communication student
JMC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-3		
JPN	101	First-Year Japanese I	Basic speaking, listening, reading, writing, computer skills, and culture. Hiragana, katakana, 75 kanji. For students without previous Japanese instruction.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	
JPN	102	First-Year Japanese II	Continued development of JPN 101 skills. 99 additional kanji. Communication skills goal: ACTFL Guideline Novice-Mid to Novice-High.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: JPN 101 with a C or greater or in progress. Students may not take JPN 102 if they have received credit for JPN 201, 202, 309, 310, 311, 312, 313, 314 or 321
JPN	110	Intensive Japanese I	First semester of the one-year intensive Japanese language sequence designed to train novice-level speakers to become competent intermediate speakers who can carry out conversation on familiar topics or handle straightforward situations. Emphasizes both oral and written communication through development of skills in listening, speaking, reading, writing and cultural awareness. Students manage a number of communicative tasks in social situations. Conversations are restricted to a few of the predictable topics necessary for survival; students express themselves in straightforward situations and on familiar topics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		Credit is allowed for only JPN 101 or JPN 102 or JPN 110
JPN	115	Japanese Popular Culture: Anime, Manga, and Film	Examines different media of Japanese popular culture such as comics (manga), animation (anime) and film for evidence of how the Japanese express their self identity in Japanese society. By separating the media into themes such as technology and the future, war/apocalypse/disaster, violence in society, gender and sexuality, and human relations, understands the Japanese culture (and social consciousness) more intimately. Students view films, read scholarly articles on the subject matter, and actively participate in the course through written papers and discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Credit is allowed for only JPN 115 or 194 (Japanese Popular Culture: Anime, Manga, and Film)
JPN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
JPN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	201	Second-Year Japanese I	Continued development in speaking, listening, reading, writing, culture, and computer skills. 74 additional kanji. Introduction to kanji dictionary.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: JPN 102 with C or better; Students with credit for JPN 202, 309, 310, 311, 312, 313, 314 or 321 may not enroll in JPN 201
JPN	202	Second-Year Japanese II	Continued development of JPN 201 skills. 116 additional kanji. Communication skills goal: ACTFL Guideline Intermediate-Low to Intermediate-Mid.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisite: JPN 201 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JPN	206	Japanese Calligraphy	Introduces Japanese calligraphy using traditional implements, starting with basic brush strokes and stroke order for kanji and kana.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): JPN 101 or 110 with C or better
JPN	210	Intensive Japanese II	Second semester of the one-year intensive Japanese language sequence designed to train novice-level speakers to become competent intermediate speakers who can carry out conversation on familiar topics or handle straightforward situations. Emphasizes both oral and written communication through development of skills in listening, speaking, reading, writing and cultural awareness. Students manage a number of communicative tasks in social situations. Conversations are restricted to a few of the predictable topics necessary for survival; students express themselves in straightforward situations and on familiar topics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8		Prerequisite(s): JPN 102 with B or better or JPN 110 with C or better; Credit is allowed for only JPN 201 or JPN 202 or JPN 210
JPN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	301	Third-Year Japanese I	Development of reading skills, using authentic materials to comprehend structure, grammar, idioms, and culture. Expansion of kanji and vocabulary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisite: JPN 202 with C or better
JPN	302	Third-Year Japanese II	Continued development of reading skills, as in JPN 301. Reading proficiency goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: JPN 301 with C or better
JPN	309	Japanese Oral Communication I	Development of interpersonal, interpretive, and presentational oral/aural skills in familiar topics with sociolinguistic skills and understanding of Japanese culture. JPN 309 and 310 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 202 with C or better
JPN	310	Japanese Oral Communication II	Continued development of oral/aural skills, with increased emphasis on honorifics. Speaking proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 309 with C or better
JPN	311	Japanese Composition I	Learning structural guidelines for narrative writing, developing organization skills to support ideas. Writing proficiency outcome goal: ACTFL Guideline Intermediate-High.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: JPN 202 with C or better
JPN	312	Japanese Composition II	Continued development of writing skills, introducing research and creative writing. Writing proficiency goal: ACTFL Guideline Intermediate-high to Advanced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: JPN 311 with C or better
JPN	315	The Language of Japanese Popular Culture I: Gender and Onomatopoeia/Mimesis	Develops reading and listening skills using Japanese popular culture materials of various genres, including narratives, comics, anime, film and music. Introduces linguistic elements that are not found in regular language textbooks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre- or corequisite(s): JPN 202 with C or better if completed; Credit is allowed for only JPN 315 or JPN 394 (The Language of Japanese Popular Culture I)
JPN	316	The Language of Japanese Popular Culture II: Honorifics and Dialects	Understands Japanese popular culture materials such as anime, music, movies, manga and narratives through their target language of Japanese. Emphasized language areas are honorifics, formal expressions, dialects and slang and vulgar expressions that are tolerable in the classroom environment. Introduces elements of the history, geography and culture of Japan to further students' understanding of the materials. Students improve their receptive skills, i.e., listening and reading, by engaging with these materials, and through the technique of shadowing, also improve their pronunciation, intonation and grammatical accuracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre- or corequisite(s): JPN 301 with C or better if completed; Credit is allowed for only JPN 316 or JPN 394 (The Language of Japanese Popular Culture II)
JPN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	401	Reading Modern Japanese Texts I	Readings in modern literary and expository texts. Focus varies from year to year.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Prerequisite(s): JPN 302 with C or better; SLC 202 with C or better
JPN	414	Introduction to Classical Japanese	Readings from various genres of pre-20th-century literature, with analysis of the structure of the classical language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 302 with C or better
JPN	415	Advanced Classical Japanese	Close readings of selected premodern texts, with focus on grammatical and stylistic features.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 414 with C or better
JPN	445	Readings in Modern Japanese Letters and Culture	Advanced study of selected facets of modern Japanese letters and culture, including literature, material and visual culture, film, and other media.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 401 and SLC 202 with C or better. Credit is allowed for only JPN 445 or 535
JPN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
JPN	485	Literary Translation: Theory and Practice	Introduces theories and practice of literary translation, with an emphasis on the translation of Japanese literary texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: JPN 401 and SLC 421 with C or better. Credit is allowed for only JPN 485 or 585
JPN	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
JPN	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
JPN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
JPN	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JPN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
JPN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	535	Advanced Readings	Readings in primary and secondary sources in history, art, religious studies, literature, or other fields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only JPN 445 or 535
JPN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	585	Advanced Problems of Translation	Theories and practice of translation; strategies for handling a variety of Japanese texts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only JPN 485 or 585
JPN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
JPN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JST	131	Biblical Hebrew I	Offers an introduction to Biblical Hebrew, the language in which most of the books of the Hebrew Bible/Old Testament have been written. Provides the basic tools to understand and translate Biblical Hebrew texts. Covers the Hebrew alphabet, basic vocabulary, morphology and syntax. Students learn idiomatic expressions, basic literary techniques in narratives and poetry, as well as specificities of Semitic languages. Emphasizes a critical approach to the ancient text. Also introduces the evolution of the biblical text, from ancient manuscripts to contemporary editions and translations. Includes an introduction to the development of writing and to the evolution of Hebrew, from earliest inscriptions to its revival in modern Israel. The texts translated in class are situated in the history of Israel, but also in their Jewish and Christian cultural and religious contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Credit is allowed for only HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I)
JST	132	Biblical Hebrew II	Completes the study of basic Biblical Hebrew grammar and vocabulary (Futato's Beginning Biblical Hebrew, chapters 21-40). Prepares students to translate narrative and legal texts from Hebrew Bible. Students learn to use dictionaries, grammars, paradigms and critical editions of the biblical text.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I) with C or better; Credit is allowed for only HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II)
JST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
JST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JST	210	Introduction to Judaism	Beliefs, ceremonies, festivals, and institutions of Judaism emphasizing the contemporary era. Assumes no previous knowledge about Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only JST 210 or REL 210
JST	211	Jews and Judaism in America	Chronological analysis of Jews and Judaism in American history and letters.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Credit is allowed for only HST 211 or JST 211 or REL 211
JST	230	Introduction to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST, JST or REL 230
JST	231	Biblical Hebrew III	Advanced study of Biblical Hebrew. Deepens understanding of the grammar and composition of the Hebrew Bible. Translates texts of different literary genres (narrative, legal, poetic, prophetic) and different periods. Introduces the basic principles of textual criticism and different approaches to interpret the texts of the Hebrew Bible.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II) with C or better; Credit is allowed for only HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III)
JST	232	Biblical Hebrew IV	Addresses advanced topics in Biblical Hebrew grammar and interpretation. The first half of the semester is devoted to texts from the Hebrew Bible; the second half on extra-biblical texts written in ancient Hebrew (for example: Dead Sea Scrolls, Rabbinic texts, ancient Hebrew poetry). Topics and texts change annually.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III) with C or better; Credit is allowed for only HEB, JST, REL 232 or HEB 294 (Biblical Hebrew IV)
JST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
JST	304	Studies in European History	Specialized topics in European history. Explores countries, cultures, and issues in history, and their interpretation in historical scholarship.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 304 or JST 304
JST	314	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
JST	314	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
JST	315	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST or REL 315
JST	316	Literary Readings of the Hebrew Bible	Literary analysis of two of the main genres of the Hebrew Bible: narrative art and poetry. Students learn the main literary conventions of biblical prose and poetry, and how these conventions are applied or subverted. Each class comprises the study of a literary aspect, close readings, and thematic discussions. Biblical texts are read only in translation. They are situated in the religious, literary and artistic traditions that have developed on their basis.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only ENG 316, HEB 316, JST 316, REL 316 or HEB 394 (Literary Readings of the Bible)
JST	317	Introduction to Rabbinic Judaism	Historical analysis of the thought, literature, and institutions of rabbinic Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST or REL 317
JST	318	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST 318, REL 318 or SOC 375

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JST	347	Modern Israeli Literature in Translation	Modern Hebrew, or Israeli Hebrew, started at the end of the 19th century in Europe and today it is the language of the State of Israel. During this short period modern Hebrew developed literature with its unique local characteristic, as well as universal ideas. Reads and examines four books against their social and historical background.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HEB 347 or JST 347 or SLC 347 or ENG/HEB/JST/SLC 394 (Modern Hebrew Literature in Translation)
JST	348	Israeli Society and Culture	Different partitions of the Israeli society, based on ethnic origin, by religious affiliation or by political association. Depicts how Israel is an absorbing immigration state. Israel is a welfare state and the course covers aspects of a welfare state, such as health, retirement, public transportation, art, higher education and more.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better. Credit is allowed for only HEB 348 or HEB 394 (Israeli Culture and Society) or JST 348 or REL 311 or SLC 348
JST	369	History and Memory of the Holocaust	In-depth study of the history of the genocide of Jews, the rise of modern antisemitism within the context of Nazi Germany, and the memory and memorialization of the Holocaust post 1945.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 369 or JST 369 or REL 312 or HST 304 (Shoah: History, Memory, and Representation) or HST 394 (History of the Holocaust)
JST	373	Women in Judaism	Studies the legal, social and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better and minimum 24 earned hours or WST 100 or 300 with C or better; Credit is allowed for only JST 373, REL 373 or WST 372
JST	384	The Bible and Archaeological Discoveries	Studies the Bible alongside the stories that architecture, pottery, metalwork, sculpture, tombs, and paintings of the ancient Near East have to tell. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only JST 384 or REL 384
JST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
JST	396	Women in the Bible	Uses feminist criticism to reconstruct the remarkable women who stand in the shadow of the patriarchy in the bible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only JST or REL 396
JST	411	Judaism and the Beginnings of Christianity	Studies the beginnings of Christianity in relation to Judaism: their common context, the process of their distinction and their mutual influence. Through a historical and thematic approach, explores the parallel construction of Jewish and Christian identities. Combines readings from primary sources (Hellenistic Judaism, Qumran, New Testament, Early Christianity, Rabbinic Judaism) and up-to-date scholarly literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101 or 105 or 107 or 108 or HST 100 or 102 or REL 100 or SLC 142 or 202 with C or better; Credit is allowed for only HEB/JST/REL 411 or HEB 394 (Judaism and the Origins of Christianity) or HEB 494 (Judeo-Hellenistic Literature)
JST	445	The Holocaust in German-Mediated Memory	Examines representations of the Holocaust from across different media (literature, film, architecture, memoir, photography) and from across multiple generations of German engagement with this period in history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 200 or ENG 201 or ENG 202 or ENG 204 or FMS 100 or FMS 200 or JST 210 or JST 230 or SLC 202 with C or better; Credit is allowed for only FMS/GER/JST/SLC 445 or GER 494 (Holocaust & German Media or Holocaust & German Mediated Memory)
JST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JST	490	Methods of Historical Inquiry	Capstone course in history as an academic discipline, including formulation of research questions, use of primary and secondary sources to evaluate, form and support historical arguments. Students draft and revise a scholarly research paper.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Prerequisite(s): History or Secondary Education (History) or History (Secondary Education) major; ENG 102, 105, or 108 with C or better; minimum 55 hours. Credit is allowed for only HST 300 or HST 495 or JST 490
JST	491	History of Antisemitism	Antisemitism means hostility, negative perceptions and persecution of Jews. Examines the evolution of antisemitism in the West from antiquity to modern times. Explains the history of antisemitism by looking at the interplay of religious, economic, cultural and political factors. Gives special attention to the origins of Christianity, the place of Judaism in Christian self-understanding, the power struggle between popes and emperors during the Middle Ages, the involvement of Jews in money lending, the alliance between the Jews and the secular princes, the rise of modern nationalism, and the place of racism in the politics of modern nation states. With a better understanding of the history of antisemitism, ponders the differences and similarities between premodern anti-Judaism and modern antisemitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours
JST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an <u>undergraduate honors thesis or creative project.</u>	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
JST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an <u>undergraduate honors thesis or creative project.</u>	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Prerequisite(s): Barrett Honors student
JST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
JST	495	Judaism, Science and World Religions	Studies the correlation between science and religion as an interdisciplinary study from a historical perspective. Session topics fall into three distinct units. The first correlates the physical sciences with Western religious theology; the second explores the consequences of the life sciences on religious psychology; and the third examines the impact of the interconnection between sciences and religions in society. Each unit is studied through specific readings, film, lectures, and discussion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108; JST 210 or REL 210 (or JST 230) with C or better
JST	496	Biblical Narratives: Literary Approaches	Presents different trends in synchronic approaches applied to the Bible such as narrative criticism, semiotics, reader-response criticism, and situates them both in the postmodern cultural context and in the history of biblical exegesis. Explores various literary devices in biblical narratives, such as repetition, type-scenes, characterization, the change of points of view, the use of metaphors. Studies each technique on particular biblical texts, literally translated into English, with a special emphasis on how these techniques guide the interpretation and create meaning. Questions the significance of literary approaches for religious or ideological texts, such as the Hebrew Bible. Also considers criticisms raised against these approaches, assesses their limits, and envisions their future.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 87 hours; ENG 102, 105 or 108 with C or better; JST 210 or REL 210 (or JST 230) with C or better
JST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. <u>Major status in the department or instructor approval is required.</u>	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		
JST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
JUS	105	Introduction to Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. <u>Appropriate for freshmen and sophomores.</u>	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Credit is allowed for only JUS 105 or 305
JUS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Must have less than or equal to 25 earned hours
JUS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: Must have less than or equal to 25 hours
JUS	200	Topics in Concepts and Issues of Justice	Uses critical thinking skills to analyze and comprehend controversial social issues (e.g., abortion, affirmative action, capital punishment, the flat tax, and immigration).	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	
JUS	207	Homicide and Serial Killers	Explores the scholarship, research and rational analysis of the mass, spree and serial killer. It will examine some of the causes and underpinnings of these killers within the U.S. as well as the major theories and understandings of this phenomenon.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
JUS	210	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only AFR 212 (or AFS 210) or APA 210 or JUS 210 or TCL 210
JUS	214	The Pursuit of Justice in the 21st Century	Introduces a wide variety of institutions and organizations--locally, nationally and internationally--that seek justice. Provides an understanding of the many ways justice is institutionalized in modern societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	
JUS	215	Bob Marley and Reggae: Lyrics of Resistance	Studies political content, influence, and impact of Caribbean popular music, in particular the music of Bob Marley.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Credit is allowed for only AFR 215 or AFR 394 (Bob Marley: Reggae and Resistance) or JUS 215
JUS	220	Introduction to Social Transformation	Introduces key concepts in the study of social change, social innovation, and social transformation. Studies examples of social movements, social activism, community organizing, and coalition building and how such efforts have transformed society and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only APA 220 or JUS 220 or SST 220
JUS	222	Drugs and Justice	Provides an historical overview of the development and circulation of certain drugs; explores the more specific effects of drug use and abuse in everyday life; and examines the efforts by governments to both restrict/end and facilitate/expand the drug trade.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Credit is allowed for only JUS 200 (Drugs and Justice) or 222
JUS	225	Black Movements in America	Survey course on the historical and political development of mass movements by African Americans and Black resistance in the United States. Traces nearly 400 years of Black resistance against injustices and mass struggles for equality and liberation. Topics include the anti-slavery movement, anti-lynching campaign, the Civil Rights movement, the Black Power movement, prison abolitionism, the reproductive justice movement, and movements for economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only AFR 225 (or AFS 225) or JUS 200 (Black Movements in America) or JUS 225
JUS	235	Disability, Justice and Advocacy	Overarching history of the disability rights movement and how it is similar to and different from other civil and rights movements. Examines how policies and activism are interconnected within this movement, in addition to looking at other human categories related to disabilities such as gender, sexuality, race and socioeconomic status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only COM 235, JUS 235, SST 235, WST 235 or SST 294 (Disability Justice and Advocacy)
JUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
JUS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
JUS	300	Race and Racism in Africa/African Diaspora	Advanced study of the concepts of race and racism and how they manifest themselves in the USA, the Caribbean, and Africa. Examines the construction of race, racism, and race relations in Africa and the African Diaspora as well as practices to challenge ethnicity, racism, and racial oppression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 301 (or AFS 301) or JUS 300
JUS	301	Research in Justice Studies	Focuses on developing and evaluating research designs, data collection, and the relationship between validity and reliability. Stresses methods for conducting research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	302	Statistical Analysis for Justice Studies	Concepts and application of descriptive and inferential statistics, including linear regression, for justice studies research..	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	CS	Prerequisite(s): minimum 2.00 cumulative GPA; minimum 24 hours; ENG 102, 105 or 108 with C or better; MAT 117, 142, 170 or approved MA General Studies course
JUS	303	Justice Theory	Examines classic and contemporary philosophies and theories of justice, including legal, social, and criminal justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Minimum 2.00 GPA
JUS	304	Islands of Globalization: Caribbean Politics and Political Economy	In-depth study of the complexities of contemporary Caribbean politics and political economy. Examines the countries that constitute the Caribbean community and common market and the Caribbean Latin American countries such as Cuba and the Dominican Republic and analyzes the historical evolution of the region's political and economic systems and the impact of globalization. Traces the development of the region's political economy from the colonial period to the present; looks at the impact of globalization on contemporary politics, economics, and culture and the region's response.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 304 (or AFS 304) or JUS 304
JUS	305	Principles of Justice Studies	Introductory overview to the study of justice from a social science perspective. Primary topics include justice theories and justice research. Appropriate for juniors and seniors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Minimum 2.00 GPA; Credit is allowed for only JUS 105 or 305
JUS	308	Courts and Society	History and development of courts. Relationship between dispute resolution mechanisms and cultural/social structure/processes in which they are embedded.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA

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JUS	320	Community and Social Justice	Discusses and analyzes definitions of community; impact of environment on behavior; promises of community organization for local empowerment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	321	Wealth Distribution and Poverty	Examines wealth and income distribution in the United States and analyzes ideological and political forces producing an increasingly unequal society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	323	Justice and the Development of the Welfare State	Provides a comprehensive overview of the development of social welfare and relevant issues pertaining to social justice. Introduces upper-division students to different ideas about the meaning of social welfare in the context of the development of the U.S. welfare state.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	325	Globalization and Socio-Economic Justice	Addresses a trend producing increasing interconnectedness of economies and societies, as well as creating new conflicts and divisions. Provides greater understanding of global forces, as well as the effect of these forces on global economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA; Credit is allowed for only JUS 325 or SGS 325
JUS	326	Music as Political Discourse: Reggae, Calypso, and Hip Hop	This is a reading and writing intensive course that employs critical thought that explores African Diaspora popular music as a medium of social and political expression. It examines the political content of Reggae, Calypso and Hip Hop and their role in triggering and influencing popular discourse in the Caribbean and the USA. Course material will analyze the interrelationships among the musical forms and their role in fostering Black and Pan African Cultural Identity, Political Consciousness and World Peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & H & G	Prerequisite(s): AFR 200 (or AFS 200); minimum 45 hours; Credit is allowed for only AFR 325 (or AFS 325) or JUS 326
JUS	329	Domestic Violence	Critical inquiry into the legal, historical, theoretical, comparative, and treatment literatures on domestic violence; application of contemporary justice and social change theories to research how society defines and organizes against domestic violence. May include consideration of intimate partner abuse, child abuse and neglect, and gender violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	330	Survey of African American Politics	In-depth study of the dynamics of the African American political experience. Examines the historical development of African American politics from the anti-slavery era to the Civil Rights breakthrough of the 1960's through the present political climate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 330 or JUS 330
JUS	332	Politics of Energy Policy and Justice	Examines the social and political dimensions that shape energy and environmental policy. Focuses primarily on the U.S. Introduces elements of regional or global policy where they influence or shape domestic politics and policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	334	Science, Technology and Inequality	Conceptual and theoretical frameworks; provides empirical case studies that contribute to understandings of science and technology as they are used in society. The applications of science and technology in society need to be understood as instrumental to the creation and maintenance of inequality within and between societies. Science and technology does not merely cause or alleviate inequality, but are more profoundly implicated in social relations regarding distribution and access to the benefits of different technologies as well as exposure to risks from science and technology projects in society. The more pervasive and obdurate sources of social distribution are enshrined and entrenched in these scientific and technological systems.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3	C	Prerequisite(s): minimum 45 hours; Credit is allowed for only FIS 334 or JUS 334
JUS	335	Organized Crime	Critical inquiry into organized crime and its illegal activities; analysis and application of contemporary theories; analysis of strategies for reducing the prevalence and power of organized crime in the U.S. and other nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	345	Peoples and Cultures of the Caribbean	Traces the socio-political history of the wider Caribbean from the 15th century to the present. Focuses on the following broad areas: the early years of European settlement and colonization; the construction of slavery and plantation society; and the transition from colonization to political independence. Critically examines the origins and building blocks of Caribbean society as well as analyzes the linkages between the region and the rest of the African diaspora.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 345 (or AFS 345) or JUS 345
JUS	347	Immigration, Education and the Family	Cultural processes related to immigration and their impact on the social construction of the immigrant family and the education of other children. Immigration theories, immigration debates and discourses, the immigration landscape of the 21st century, conceptualizations of the family, and the methodological challenges family researchers face. Topics include issues pertaining to education and the family and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only APA 347, JUS 347, APA 394 (Immigration, Education & Family) or JUS 394 (Immigration, Edu. & Family)
JUS	350	Immigration and Justice	Examines immigration policy, history of immigration, refugee issues, labor force participation, gender, family, children, social networks, and transnationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA

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JUS	352	The Global Politics of Human Rights	Examines political forces that have shaped gradual construction of an international human rights regime and a universal culture of rights, including civil and political rights, as well as economic, social, and cultural rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	353	Race, Space and the Production of Inequality	Explores how the relationship between race and space has been important to the development of broad patterns of social inequality in the United States. Through a variety of readings, films and other material, examines how ideas of race and space have been important to the making and maintenance of national boundaries, citizenship, regional histories and spatial typologies such as border, ghetto, suburb and prison.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): APA 200 or 210; minimum 45 hours; Credit is allowed for only AFR 352 (or AFS 352) or APA 352 or JUS 353 or TCL 353 or APA 394 (Race, Space and the Production of Inequality)
JUS	360	Law and Social Control	Resolution of social issues through the application of law as an agent of social control. Nature, sanctions, and limits of law. Categories of law and schools of jurisprudence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	365	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
JUS	370	Cultural Diversity and Justice	Analyzes how cultural diversity challenges and broadens conventional understanding of justice. Examines how cultural beliefs and practices come into conflicts with public law and policy. Assesses the U.S.'s performance on incorporating cultural diversity in its social institutions including education, media, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Pre-requisites: 2.00 cumulative GPA; Pre/Co-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours
JUS	374	The Holocaust, Genocide, and Human Rights	Explores the psychological, social, historical, and political dimensions of the Holocaust and the phenomenon of genocide. Also examines the more recent international cases of genocide along with a discussion and analysis of the Universal Declaration of Human Rights.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	375	Justice and the Mass Media	Analysis of the impact of mass media and popular culture on social justice issues, including criminal justice. Critical inquiry into portrayals of gender, race, culture and class in mass media and other forms of popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	377	Arizona, Immigration, Latinos and Politics	Contemporary immigration and its related issues have generated significant debates, reforms and responses by government officials, businesses and private citizens, to name but a few in this country. This course provides a much-needed framework for understanding some of the immigration issues in Arizona and the country generally. It also focuses on some of the political responses by Latinos and their significant mobilization at the local, state and federal levels.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only JUS 377 or TCL 377 or JUS/HST/POS/SGS/TCL 394 (Arizona, Immigration, Latinos and Politics)
JUS	382	Justice and Pop Culture	Explores the connections between the production, reproduction, and consumption of popular culture and the resultant impact on issues of justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU or SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	385	Justice and Everyday Life	Justice and injustice in everyday life and how small things can become legal issues. Role of language and interaction in social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours; minimum 2.00 GPA
JUS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 2.00 GPA; Minimum 24 hours
JUS	405	Inequality, Economy and Justice	Addresses economic issues and justice implications, including the interplay among economic conditions, race-ethnicity, class, and gender worldwide.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 36 hours
JUS	408	Comparative Development of the Welfare State	Embodies a multidisciplinary perspective on welfare issues and exposes students to different ideas about justice beyond the United States. Allows them to better understand how and why states organize and deliver justice in different ways. Exposes students to cross-national variation in how history, culture, politics, and economics have shaped the development and content of different types of welfare states. Engages theoretical perspectives from political sociology and political economy concerning the emergence and future fate of these welfare states. Analyzes comparative analysis of three distinctive types of welfare states; Liberal, Conservative, and Social Democratic Welfare States, with particular emphasis on their varying capacity to combine economic efficiency with social justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & G	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA

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JUS	410	Punishment: Logic and Approach	Analyzes forms of punishment, how and why they have changed. Areas include philosophy, history, and social structure of punishment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 2.00 GPA
JUS	414	Black Political Movements: Pan Africanism to Black Power	In-depth examination of the three defining 20th century political movements in Africa and the African Diaspora (USA, Europe, Latin America and the Caribbean)the Pan Africanist, the Civil Rights and the Black Power movements. A primary course objective is to synthesize a comprehensive understanding of Black/African politics and society from a Diasporan perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G & H	Prerequisite(s): AFR 200 (or AFS 200) or minimum 9 upper-division hours; junior standing; Credit is allowed for only AFR 394 (Black Political Movements) or AFR 414 or JUS 414
JUS	415	Gender and International Development	Examines the ways in which international development is gendered as well as women's rights as human rights in both national and international arenas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & G	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	420	Women, Work, and Justice	Examines gender inequality in the workplace, including the nature of women's work, theoretical issues, and models for promoting gender justice at work.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	421	Race Ethnicity and Politics in the African Diaspora	Reading and writing intensive course that employs critical thought to look at the competition for political power among different ethnic groups in Africa, the Caribbean and the USA and the implications for political stability, economic development, democratic governance, democratization, nationhood and the empowerment of African and African Diasporan populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): AFR 200 (or AFS 200) and minimum junior standing OR minimum 9 upper-division hours in any classes with the following prefix: AFH, AFS, AFR, APA, JUS, POS, SGS, SOC, WST; Credit is allowed for only AFR 420 or JUS 421
JUS	422	Women, Law, and Social Control	Examines social, economic, and legal factors that are relevant to mechanisms of social control of women, including formal legal control and informal control through violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 36 hours; Minimum 2.00 GPA. Credit is allowed for only JUS 422 or WST 422
JUS	424	Ethics and Alternative Tourism	Cultural processes related to alternative tourism and their impact on both the tourist and local. Travel, tourism, globalization, development, human rights and the commodification of people and places. Topics include issues pertaining to Western tourism, commodification, race/class/gender and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 36 hours. Credit is allowed for only JUS 424 or JUS 494 (Sex, Drugs and Death)
JUS	425	Race, Gender, and Justice	Critically examines major theories, research findings, policies, and controversies concerning race, ethnicity, gender, and crime.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	427	Identity and Justice	Theory of symbolic interaction which provides a vocabulary, observational methodology (i.e., dramaturgy) and a set of grounding concepts that allow students to explore identity in its everyday practices. Explores the transformation and emergence of identities in public discursive spaces and the political impact of identity as it is deployed (invoked) and interpreted (imputed) among interactants in the social world. Establishes the position that identity operates as a central constitutive function in the construction of meaning and, subsequently, our ideas and attitudes about justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only JUS 427 or JUS 494 (Identity & Justice)
JUS	428	Critical Race Theory	In-depth analysis of the ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	GRD	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only AFR, APA, JUS or SST 428
JUS	430	Social Protest, Conflict, and Change	Analyzes historical and contemporary protest movements advocating equality based on race, gender, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	432	Racial Justice	Racial inequality remains a dominant theme in understanding social, legal, and economic justice in the U.S. today. Explores controversial topics surrounding race and justice. Emphasizes current legal, economic, political, and social conceptual frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	435	Cinema and Justice	Tracks the conceptualizations of justice that have been and are currently conveyed in film, including but not limited to the relationship between crime and various notions of justice. Other depictions include social issues such as gender, race, or economics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	438	Human Differences: Dilemmas of Justice	General examination of democracy and human differences that expands into in-depth investigations of (1) racial difference and identity politics; (2) gender and sexual difference in democracy; and (3) cultural difference and the multiculturalism debate.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or HU) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA

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JUS	440	Prisons, Power and the Punishments of the Past	Examines the history and logics of a "U.S. Penal Democracy," tracing how prisons became the preferred and accepted choice for punishment. Traces how the practices, policies and rationalizations of punishment (physical, psychological and social) have been at the center of U.S. politics beginning in the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 36 hours. Credit is allowed for only JUS 440 or JUS 494 (Prisons, Power and the Punishments of History)
JUS	444	Environment and Justice	Explores issues of environment and justice. Topics include justice and environmental racism, future generations, nonhuman life, global/non-Western societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	445	Surveillance and Society	Explore how surveillance technologies alter social life; the complex ways that they interact to produce security, fear, control, and/or vulnerability.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	452	Justice Issues in Israel and Palestine: The Political is Personal	Explores the justice issues related to the symbolic, historical, geographic, political, economic, religious, social, and cultural meanings of Israel and Palestine. Focuses on how and why the "political" is felt so very personally in everyday life in Israel and Palestine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	456	Human Rights and Sustainability	Addresses the connections between human rights and environmental sustainability. Legal and scholarly approaches linking these areas present new perspectives for addressing some of the greatest challenges of our time, given the important resource dimensions of economic and social rights and the human dimensions of sustainability. Yet human rights demands and environmental concerns are not always in harmony. Explores these tensions and opportunities by examining three substantive areas: urban ecology and human rights, the human right to food, and the human rights implications of extractive industries such as oil and mining. Following an introduction to the key concepts of human rights and sustainability, explores the substantive areas through theoretical and empirical readings on each; grassroots accounts of struggles over environment-related human rights; and selections from literature and film that illustrate the environmental justice issues at stake.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & G	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 36 hours. Credit is allowed for only JUS 456, SOS 456, JUS 394 (Human Rights & Sustainability), or JUS 497 (Seminar in Human Rights)
JUS	460	Feminism and Justice	Explores feminist thought and critiques traditional political theories. Examines issues of racism, sexuality, and the law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	463	Discretionary Justice	Use/abuse, key issues/manifestations of discretion in legal system and other societal institutions. Theoretical/empirical linkages between discretion and discrimination, based on race, ethnicity, and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	465	Death Penalty in the United States	Focuses on capital punishment in the United States; explores negotiation of law, politics, morality, public policy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	467	Terrorism, War, and Justice	Examines the relationship among terrorism, war, and justice. Analyzes terrorism within the larger study of deviance and social control, comparative politics, hegemony, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	468	Protest, Justice, Law and the Media	Examines research on protests, political deviance, trials/law and justice, and critiques some of the media representations of related ideas. Investigates global social movements, political protests and nascent political trials. Analyzes varied justifications for defining action as diversity, deviance or crime and the reasons for using criminal, civil or alternative (positive) sanctions (especially via indigenous peoples). Explores the encompassing meaning of a political trial. Many people throughout the world find everyday life to be a trial, especially those placed on the margins of globalization. Expands the research on media and trials that usually have been examined narrowly by legal institutions in North America and reinforced by hegemony.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 2.00 GPA; minimum 36 hours; Credit is allowed for only JUS 468 or 494 (Protest, Justice and the Media)
JUS	469	Political Deviance and the Law	Examines the controversies created by political and deviant behavior, including a critical view of law as an agent of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	470	Alternative Dispute Resolution	Critical examination of the tenets of alternative dispute resolution movement; exposure to the programs of ADR, including community and court based.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA

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JUS	473	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Non-Justice Studies majors with minimum 56 hours and 2.50 GPA OR Prof/capstone undergrad or Justice Studies graduate; Credit is allowed for only REL 482, POS 473, or JUS 473
JUS	474	Legislation of Morality	Addresses historical and contemporary issues related to social justice movements, law, and morality in a pluralistic society. Issues include AIDS, burial rights, homosexuality, poverty, prostitution, and racial discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	477	Youth and Justice	Critical examination of youth-related justice issues, including economic justice, violence against youth, delinquency, and the juvenile justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	479	Law and Disputing	Critical analysis of the controversies created by disputes, law, and other forms of social control.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
JUS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
JUS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
JUS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Minimum 2.00 GPA
JUS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
JUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7		
JUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
JUS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Social and Cultural Pedagogy MA student, Justice Studies MS or PHD student
JUS	501	Justice Theory	Theories and philosophies of social, economic, political, and criminal justice. Applies theories to contemporary justice issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student
JUS	509	Statistical Problems in Justice Research	Methodological problems of research design and statistical methods specific to justice studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student
JUS	521	Qualitative Data Analysis and Evaluation	Analyzes qualitative data, e.g., field notes, in-depth interview transcripts, document analysis, coding, and retrieval with a microcomputer; qualitative evaluation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student
JUS	542	American Indian Justice	Provides a broad overview of American Indian and Alaskan Native issues of justice and injustice in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	550	Gender, Race, and Economic Justice	Provides a critical social scientific perspective on economic issues particularly as they relate to gender, race, and class equality. Examines issues of economic inequalities as they are distributed along the lines of gender and race. Components converge to identify the social justice ramifications of economic policy and economic conditions.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	555	Migration/Immigration and Justice	Explores the causes and consequences of immigration to the United States and the incorporation of immigrants into the American economy and society.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	560	Women, Law, and Social Control	Gender issues in the exercise of formal and informal mechanisms of social control, including economic, social, legal factors, both violent and nonviolent.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	570	Juvenile Delinquency	Study of delinquency, including causation theories. Alternative definitions of delinquency, official statistics, and the critique and analysis of the interaction between social institutions and youth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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JUS	575	Race, Gender, and the Law	Explores the law and social sciences literature on race, ethnicity, gender, and the legal order. Critically assesses the major contemporary theoretical and policy debates and controversies in the field from a variety of disciplinary and interdisciplinary lenses, setting these debates in their historical contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	588	Justice and the Mass Media	Analyzes the nature and impact of mass media messages about justice concerns for social order.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	610	Law and the Social Sciences	Analyzes the theoretical grounds underlying diverse studies of law and society; creation and administration of law; and jurisprudence and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	620	Justice Research Methodology	Covers the epistemology of knowledge and method in justice research, history, and philosophy of social science and critical inquiry, as well as perspectives that link these concerns to research strategies. Explores the strengths and weaknesses of introduced methodologies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student; JUS 500 with C or better
JUS	630	Data Analysis for Justice Research	Bivariate and multivariate techniques of data analysis and hypothesis testing for justice-related research and use of information and statistical programs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student; JUS 509 with C or better
JUS	633	Community Research	Focuses on epistemology, methodology, and the production of knowledge about community and seeks to link theory, methodology, specific research strategies, and social criticism about the conduct of community research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	640	Theoretical Perspectives on Justice	Analyzes philosophical perspectives of justice; linkages between social science theory and justice constructs; application of justice to social issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student; JUS 501 with C or better
JUS	650	Advanced Qualitative Data Analysis	Advanced qualitative data collection and analysis techniques, including ethnography, in-depth interviews, field notes, coding, transcribing, content analysis, textual analysis.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Justice Studies MS or PHD student

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JUS	656	Human Rights and Sustainability	Addresses the connections between human rights and environmental sustainability. Legal and scholarly approaches linking these areas present new perspectives for addressing some of the greatest challenges of our time, given the important resource dimensions of economic and social rights and the human dimensions of sustainability. Yet human rights demands and environmental concerns are not always in harmony. Explores these tensions and opportunities by examining three substantive areas: urban ecology and human rights, the human right to food, and the human rights implications of extractive industries such as oil and mining. Following an introduction to the key concepts of human rights and sustainability, explores the substantive areas through theoretical and empirical readings on each; grassroots accounts of struggles over environment-related human rights; and selections from literature and film that illustrate the environmental justice issues at stake.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only JUS 656 or SOS 656 or JUS 691 (Human Rights & Sustainability)
JUS	660	Globalization and Economic Justice	Explores the political economy of globalization from a theoretical as well as practical standpoint. Sources used come from a variety of disciplines--sociology, political science, international relations, geography, and economics--all of which contribute unique theoretical and normative tools for analyzing the effect of global forces on economic justice.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Graduate student
JUS	669	Political Trials and Indigenous Justice	Focuses upon research on political trials, deviance, and conceptions of indigenous and contemporary justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		Prerequisite(s): degree- or nondegree-seeking graduate student
JUS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	100	Introduction to Health and Wellness	Current concepts in health, exercise, and wellness. Emphasizes personal health, theories, attitudes, beliefs, and behaviors.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Credit is allowed for only EXW, HSC or KIN 100
KIN	101	Introduction to Kinesiology	Introduces the disciplines and professions associated with kinesiology, including an overview of historical and philosophical foundations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		
KIN	102	Forager to Couch Potato: The Obesity & Diabetes Epidemics	Overview of factors leading to the global surge in obesity and type 2 diabetes; the historical, cultural, environmental, and anthropological factors impacting genotypes related to the development of obesity and diabetes; social forces leading to a sedentary lifestyle; and options for reengineering environmental and social institutions to increase physical activity.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		
KIN	105	Physical Education Activity	Beginning instruction in a wide variety of sports such as aerobics, aquatics, racquet sports, physical conditioning, and golf. 3 hours per week. Y grade only.	Y	LEC	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		
KIN	110	Research Analysis Laboratory	Introduces basic research areas in the discipline of kinesiology. Topics may include the following: developmental learning, exercise physiology, exercise psychology, exercise testing, metabolic physiology, motor control, motor learning, research journals and societies, research methods, research writing.	N	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-2		Pre-requisite: Pre Sec Ed - Physical Ed, Exercise Sci/Phys Educ or Kinesiology major
KIN	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-3		Prerequisite: maximum 25 hours
KIN	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
KIN	205	Physical Education Activity	Intermediate levels. Continuation of KIN 105. 3 hours per week.	Y	LEC	Y	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		

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KIN	290	Introduction to Evidence-Based Practice	Introduces best practices for gathering, interpreting, analyzing, synthesizing and evaluating research within the health and health care professions.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Prerequisite(s) with C or better: College of Health Solutions major; ECN 221, HCD 300, JUS 302, PBH 300, POS 401, PSY 230, SOC 390 or STP 226; ENG 101, 105, or 107; Credit allowed for KIN 290 or KIN 294 (Intro to Evidence Based Practice) or NTR 290
KIN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
KIN	310	Collegiate Sports	Participation in men's or women's intercollegiate competition. May be repeated for 4 hours 1 per year. Y/E grade.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		
KIN	334	Functional Anatomy and Kinesiology	Muscles, bones, joints, and nerves and how they produce movement. Emphasizes muscle origins, insertions, actions, and innervations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 201 (ZOL 201) with C or better; BIO 202 with C or better
KIN	335	Biomechanics	Basic anatomical and mechanical principles applied to human movement. Emphasizes kinematic and kinetic concepts.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: KIN 101 (KIN 200) with B or better; BIO 201 (ZOL 201) and BIO 202 (ZOL 202), PHY 111 with C or better; One of the following courses: MAT 170, 210, 251, 270, 271, or 272 with C or better
KIN	340	Physiology of Exercise	Physiological mechanisms of acute responses and chronic adaptations to exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: KIN 101 (KIN 200) with B or better, BIO 201 (ZOL 201) and BIO 202 (ZOL 202) with C or better; one of the following courses: CHM 101, 113, 114, 115, 116, 117, or 118 with C or better
KIN	345	Motor and Developmental Learning	Principles of motor skill acquisition across the life span, focusing on the learner and the learning environment.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: KIN 101 (KIN 200) with B or better; PGS 101 (PGS 101) with C or better; BIO 201 (ZOL 201) with C or better
KIN	348	Psychological Skills for Optimal Performance	Applies psychological techniques and their use to improve effectiveness and performance in sport and related areas.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	
KIN	352	Psychosocial Aspects of Physical Activity	Interrelationships between physical activity and psychosocial variables, including socialization, cultural values, aggression, and motivation. Includes the psychological benefits of physical activity and exercise adherence.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB & C	Pre-requisites: KIN 101 (KIN 200) with B or better; PGS 101 (PGS 100) with C or better
KIN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
KIN	412	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discussion of injury mechanisms.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 335 with C or better; Credit is allowed for only KIN 412 or 512
KIN	413	Qualitative Analysis in Sport Biomechanics	Develops systematic approach for detecting and correcting errors in human performance using anatomical and mechanical principles.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 335 (EPE 335) with C or better
KIN	414	Electromyographic Kinesiology	Muscular contributions to human movement, muscle mechanics, electrophysiological basis, and practical application of electromyography.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisites: KIN 335 (EPE 335 or PED 335) with C or better; KIN 340 (EPE 340 or PED 340) with C or better
KIN	418	Experimental Neuromechanics	Students experience different quantitative techniques to analyze human movement from a motor control and biomechanical perspective.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): KIN 290; KIN 335; KIN 345; Credit is allowed for only KIN 418 or KIN 494 (Experimental Neuromechanics)
KIN	421	Human Motor Control	Focuses on understanding how the human central nervous system controls, regulates, and learns movements.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 345 (EPE 345) with C or better
KIN	422	Motor Control in Special Populations	Discusses principles of motor control theories and related practical applications for certain special developmental populations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 345 (EPE 345) with C or better
KIN	423	Motor Control and Aging	Functional and behavioral changes to the motor control system as humans age, how specifically it impacts motor control and learning.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 345 (EPE 345) with C or better

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KIN	437	Comparative Biomechanics and Motor Control	Guides students to critically evaluate how the physical and mechanical properties of organisms and their environment affect biological tissues, structures, and motor control.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 181; MAT 170 and PHY 111 with C or better; Credit is allowed for only BIO 437, 537, KIN 437 or 537; Credit is allowed for only KIN 437 for KIN 494 or 598 (Comparative Biomechanics and Motor Control)
KIN	440	Exercise Biochemistry	Study of bioenergetics and metabolism of cellular (skeletal muscle, heart, and liver) organelles and proteins during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 (EPE 340 or PED 340); Credit is allowed for only KIN 440 or 532
KIN	441	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 340 (EPE 340 or PED 340); Credit is allowed for only KIN 441 or 531
KIN	442	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 (EPE 340) with C or better; Credit is allowed for only KIN 442 or 536
KIN	443	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 340 (EPE 340 or PED 340) with C or better; Credit is allowed for only KIN 443 or 533
KIN	444	Metabolic Adaptations to Exercise Training	Examines physiologic adaptations to exercise training as they relate to metabolism and tissue functions.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 (EPE 340 or PED 340) with C or better
KIN	445	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 (EPE 340) with a C or better; Credit is allowed for only KIN 445 or 535
KIN	446	Pediatric Obesity	Covers a variety of aspects related to pediatric obesity including the causes and consequences in terms of physiologic, genetic, psychosocial, environmental and economic. Also discusses potential interventions such as behavioral, pharmacologic, surgical and public health and policy. Evidenced-based course where research guides class lectures and discussions.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): EXW 315 or KIN 340; Credit is allowed for only EXW 412 or KIN 446 or EXW 494 (Pediatric Obesity) or KIN 494 (Pediatric Obesity)
KIN	447	ECG Interpretation	Using ECG data, this course comprehensively investigates cardiac arrhythmias and interactions with therapeutic drugs and exercise.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 340 with C or better; Credit is allowed for only KIN 447 or 547 (or 598 (ECG Interpretation))
KIN	450	Biopsychosocial Perspectives on Physical Activity and Health	Uses a biopsychosocial perspective to examine the interrelationships on physical activity and health (physical and mental).	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: KIN 352 (EPE 352) with C or better
KIN	452	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Pre-requisite: KIN 352 (EPE 352 or PED 352) with C or better; Credit is allowed for only KIN 452 or 522
KIN	454	Motivational Theory in Exercise and Health	Assesses motivational theories relevant to the field of exercise and health psychology. Evaluates research and utilizes the findings to create applied public service announcements targeted toward a specific health issue (e.g., exercise, nutrition, smoking) and a specific population. Assesses students on four group public service announcements and "mini exams" for each unit. Taught in class, online and in a hybrid format.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): KIN 352 with C or better. Credit is allowed for only KIN 454 or KIN 494 (Motivational Theory in Exercise & Health)
KIN	460	Theory of Strength Training	Research and theories on developing muscular strength; programs for developing muscular strength.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: KIN 340 (EPE 340 or PED 340) with C or better
KIN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): minimum 2.00 GPA; Corequisite(s): junior or senior standing
KIN	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6		Prerequisite(s): Barrett Honors student
KIN	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6	L	Prerequisite(s): Barrett Honors student
KIN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Pre-requisite: Minimum 25 hours
KIN	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-7	L	Prerequisite(s): Kinesiology BS major; senior standing

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KIN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
KIN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	512	Biomechanics of the Skeletal System	Biomechanics of tissues, structures, and major joints of the musculoskeletal system. Discusses injury mechanisms.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 412 or 512
KIN	520	Applied Sport Psychology	Psychological theories and techniques applied to a sport to enhance the performance and personal growth of athletes and coaches.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 448 or 520
KIN	522	Exercise Psychology	Contemporary research and theory as related to human behavior and health in an exercise setting.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 452 or 522
KIN	523	Motor Control and Aging	Focuses on the functional and behavioral changes to the motor system as humans age and how specifically it impacts motor control and learning.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	530	Exercise Physiology	Immediate and long-term adaptations to exercise with special reference to training and the role of exercise in cardiovascular health.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	531	Physiology of Women in Sport	Physiological aspects of women engaging in physical activity. Emphasizes factors affecting performance and health throughout life.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 441 or 531
KIN	532	Exercise Biochemistry	Understanding the basic biochemical principles and enzyme pathways involved in energy transduction during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 440 or 532
KIN	533	Exercise Endocrinology	Discusses current research and theory concerning hormonal changes during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 443 or 533
KIN	535	Exercise Physiology for Children and Adolescents	Understanding the influence of physical growth and maturation on the development of the functional capacities of the exercising child.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 445 or 535
KIN	536	Fuel Metabolism	Discusses current research concerning the metabolism of carbohydrate, fat, and protein during exercise.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student; Credit is allowed for only KIN 442 or 536

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KIN	537	Comparative Biomechanics and Motor Control	Guides students to critically evaluate how the physical and mechanical properties of organisms and their environment affect biological tissues, structures, and motor control.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only BIO 437, 537, KIN 437, 494 (Comparative Biomechanics and Motor Control), 537 or 598 (Comparative Biomechanics and Motor Control)
KIN	547	ECG Interpretation	Comprehensive investigation of the heart rhythm disturbances that occur within the chambers and conducting tissue of the heart. Partitioned into three sections allowing the systematic review of arrhythmias that occur in the atria, AV junction and ventricles of the heart. The material is designed to maximize understanding by analyzing electrocardiogram rhythm strips to reinforce applying the theoretical component of the course. Also uses the application of these theories through laboratory experiences allowing hands-on experience with electrode placement and 12 lead ECG interpretations.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): Clinical Exercise Physiology MS or Exercise and Wellness MS student; Credit is allowed for only KIN 447 or KIN 547 or KIN 598 (ECG Interpretation)
KIN	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	598	Special Topics	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	621	Motor Learning/Control	Discussion of contemporary research issues in motor learning and control. Includes behavioral and neurophysiological issues.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
KIN	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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KIN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): degree- or nondegree-seeking graduate student
KIN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
KOR	101	First-Year Korean I	Pronunciation, grammar, elementary conversation, and development of basic reading and writing skills, including Han'gul. Lecture, recitation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
KOR	102	First-Year Korean II	Continuation of KOR 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		Pre-requisite: KOR 101
KOR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	201	Second-Year Korean I	Continual development of communication skills. Increased emphasis on reading and writing, vocabulary building, and review of fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: KOR 102
KOR	202	Second-Year Korean II	Continuation of KOR 201.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: KOR 201
KOR	250	Korean Culture and Society	Surveys Korean culture and society, covering history, religious traditions, gender, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	
KOR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	313	Third-Year Korean I	Continued development of ability to communicate orally and in writing. Exposure to a variety of Korean written styles.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: KOR 202
KOR	314	Third-Year Korean II	Continuation of KOR 313.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: KOR 313
KOR	321	Korean Literature in Translation	Introduces various genres of Korean literature written from the seventeenth century to the present in English translation. Aims to help students to understand the history of modern Korean literature in transnational and transdisciplinary contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only KOR 294 (Korean Lit in Translation), 321, 394 (Korean Lit in Translation) or SLC 321
KOR	347	Korean Film and Literature	Introduces aspects of Korean history, culture, and society through Korean film and literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	
KOR	350	Women of Korea	Examines the changing role and status of women in modern Korea in relation to political and cultural changes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	H	
KOR	354	Religions of Korea	Explores major religious traditions and folk religions in Korea. Covers diverse topics such as mythology, indigenous practices, doctrinal and meditation Buddhism, early and Neo-Confucianism and Christianity as well as the new religions of modern times. Discusses the development of religious ideas and practices in light of the political, cultural and social milieus. Focuses on cultural importation and adaptation as well as interaction and conflict among the different religious traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 24 hours; Credit is allowed for only KOR 354 or REL 354
KOR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
KOR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
KOR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
KOR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
KOR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
KOR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LAA	345	Professional Practice Seminar	Landscape architecture practice including contracts, project and office management, liability, licensing, and professional development.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	1		Pre-requisites: Landscape Architecture student; Co-requisite: LDE 362
LAA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		

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LAP	254	Plant Materials	Plants as landscape architectural elements. Emphasizes plant identification and the uses of particular plants in landscape architecture.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Landscape Architecture major; Corequisite(s): LDE 262; Credit is allowed for only LAP 254 or LTC 494 (Plant Materials)
LAP	332	GIS Applications in Environmental Design	Addresses fundamentals of geographic information systems (GIS), especially as they relate to applications by environmental planners and designers (including architects, landscape architects, urban designers and related professionals). Focuses on using GIS as tools. Explores the techniques and procedures for acquiring, displaying, editing, analyzing and modeling spatial information.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Landscape Architecture BS major; minimum junior standing; ALA 235
LAP	352	Ecosystems and Sustainable Design	Increases awareness and understanding of the biotic and abiotic systems, processes and factors of our biosphere in order to facilitate sustainable landscape architectural design and applications.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	3		Prerequisite(s): Landscape Architecture major; Credit is allowed for only LAP 352 or LTC 294 (Natural Systems)
LAP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisites: Landscape Architecture BS/BA plan; Co-requisite: LDE 461
LAP	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-6		Pre-requisite: Junior standing; Credit is allowed for only GCU 485 or GPH 485 or LAP 485 or POR 485 or PUP 485 or 585
LAP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
LAP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
LAP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
LAP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAP	585	International Field Studies	Organized field study in specified international locations.	N	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only GCU 485 or 585 or GPH 485 or 585 or LAP 485 or 585 or POR 485 or PUP 485 or 585
LAP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAP	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LAS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	CNV	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
LAS	205	Deep Roots: Latin America	Introduces the diversity of Latin-American traditions through its cultural production. The approach is interdisciplinary (art, architecture, literature, film, theater, business and anthropology). Studies the history and culture of Latin America and its concept of identity and nation through a variety of genres. Focuses on aspects that reveal the complexity of Latin America and in turn provides insights into Latin American culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	206	Locating Latin America: Interdisciplinary Methods	Methodologies course designed to provide exposure to academic fields and research approaches that intersect in Latin American studies	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		

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LAS	330	From the Inside: The Latin American Journey	Journeys through a wide variety of genres and critical scholarship in Spanish. Provides a broad exposure to different types of reading and writing. Because the Latin American Studies program is flexible, students must be able to engage with many different types of texts across disciplines. Covers Latin American cultural history from pre-Colombian to the post-modern by exploring different formats and genres around major central themes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	340	Latin American Women Writers	In the 20th and 21st centuries, Latin America has seen a proliferation of literature published by women authors. While this explosion of the written word owes in part to changing socioeconomic factors and the opening of the international markets, Latin American women's literary history is often ignored in the canon. Examines the concepts of feminism through a Mexican framework, starting from the point of view of Mexican women theorizing about their own. This is not a history of feminism, but it does aim to highlight certain fundamental texts and key concepts of Mexico's history from the position of women writers, including feminism's critique of social structures beyond the bounds of gender relations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only LAS 340 or WST 341
LAS	350	The Construction of a Nation: Chile in the 20th/21st Century	Examines Chilean history, politics and cultural production through its historical development and explores a multiplicity of cultural issues. Develops knowledge and appreciation of cultural and visual production of Chile and Latin America as well as acquired skills for critically analyzing texts in their applicability to modern-day society. Considers the variety of cultural and artistic productions (novel, poetry, short story, film, music, pop culture, presidential speeches) as sources of social commentary in which observations of national identities are constructed.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; Credit is allowed for only LAS 350, ENG 494 (Construction/Nation:Chile in the 20th/21st Cen) or SPA 494 (Construction/Nation:Chile in the 20th/21st Cen)
LAS	351	Cityscapes: Urban Mexican Literature and Culture	Examines major developments in contemporary Mexican literature. Begins at mid-20th century as the novel turns away from the rural novel of the Revolution, toward a more urban setting. Mexico City serves as a cultural and political center, and the novels mark social and political changes across different literary currents.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	355	Contemporary Mexican Cinema: Changing Cartographies	Examines major themes and auteurs in contemporary film as their work intersects with larger cultural phenomena, expanding students' cultural knowledge as well as critical communication skills.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
LAS	419	20th Century Chicano/a History	Historical development of the Chicano community in the 20th century.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only HST 419 or LAS 419
LAS	428	Chicano Cultures in the Southwest	Examines the history and cultures of people of Mexican descent in the Southwestern region of the United States through exploration of "cultural citizenship" and "belonging" as they relate to the pursuit of civil rights, equality, justice and cultural production.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AMS 428 or ETH 428 or LAS 428 or MAS 598 (Chicano Cultures in Southwest)
LAS	430	Gender on the Borderlands	Examines women's status in the U.S.-Mexico borderlands through key issues such as migration, labor, violence, education, and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours OR WST 100 or 300 with C or better; Credit is allowed for only ETH 430 or LAS 430 or WST 430 or JHR 598 (Gender on the Borderlands)
LAS	450	Latina/os, Schooling and Social Inequality	Advanced interdisciplinary understanding of the issues facing Chicano, Mexican American and Latino communities in relation to K-16 schooling in the southwestern United States. Examines various schools of thought that have shaped social discourse and policies, develops a critical perspective on the social and political issues affecting education, and identifies issues--both historical and contemporary--affecting Chicanos in public education.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only AMS 450 or ETH 450 or LAS 450 or AMS 429 (Latino/a School & Social Inequity)
LAS	471	Treaties and Cultural Production in Spain and the Americas	Emphasizes sociocultural values associated with national, transborder and transatlantic identities providing a panoramic view of treaties, agreements, constitutions and cultural production by Americans and Spaniards from 1812 to 2012 with particular focus on the themes of nations, borders, citizenship and identity.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	473	Indigenous and Latina/Chicana Representation	Examines from an interdisciplinary perspective contemporary issues experienced by Indigenous and Chicana/Latina women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 45 hours; Credit is allowed for only ETH 473 or LAS 473 or WST 473

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LAS	480	Current Trends in Theatre and New Media in Latin America and Spain	Overview of the transatlantic cultural interrelationships between Latin American and Spanish theatre and performance in the 20th and 21st centuries. Explores topics such as cyber-theatre, Internet theatre and multimedia theatre.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
LAS	481	Dictatorships and Dirty Wars: Latin American Cinema from Resistance to Reconciliation	Examines aspects of Latin American politics and culture of and through the optic of social unrest. Examines films focusing on the period(s) of recent Latin American history in which there have been social upheavals, dictatorships and state repression, "dirty wars": understood as clandestine wars waged on the citizenry by the government, social movements from below.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s) with C or better: LAS 205, 206, 330. Credit is allowed for only LAS 481 or SPA 481 or ENG 494 (Dictatorships/Dirty Wars:Lat Am Cinema) or SPA 494 (Dictatorships/Dirty Wars:Lat Am Cinema)
LAS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
LAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
LAS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required. Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
LAS	499	Individualized Instruction	Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
LAT	101	Elementary Latin	Basic Latin grammar with an emphasis on developing reading skills. For beginning students only.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
LAT	102	Elementary Latin	Continuation of LAT 101.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Pre-requisites: LAT 101
LAT	140	Greek and Latin Roots in Bioscientific Terminology	Introduces students to the ancient Greek and Latin root words most commonly used in biological, medical, and other scientific terminology, and gives practice identifying them in context. The knowledge of these root words enables students to memorize with greater ease and increased retention the bioscientific terminology they encounter in other coursework as well as in their medical or scientific profession.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
LAT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
LAT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	201	Intermediate Latin I	Final semester of grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	HU	Pre-requisites: LAT 102
LAT	202	Intermediate Latin II	Beginning reading of Latin authors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	HU	Pre-requisites: LAT 201
LAT	222	Survey of Roman Literature	Introductory survey of Roman literature. Familiarizes students with the literary genres, texts and authors of the Romans from the origins of the Latin language to the Silver age. All readings in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only LAT 222, SLC 222, LAT 294 (Roman Literature in Translation) or SLC 294 (Roman Literature in Translation)
LAT	223	Introduction to Greek and Roman Mythology	Familiarizes students with the characters and events of ancient Greek and Roman myths through their literary manifestations, and moves beyond mere narrative to consider the possible interpretations and functions of these myths, thus revealing the central concerns of ancient society and giving insights into the working of our own society and its literary and artistic traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only GRK 223, LAT 223, SLC 223, GRK 294 (Greek and Roman Mythology)
LAT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	301	Roman Authors	Intermediate Latin reading class that introduces Roman prose authors such as Livy, Cicero and Pliny and explores the variety of genres within Latin prose, such as historical accounts, personal letters and political oratory.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): LAT 201 with C or better; Credit is allowed for only LAT 301 or LAT 394 (Introduction to Latin Authors)
LAT	322	Medieval Latin	Surveys Late Antique and medieval Latin authors and texts, both prose and poetry. Some review of grammar.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: LAT 201 with C or better
LAT	344	Classics and Comics	Explores the connections between the classical tradition of Ancient Greek and Roman literature and the modern American superhero comic book tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GRK 344 or LAT 344 or SLC 344 or GRK/LAT/SLC 394 (Classics and Comics) or SLC 494 (Classics and Comics)

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LAT	360	Greece and Rome at War		N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 360, HST 397, LAT 360, SLC 360 or SLC 394 (Greece and Rome at War)
LAT	361	Roman Religion	Roman religion was never static, despite the best efforts of the Roman state to make it so. Understands the artifacts and procedures of Roman state cult from its earliest origins to the late empire, using ancient literary sources, archaeology throughout the ages and modern scholarly theories. Clarifies the forces that influenced development and change in Roman religion, both internal and external.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only LAT 361, REL 361, SLC 361 or SLC 394 (Roman Religion)
LAT	373	Roman History I: Foundations and Republic	Traces the growth of Roman power from Rome's humble beginnings in the eighth century B.C. to its domination of the Mediterranean and the transformation of the Roman Republic into the Roman Empire after the Battle of Actium (31 B.C.).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 373 or LAT 373 or SLC 373
LAT	374	Roman History II: The Roman Empire	The Roman Empire from the reign of the first emperor, Augustus (27 B.C.-A.D. 14), to that of Justinian (A.D. 527-565), focusing on the lives of the Roman emperors, the society and culture of the empire, and the profound changes that eventually contributed to the empire's collapse.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 374 or LAT 374 or SLC 374
LAT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	421	Roman Literature	Readings in the Latin masterpieces. Authors read change each year in accordance with needs of the class. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: LAT 202
LAT	422	Roman Literature	See LAT 421.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: LAT 202
LAT	444	Heroes, Ancient and Modern	Explores the heroic literature of the ancient Greeks and Romans, then traces the classical tradition and reception of the classical hero in medieval and modern texts. Incorporates history, art history and material culture from the relevant societies to supplement study of the texts involved.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 444, LAT 444, SLC 444 or SLC 494 (Heroes: Ancient and Modern)
LAT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
LAT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
LAT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
LAT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
LAT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LAT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LAW	105	The Structure and Methodology of the American Legal System	What is law? What is the structure of the American legal system? What does it mean to understand law in the context of that system? How is this system effective and problematic and how does its evolution over time change our perceptions of and relationships with those who are part of it? Provides answers to these and other questions while simultaneously developing a working understanding of American law, its practicalities, and externalities. Takes the form of a comprehensive inquiry into the legal system, its origins, structures, applications, success, failure, and decision-making processes. In asking probing questions about the system and its nature, explores the values and philosophies that inform our American conception of the law and its role in society.	N	LEC	N	OPT	College of Law	College of Law Dean's Office	3		

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LAW	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1		Pre-requisites: Freshman standing
LAW	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	College of Law Dean's Office	1-4		Pre-requisites: JD students may not enroll.
LAW	210	Law, Culture and Community	Considers how law constructs meaning from the world around us. Explores not only what law is, but why law is, and where law shows up in American public and private life. Examines the roles of law in facilitating cooperation and resolving conflict with an interdisciplinary lens of history, philosophy, religious studies, political and legal theory.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Credit is allowed for only LAW 210 or 294 (Law, Culture & Community)
LAW	215	Business, Law, and Society	Examines the philosophical and legal framework of business--the basic concepts of business entities, contracts, accountability, and relationships with an emphasis on the social context in which these concepts operate. Emphasizes the concepts of law and ethics throughout the course.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisites: Undergraduate student; Credit is allowed for only LAW 215 or 294 (Business, Law, and Society)
LAW	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	310	The Global Legal Community	Introduces the building blocks of the developing "global legal community," global governance institutions, both public and private, international law and transnational legal regimes. Examines how dynamic area of law is influenced by, and influences the conduct of the international and domestic relations.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: Junior or Senior standing; Credit is allowed for only LAW 310 or 394 (The Global Legal Community)
LAW	315	Foundations in American Business Law	Explores the foundations of American business law. Topics covered include: the structure and processes of the U.S. legal system, a comparison of transactional law and business litigation concepts and processes, and the role of regulation in the free market. Students read law cases and other legal texts such as legislation, professional and academic legal writing.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): minimum 45 hours
LAW	316	Introduction to Corporate Tax Law and Policy	Hands-on introduction to the basics of U.S. Federal and Arizona state corporate tax law. Explores the economic and social policy foundations of the tax codes. Students use the tax code to address various business scenarios they may face.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Credit is allowed for only LAW 316 or 394 (Intro Corporate Tax Law&Policy)
LAW	322	Consumer Protection Law	Since the "Progressive Era" at the turn of the last Century, many new consumer protection agencies were created: The Food and Drug Administration, The Public Health Service, The Federal Trade Commission, Agencies to Control Narcotics, and fifty years later the Consumer Product Safety Commission, the Environmental Protection Agency and the Radiation Health programs, Nuclear Regulatory Commission. Focusing mostly on health products, lookd at these efforts and their effects on the products we use, the choices we make and the assurances we have as consumers that these products are well manufactured and deliver the goods.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: Junior or Senior standing; Credit is allowed for only LAW 322 or 394 (Consumer Protection Law)
LAW	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	480	Business, Law and Society	What would a legal system that is pro-business look like? Explores the role law plays in American business. Considers what it means to have business relations generally governed by the rule of law, and specifically in the United States legal system. Draws on legal theory, political theory, and American legal history to guide us. Examines some of the legal tools of the trade from property law and contract law that are fundamental to the conduct of American business. Discovers that the development of legal doctrines promoting free enterprise are at times tempered by social justice concerns rooted in conceptions of equality and fairness. Considers how the current legal regulatory climate promoting corporate social responsibility impacts business decisionmaking.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): LAW 210, LAW 215 or 294 [Business, Law and Society]); junior or senior standing. Credit is allowed for only LAW 480 or LAW 494 (Business, Law and Society)
LAW	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	515	Contracts	Explores common law legal method and the structure of Article 2 of the U.C.C. in the context of issues of contract formation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	516	Criminal Law	Substantive law of crimes.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		
LAW	517	Torts	Legal protections of personality, property, and relational interests against physical, economic, and emotional harms.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	518	Civil Procedure	Explores the structure of a lawsuit and techniques of alternative dispute resolution. Specific topics include commencement of suit, joinder of parties, discovery, pretrial motions, subject matter and personal jurisdiction, res judicata, collateral estoppel, and choice of law under the Erie doctrine.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-5		
LAW	519	Legal Method and Writing	Examines methods used to analyze legal problems. Reviews precedent statutory construction and basic res judicata problems. Use of basic legal writing formats.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student

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LAW	522	Constitutional Law I	Role of courts in the federal system, distribution of powers between state and federal governments, and the role of procedure in litigation of constitutional questions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		
LAW	523	Property	Indicia of ownership, found property, estates in land, landlord tenant, nonpossessory interests in property, nuisance, land use planning, and transfers of interests in property.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	524	Legal Advocacy	Continuation of LAW 519.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2		
LAW	530	Fundamentals of Contract Law	Explores the fundamental principles of contract law under the common-law and Uniform Commercial Code statutory provisions. Focuses on issues of contract formation and interpretation, defenses to enforcement, warranties and conditions, and remedies for breach of contract.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): Master of Legal Studies major; Credit is allowed for only LAW 530 or LAW 598, Fundamentals of Contract Law
LAW	581	U.S. Law and Legal Analysis	Introduces non-JD students to the U.S. legal system and to the types of legal reasoning used by U.S. lawyers and judges. Provides the necessary instruction to use legal reasoning in work, including reading and understanding cases and statutes and applying existing law to the issue presented. Extensive written legal analysis exercises.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): Laws (Global Legal Studies) or Legal Studies or Master of Sports Law and Business student
LAW	582	Patent Drafting	Prepares students to draft patent applications on behalf of clients. Additionally, students learn the techniques and language necessary to reply to Offices Actions issued by the United States Patent and Trademark Office (USPTO). Provides significant drafting experience, requiring three separate writing submissions and revisions based on instructor feedback throughout the course. Students create work product examples that can be shared with potential employers and/or prospective clients.	N	LEL	N	GNA	College of Law	Sandra Day O'Connor College of Law	3		Prerequisite(s): Master of Legal Studies major
LAW	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAW	585	Comprehensive Patent Practice	Prepares students for the patent prosecution process, as administered by the United States Patent and Trademark Office (USPTO). Uses a "cradle to grave" approach, beginning with the earliest steps taken when preparing to draft a patent application for a client and ending with post-decision options and activities available to those awarded with an issued patent or denied an issued patent.	N	LEL	N	GNA	College of Law	Sandra Day O'Connor College of Law	5		Prerequisite(s): Master of Legal Studies major
LAW	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LAW	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	596	Professional Legal Writing	Teaches non-JD students how to organize a legal research project by analyzing the facts and identifying the issues involved, determining the research tools needed to correctly investigate the legal problem, and systematically using these tools to strengthen and support the desired legal argument.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: Laws (USLaw&Global Legal Pract) or Legal Studies students
LAW	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	601	Antitrust Law	Legislation and its implementation to prevent monopoly and business practices in restraint of trade, including restrictive agreements involving price-fixing, trade association activities, and resale price maintenance.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisites: College of Law student
LAW	602	Civil Procedure II	Focuses on the Rules of Civil Procedure and how lawyers use the Rules in litigating civil cases from initiation through the pre-trial stages.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		
LAW	603	Conflict of Laws	Problems arising when the operative facts of a case are connected with more than one state or nation. Choice of law, bases of jurisdiction, effect of foreign judgments, and underlying federal and constitutional issues.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Prerequisite(s): degree- or nondegree-seeking graduate student
LAW	604	Criminal Procedure	Nature of the criminal procedural system with special focus on constitutional protections for the accused.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisites: College of Law student
LAW	605	Evidence	Principles and practice governing the competency of witnesses and presentation of evidence, including the rules of exclusion and roles of lawyer, judge, and jury under the adversary system.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student
LAW	606	Federal Income Taxation	Federal income tax in relation to concepts of income, property arrangement, business activity, and current tax problems, with focus on the process of tax legislation and administration.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisites: College of Law student
LAW	607	Nanotechnology Law and Policy	Provides an overview of the legal and policy issues relating to nanotechnology, including risk management, national and international regulations, intellectual property, privacy issues, and liability issues.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		

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LAW	610	Advanced Criminal Procedure	Topics in criminal procedure, with emphasis on legal constraints on grand jury investigations, police practices, pretrial release, preliminary hearings, prosecutorial discretion, and plea bargaining.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	611	Estate and Gift Tax	Tax laws relating to transfer of wealth both at death and during lifetime, including federal estate tax, gift tax, and income taxation of estates and trusts.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student; LAW 606
LAW	612	Family Law	Legal and nonlegal problems that an individual may encounter because of a situation as a family member.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	613	Federal Courts	Federal judicial system; relationship of federal and state law; jurisdiction of federal courts and their relation to state courts.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	614	International Contracts	Explores the laws applicable to international contractual relations, focusing heavily on the United Nations Convention on Contracts for the International Sale of Goods. One of several offerings in the field of International Business Transactions, touches on choice of law rules and a comparison of selected UCC with CISG provisions; a comparison of the contract law of selected foreign nations with the UCC; and the law of contracts in the United States. The casebook is heavily oriented toward a problem method of study.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	615	Public International Law	Role of law in international disputes. Considers drafting and interpretation of treaties and multilateral conventions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	616	Jurisprudence	Introduces legal philosophy, with readings on the nature of law and legal reasoning, the relationship between law and morality and equality and social justice.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	617	Genetics and the Law	Provides background on genetics and recent genetic advances; addresses the legal consequences and issues associated with such advances.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Prerequisite(s): College of Law major or MS in Biomedical Diagnostics major. Credit is allowed for only BMD 617 or LAW 617
LAW	618	Decedent's Estates	Substantive concepts involved in transmitting wealth, including interstate succession, wills and will substitutes, the modern trust as a family protective device, creation of future interests in a planned estate, social restrictions of a nontax nature, and methods of devoting property to charitable purposes.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	620	Civil Rights Legislation	Coverage of the rights and remedies provided by federal civil rights legislation, principally, the key provisions of the Reconstruction Era Civil Rights Acts, portions of the employment discrimination legislation, and voting rights legislation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	621	Sales	Advanced issues involving the formation and interpretation of sales and lease contracts. Focuses primarily on Articles 2 and 2A of the Uniform Commercial Code.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	622	Secured Transactions	Secured transactions under Article 9 of the Uniform Commercial Code and other relevant sections. Overview of the creation, perfection, and priority effects of security interests. Financing of business enterprise and consumer credit.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	624	Community Property	Property rights of husband and wife; the Arizona community property system; homestead.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	1-2		Pre-requisite: College of Law student
LAW	625	Constitutional Law II	Fundamental protection for person, property, political, and social rights.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	626	Writing for Law Practice	Helps students attain an advanced level of writing proficiency by exposing them to a broad range of legal documents.	N	SEM	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: Juris Doctor Candidate; Credit is allowed for only LAW 626 or 665
LAW	627	Corporate Taxation	Problems in taxability of the corporation, corporate distributions, and corporate reorganizations.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	628	Creditor-Debtor Relations	Creditors' remedies in satisfaction of claims and debtors' protection and relief under bankruptcy, other laws.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	629	Employment Law	Employment law topics including testing, privacy, OSHA, FLSA, benefits, worker's compensation, rights to compensation, workplace emotional injuries, termination, and sexual harassment.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	630	Employment Discrimination	Focuses primarily on Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act, and the Americans with Disabilities Act.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	631	Environmental Law	Litigation, administrative law, and legislation relating to problems of environmental quality. Topics covered may include air and water pollution, toxic substances, pesticides, and radiation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	632	Federal Indian Law I	Inquiry into legal problems special to American Indians and tribes.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	633	Law, Litigation, and Science	Fills a gap in the education of most lawyers, namely, how to effectively think about and use empirical evidence.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	635	Juvenile Law	Special problems in the juvenile system.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	636	Land Use Regulation	Legal problems in the regulation and control of land development by state and local governments. Administration of zoning, subdivision, and other planning controls; issues of fairness and procedure in the utilization of such controls.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student

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LAW	637	Lawyering Theory and Practice	Issues of competency and professionalism in the practice of law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	4		Pre-requisite: College of Law student
LAW	638	Professional Responsibility	Emphasizes the Model Rules and Model Code that govern the professional responsibility of lawyers and their interpretation and application.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	639	Natural Resource Law	Examines the constitutional basis for federal land management and the different kinds of public lands management schemes (e.g., parks, forests, wildlife refuges), emphasizing acquisition of right to, and regulation of, the different uses of public lands and resources (e.g., mining, grazing, timber, wildlife habitat, recreation).	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	640	Securities Regulation	Selected problems arising under the major statutes concerned with regulating the securities market.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	642	White Collar Crime	Examines the ways in which white collar crime is prosecuted, principally in the federal system.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	643	Water Law	Acquisition of water rights; water use controls; interstate conflicts.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	645	Patent Law	In-depth examination of substantive patent law as it applies to the commercialization and enforcement of patent rights.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	646	Copyright Law	Legal rights in original forms of human expression.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3		Pre-requisite: College of Law student
LAW	647	Mass Tort Litigation	Examines unique procedural and substantive issues that arise in mass tort litigation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	648	International Intellectual Property	Considers patents, copyrights, and trademarks under international law and the major international treaties.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	649	Scientific Evidence	Examines the use of scientists and scientific tests or studies in criminal and civil litigation.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	650	Health Law	Introduces health law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	651	Public Health Law	Addresses the relationship between the state and the population's health.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	652	Bioethics and the Law	Covers a range of issues relating primarily to human reproduction and life and death decisions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	653	Bankruptcy	Covers basic bankruptcy law and practices.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	654	Business Organizations	Covers the primary forms of business organizations: partnerships, limited partnerships, limited liability companies, and corporations.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	3-4		Pre-requisite: College of Law student
LAW	655	Chapter 11	Covers the law and practice of reorganizing business entities under Chapter 11 of the United States Bankruptcy Code.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisite: College of Law student
LAW	656	Valuing Real Estate and Closely-Held Businesses	Focuses on the valuation of interests in real property and closely-held businesses.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	657	Private Property Rights	Explores the conflict between property rights and the right of the government to acquire private property for public use.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	658	Arizona Constitutional Law	Examines the basic provisions of the Arizona Constitution and the judicial decisions interpreting those provisions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student; LAW 522; Pre/Co-requisite: LAW 625
LAW	660	Advanced Estate Planning	Covers advanced estate planning and estate administration issues.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	661	Constitutional Literacy	Academic complement to the Marshall-Brennan Constitutional Literacy Program where law students teach constitutional law to high school students.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	662	Alternative Dispute Resolution and Employment Law	The use of alternative dispute resolution has been most extensive in the area of employment law. Mediation and arbitration are widely used not only in the collective bargaining setting, but also in virtually every aspect of the employment relationship. Offers a comprehensive review of the subject with special emphasis on the extensive body of law that has developed in regulating employer-imposed arbitration. Discussion of mediation includes use of simulations to enable the students to understand how mediation can effectively resolve employment disputes. Opportunities to observe real mediations of employment disputes. Experienced attorneys discuss the "real world" use of employment ADR from a plaintiff's and a defendant's perspective.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	664	Intellectual Property	Surveys the laws conventionally grouped as intellectual property, with a focus on patents, copyrights, and trademarks. Explores the policy rationales for each body of law. Particularly relevant for two types of students: (a) those who are unsure they want to specialize in IP and want a general introduction, and (b) those who do not have room in the schedules to take all of the upper-level offerings here at ASU. Not appropriate for students who have already taken the upper-level courses in copyright, trademark, and patents; students who have taken these offerings may be withdrawn.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	665	Fundamentals of Legal Drafting	Fundamental writing skills applicable to drafting normative legal documents.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	667	FDA Regulation	Examines the regulation of drugs, medical devices, and biologics (e.g. vaccines) by the Food and Drug Administration.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Prerequisite(s): degree- or nondegree-seeking graduate

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LAW	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	697	Visiting Student Program		N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	0		
LAW	701	Arbitration	Examines the Federal Arbitration Act and the Uniform Arbitration Act as it has been adopted in Arizona.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	702	Alternative Dispute Resolution	Broad exposure to methods of settling disputes in our society such as mediation, arbitration/conciliation, and negotiation, including examination of the current litigation model.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	703	Law, Science, and Technology	Legal mechanisms used in dealing with various issues raised by contemporary science and technology. Explores current legal responses to science and technology.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	704	Federal Indian Law II	Surveys the federal legal doctrines surrounding Indian ownership and exploration of resources.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	705	Media Law	Examines First Amendment principles and statutory and regulatory requirements with respect to the conventional print and broadcast media, as well as recent technologies such as cable.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	706	Immigration Law	Explores political, economic, social, and legal issues concerning immigration. Specific topics covered include citizenship and naturalization, denaturalization, deportation, and refugee rights and asylum.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	707	Elder Law	Looks at legal and policy questions related to aging individuals and an older society.	N	SEM	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	709	International Human Rights	International rules and procedures governing the protection of human rights.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	710	Real Estate Tax Planning	Discusses topics, including but not limited to real estate investments as tax shelters, alternative acquisition finance devices, refinancing techniques, and nontaxable exchanges.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	712	Religion and the Constitution	In-depth study of the establishment and free exercise clauses of the First Amendment to the U.S. Constitution.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	713	Tribal Law and Government	Analyzes particular problems in tribal law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	715	Sports Law	Unique legal problems relating to professional sports, including their relationship to antitrust laws, the nature of player contracts, and associated tax problems.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	718	Economic Development in Indian Country	Focuses on the unique legal, economic, and political issues confronting tribal governments in developing diversified reservation economies.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: Law major; Credit is allowed for only LAW 718 or PUP 718
LAW	719	International Indigenous Rights	Examines the developments in recognizing indigenous rights in people's systems of international law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	720	Indian Gaming Law	Surveys the law surrounding the Indian gaming industry.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	721	Education and the Law	Current legal problems affecting institutions of higher education, faculty, students, and governing boards.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	723	Cultural Resources Law	Focuses on the protection of Native American cultural resources and religions.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	724	Privacy	Traces the development of privacy law with special attention to contemporary challenges.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	725	Critical Race Theory	Focuses on the idea of "race" as a social/political construct and examines the impact of American law on the construction of race. Provide historical and legal background necessary to understand the significance of race within American law and policy. Evaluate a number of legal frameworks that address issues of race and ethnicity in various contexts (e.g. segregation laws, civil rights law, federal Indian law, international human rights law). Assesses various jurisprudential accounts evaluating the ethical and moral underpinnings of the law. Critical race theory is known as a jurisprudential framework that is often critical of standard liberal approaches. Evaluates the critiques of liberalism and the scholarship of both liberal and critical theorists.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	733	Negotiation	Explores alternative models of negotiated dispute resolution, as well as the roles of lawyer and client in the negotiation process. Extensive use of simulation exercises.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	734	Products Liability	Traces the development of products liability law; analyzes the major issues currently confronting the courts in this area.	N	SEM	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		Pre-requisite: College of Law student
LAW	735	Teaching Assistant	Legal writing teaching assistants assist a writing professor with various tasks throughout the semester.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-4		
LAW	736	Advanced Legal Research Seminar	Focuses on a rigorous review of basic print and electronic resources and strategies for conducting legal research, federal/state.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		

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LAW	737	Cults and Alternative Religions	Provides opportunity to study laws and policies governing cults. While the definition of a "cult" will be a topic of initial study in the seminar, it may be conceived of loosely as a group with a charismatic leader whose members are persuaded to relinquish their self-identities and material possessions in furtherance of the group's goals. In addition to analyzing the definition of a cult, the first part of the seminar discusses the various types of cults, studying particular cults, and learning about cultic activities. The remainder covers domestic and foreign legal and policy issues generated by cults, including the legal rights of cultic organizations, anti-cult organizations, cult members, and cult members' families. Covers conventional religions that are conceptually similar to cults, to the degree that religious movements fall outside the mainstream.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		
LAW	738	Trial Advocacy	Confronts issues of trial advocacy through simulation of a variety of aspects of trial practice in a mock court setting.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: LAW 605
LAW	739	Economics and the Law	Explores premises of the law and economics movements and their applications to property, contract, and tort law.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	745	The Supreme Court	Intensive examination of selected current decisions of the U.S. Supreme Court.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-3		
LAW	768	International Business Transactions	Introduction to U.S., foreign, and international law regulating cross-border business transactions and to the structure of cross-border business deals.	N	LEC	N	OP6	College of Law	Sandra Day O'Connor College of Law	2-4		Pre-requisites: LAW 515 and 654
LAW	770	Law Journal	Academic credit for successful completion of editorial work by a member of the staff of Arizona State Law Journal.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	771	Jurimetrics Journal	Academic credit for successful completion of editorial work by a member of the staff of the Jurimetrics Journal of Law, Science, and Technology.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	772	Defender Clinic	Placement in the Public Defender Clinic and related classroom component.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		Pre-requisite: College of Law student
LAW	773	Civil Justice Clinic	Placement in the Civil Practice Clinic and related classroom component.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	774	Prosecution Clinic	Placement with various prosecutor offices in the Phoenix area and related classroom component.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		Prerequisite(s): College of Law student; LAW 605
LAW	775	Mediation Clinic	Study of the mediation process and experience as mediators in cases pending before the justice courts and administrative agencies.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	776	Indian Legal Clinic	Provides law students the opportunity to participate in cases dealing with native peoples and Indian issues.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		
LAW	777	Innovation Advancement Legal Clinic	Allows students to gain real-world experience in legal areas such as patentability of inventions, patent drafting, and technology valuation.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		Pre-requisite: College of Law student
LAW	778	Immigration Law and Policy Clinic	Live-client clinic where students represent Latinos, particularly children, in immigration proceedings and the immigration courts.	N	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-6		Pre-requisite: College of Law student
LAW	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	781	Independent Study	With the approval of a faculty member, a student may research a legal subject of special interest and prepare a paper suitable for publication.	Y	IND	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		Pre-requisite: College of Law student
LAW	782	Independent Study	See LAW 781.	N	IND	N	OP6	College of Law	Sandra Day O'Connor College of Law	2		
LAW	783	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-3		
LAW	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		Pre-requisite: College of Law student
LAW	785	Externship	Supervised, practical lawyering in an external placement proposed by the student or established by a sponsoring agency and approved by the Sandra Day O'Connor College of Law. In addition, an associated academic component is established by the student with a member of the faculty.	Y	PRA	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OP6	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
LAW	795	Cont Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	College of Law	Sandra Day O'Connor College of Law	1		
LAW	797	Visiting Student Program		N	LEC	N	Z3	College of Law	Sandra Day O'Connor College of Law	0		
LDE	261	Landscape Architecture Design Fundamentals III	Applies design fundamentals with an emphasis on landscape architectural issues.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	4		Prerequisite(s): Landscape Architecture major; passed milestone; ALA 122 with C or better; Corequisite(s): ALA 235

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LDE	262	Landscape Architecture Design Fundamentals IV	Applies design fundamentals to landscape architectural design with emphasis given to human factors.	N	LEC	N	GNA	Herberger Inst Design & Arts	The Design School	4		Prerequisite(s): Landscape Architecture major; LDE 261 with C or better
LDE	361	Landscape Architecture I	Site planning: analysis of natural and cultural features; site systems and implications for plan making and design.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): Landscape Architecture major; LDE 262 with C or better; Corequisite(s): LTC 343
LDE	362	Landscape Architecture II	Site design: site-specific design of configured space by the creative development of form.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Landscape Architecture student; LDE 361 (or PLA 361) with C or better
LDE	363	Landscape Planting Design	Functional and aesthetic use of plants in arid-region landscape design. Explores design philosophies through planting design problems.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Landscape Architecture student; Co-requisites: LTC 344, LDE 461
LDE	461	Landscape Architecture III	Landscape ecological planning: collection and application of ecological data relevant to planning and design at landscape scale.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Landscape Architecture student; LDE 362 with C or better; Co-requisites: LTC 344; LDE 363
LDE	462	Landscape Architecture IV	Advanced landscape architecture: integrative capstone studio with multifaceted design problems.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	5		Pre-requisites: Landscape Architecture student; LDE 461 with C or better; Co-requisite: LTC 446; LPH 411
LDE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
LDE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
LDE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LDE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
LDE	521	Advanced Landscape Architectural Studio I	Explores landscape architecture and design with emphasis on the urban landscape and the significance ecology plays in the design process. Studio-based course includes reading, presentations by faculty and students, discussion, design research, conceptual design practice, and the public exhibition/presentation of this work in multiple formats.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): Master of Landscape Architecture student; Credit is allowed for only LDE 521 or LDE 590 (Advanced Landscape Architecture Studio I) or LDE 590 (Applied Landscape Architecture)
LDE	522	Advanced Landscape Architectural Studio II	Explores landscape architecture and design with emphasis on urban landscapes and human health. Studio-based course includes reading, presentations by faculty and students, discussion, design research, conceptual design practice and the public exhibition/presentation of this work in multiple formats.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): LDE 521 with C or better; Credit is allowed for only LDE 522 or LDE 590 (Advanced Landscape Architecture Studio II) or LDE 590 (Advanced Landscape Architecture Studio II)
LDE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LDE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	621	Advanced Landscape Architectural Studio III	Structured around the Design School's "traveling studio" model and provides an opportunity for graduate-level students to refine their talents while also contributing to a better future. Challenges students to work in a multidisciplinary environment to identify new design concepts that improve society and the natural environment. For approximately one week during the semester, students travel to an off-campus location (either in the U.S. or abroad) to examine a local condition there for which new design solutions are needed. Students return to ASU and continue working on the project for the semester. Studio-based course includes reading, presentations by faculty and students, discussion, design research, conceptual design practice, and the public exhibition/presentation of this work in multiple formats.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): LDE 522 with C or better; Credit is allowed for only LDE 621 or LDE 690 (Advanced Landscape Architecture Studio III)
LDE	622	Advanced Landscape Architectural Studio IV	Capstone course. Students complete a design project that demonstrates mastery of landscape architecture skills and knowledge. Requires some independent direction. The instructor determines deadlines and expectations for deliverables. Requires cooperation and collaboration between students. Design performance is the themed topic and focus. Students develop a complex design project that addresses a significant professional issue. The project explores and demonstrates how advanced design resolves that issue in a performative manner using evidence-based practices and performance-based metrics. Studio-based course includes reading, presentations by faculty and students, discussion, design research, conceptual design practice, and the public exhibition/presentation of this work in multiple formats.	N	STO	N	GNA	Herberger Inst Design & Arts	The Design School	5		Prerequisite(s): LDE 621 with C or better; Credit is allowed for only LDE 622 or LDE 593 (Advanced Landscape Architectural Studio IV)
LDE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LDE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		
LES	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		
LES	305	Business Law and Ethics for Managers	Legal theories, ethical issues, and regulatory climate affecting business policies and decisions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): W.P. Carey student, or non-business student with minimum 2.5 ASU cum GPA and minimum 56 earned hours, or non-degree student with minimum 2.5 ASU cum GPA, or graduate student

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LES	306	Business Law	Legal and ethical aspects of contracts, sales, commercial paper, secured transactions, documents of title, letters of credit, and bank deposits and collections.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-Requisites: Student in Accountancy; Global Management student in Conditional or Professional Business status
LES	380	Consumer Perspective of Business Law	Role of law as it affects society. Uses case studies to present principles that govern business and consumers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: Must have a minimum GPA of 2.00 ASU Cum GPA and a minimum total earned hours of 56, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
LES	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		Pre-requisites: Minimum 2.00 GPA; Minimum 56 hours OR Non-degree seeking student
LES	411	Real Estate Law	Legal and ethical aspects of land ownerships, interests, transfer, finance development, and regulations of the real estate industry.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s) with C or better: FIN 300 or 302 or 303 or REA 380; W.P. Carey BA or BS Business major OR non-business student with minimum 56 hours and 2.50 ASU and business GPA OR non-degree graduate student. Credit is allowed for only LES or REA 411
LES	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-6	L	Prerequisite(s): Barrett Honors student
LES	581	Essentials of Law for Managers	Studies legal components of business decisions, multiple aspects of law affecting business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1.5-3		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	582	Ethical Issues for Managers	Studies ethical decisions; the role of business in society.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1.5-3		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LES	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIA	101	Student Success in the College of Liberal Arts and Sciences	Introduces students to resources that help them succeed in the College of Liberal Arts and Sciences.	N	SEM	N	GNA	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1		Pre-requisite: Freshman standing; Credit is allowed for only LIA 101 or 194 (Intro Liberal Arts & Sciences)
LIA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
LIA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		Prerequisite(s): Barrett Honors student
LIA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		
LIA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		
LIA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		Prerequisite(s): Barrett Honors student
LIA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6	L	Prerequisite(s): Barrett Honors student
LIA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-14		
LIA	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-6		Prerequisite(s): Barrett Honors student

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LIA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7		
LIA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-3		
LIA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	501	Approaches to Research	Theories, methods and/or methodologies as well as qualitative and/or quantitative approaches to the specific discipline. Also serves as an introduction to the profession.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ENG 501 or LIN 501
LIN	510	Linguistics	Overview of linguistics, its subfields, and some of its applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Students who have credit for BLE 537, may not enroll in LIN 510
LIN	511	Phonetics and Phonology	Current trends in phonological theory and its basis in acoustic and articulatory phonetics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	513	Semantics	Current approaches to linguistic meaning with particular attention to English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	514	Syntax	Analyzes syntactic structures using a generative theoretical model with a focus on English.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	515	American English	Development of the English language in America, including regional and social varieties, and its relationship to other immigrant and native languages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	516	Pragmatics and Discourse Analysis	Studies language use in context and language structures in spoken and written texts.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	516	Pragmatics and Discourse Analysis	Studies language use in context and language structures in spoken and written texts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	517	History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisites: Students who have credit for ENG 413, many not enroll in LIN 517
LIN	517	History of the English Language	Surveys the development of the English language, with an emphasis on major linguistic transformations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Students who have credit for ENG 413, many not enroll in LIN 517
LIN	520	Second-Language Acquisition Theories	Theories of second-language acquisition, including the linguistic, cognitive, and sociocultural aspects.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	521	Methods of Teaching English as a Second Language	Methods of teaching English as a second language, language teaching trends, practical applications, and the teaching of different skills.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	522	Grammar for TESL	Surveys major grammatical structures in English and how they can be taught to ESL speakers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	523	Language Testing and Assessment	Introduces the theory and practice of language test construction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	524	Curriculum Design and Materials Development	Practical guide to curriculum and materials development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	525	Teaching Second Language Writing	Provides a critical introduction to the field of second language writing as well as issues and strategies in the teaching of second language writing in a wide variety of contexts. After exploring various instructional contexts as well as the characteristics of different types of students and their texts, considers various instructional practices and strategies, focusing on course and assignment designs, reading-writing connection, teacher and peer feedback, grammar instruction, classroom assessment, plagiarism and text borrowing strategies, and negotiating language differences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only LIN 525, 591 (Teaching 2nd Language Writing) or ENG 525

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LIN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	610	Advanced Studies in Linguistics	Different topics such as morphology, semantics, typology, history of linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	614	Advanced Studies in Syntax	Focuses on morphosyntactic feature checking, movement, phrase structure, and their crosslinguistic differences.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	615	Advanced Studies in Sociolinguistics	Language in its social setting, e.g., social variation among native speakers, sociolinguistics aspects of second-language acquisition, and language policy.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	616	Advanced Studies in Discourse Analysis	Advanced analysis of spoken and written discourse emphasizing different methodological and theoretical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	617	Advanced Studies in Historical Linguistics	Overview of theories on language change, the history of languages, and of methods in historical linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	620	Advanced Studies in Second-Language Acquisition	Selected topics in second-language acquisition, such as phonetics and phonology, morphology, syntax, and discourse.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	625	Advanced Studies in Second Language Writing	Provides opportunities to explore advanced research topics as well as current issues and controversies in the field of second language writing--an interdisciplinary field of inquiry simultaneously situated in applied linguistics, rhetoric and composition, and teachers of English to Speakers of Other Languages.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ENG or LIN 625
LIN	655	Disciplinary Discourses	Investigation of professional and disciplinary issues related to linguistics and applied linguistics.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ENG 655 or LIN 655
LIN	656	Studies in Cross-Cultural Discourse	Theoretical and methodological issues in the comparative study of discourses between cultures and communities of practice.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LIN	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of English	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LIN	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of English	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
LIS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bac UG, Non Degree Graduate or Degree Graduate
LIS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LIS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-Requisite: Must be Post Bac Undergraduate, Non Degree Graduate or Degree Graduate student
LNP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LNP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LNP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
LNP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LNP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LNP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LNP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LPH	310	History of Landscape Architecture	Physical record of human attitudes toward the land. Ancient through contemporary landscape planning and design.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU & H	Pre-requisites: Landscape architecture majors; ALA 100 or ALA 102; passed the degree milestone review, or non-majors with sophomore standing
LPH	311	20th-Century Landscape Architecture	Explores concerns, projects, and movements in landscape architecture of late 20th-century understanding; social, ecological, regional, and historical influences.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	HU	Pre-requisites: Landscape architecture majors; ALA 100 or 102; passed the degree milestone review, or non-majors with junior standing
LPH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LPH	411	Landscape Architecture Theory and Criticism	Critically analyzes landscape architecture theories and projects to evaluate validity of design and contribution to society.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3	L	Pre-requisites: Landscape Architecture; LDE 461 and LPH 311 with C or better; Co-requisites: LDE 462 and LTC 446
LPH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
LPH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
LPH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LPH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
LPH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LPH	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LPH	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
LSC	322	Fundamentals of Ecology Laboratory	Investigational field course on fundamental concepts in ecology.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre/Co-requisites: LSC 320 or BIO 320 (with C or better if completed)
LSC	347	Fundamentals of Genetics	Science of genetics, gene flow, and genetic engineering in humans and other organisms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) and BIO 182 (or BIO 187) and CHM 116 with C or better
LSC	348	Fundamentals of Genetics Laboratory	Investigational lab using modern molecular techniques to analyze various genetic phenomena.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187) with C or better; CHM 113 with C or better; CHM 116 with C or better; Pre or Co-requisites: LSC 347 (with C or better if completed)
LSC	359	Animal Physiology Laboratory	Investigative lab experience using animals (including humans) and models.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre/Co-requisites: LSC 358 or BIO 360 (with C or better if completed)
LSC	362	The Human Environment	Evolution of humans' physiological, ecological, and behavioral interaction with their environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		
LSC	363	Genes, Race, Gender, and Society	Examines biological events and theories on race and gender and their interface with societal views.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Prerequisite(s): BIO 340 or LSC 347
LSC	365	The Human Organism	Analyzes human anatomy, physiology, and behavior in an ecological and evolutionary context with the methods of comparative biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SG	
LSC	388	Research Fundamentals for the Natural Sciences	Teaches research skills in the natural sciences. Topics covered include the basic research techniques of the study organism and system, experimental design, literature searches, statistical analysis and preparation of scientific papers and posters.	N	LEL	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Prerequisite(s): BIO 181; BIO 182; Credit is allowed for only LSC 388 or LSC 498 (Research Fundamentals for the Natural Sciences)
LSC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
LSC	425	Analytical Chemistry for Life Sciences	Presents an analysis of chemicals, including the theoretical and practical considerations regarding the separation, detection and quantitative determination of chemicals. Illustrates the application of different analytical procedures using some of the common chemicals of concern in the forensics and environmental fields.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): CHM 234 with C or better; CHM 238 with C or better; Credit is allowed for only FOR 425 or LSC 425
LSC	426	Analytical Chemistry for Life Sciences Lab	Provides hands-on experience with sample extraction, sample clean-up, and instrumental analysis of common chemicals. Largely focuses on the application of analytical chemistry methods to the fields of forensics and the life sciences. Mainly uses the solvent and solid-phase analyte extraction methods; gas chromatography-mass spectrometry, FTIR and NMR, generally determines analyte identification.	N	LAB	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	2		Prerequisite(s): CHM 234 with C or better; CHM 238 with C or better; Corequisite(s): FOR 425 or LSC 425; Credit is allowed for only FOR 426 or LSC 426
LSC	430	Environmental and Human Toxicology	Lecture/fieldwork course investigating toxic substances in the environment and their effect on the health of organisms, including humans.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Pre-requisites: BIO 181 (or BIO 188), BIO 182 (or BIO 187), and CHM 116/115 with C or better
LSC	432	Fundamentals of Pharmacology	Aspects of pharmacology using an integrated approach to familiarize students with natural and synthetic therapeutic agents used in medicine.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): BCH 361 or 371 or 461; BIO 340 or LSC 347; BIO 353; CHM 231 or 234
LSC	434	Marine Ecology	Examines ecological processes in oceans, seas, and estuaries that emphasizes species- and community-level phenomena.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: BIO 181 (or BIO 188) with C or better; BIO 182 (or BIO 187) with C or better; LSC 320 or BIO 320 with C or better
LSC	447	Molecular Genetics Laboratory	Investigative lab involving DNA isolation, PCR, gel electrophoresis, enzyme digestion and ligation, transformation, and hybridization analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): minimum 45 hours; Credit is allowed for only FOR 447 or LSC 447

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LSC	475	Principles of Toxicology	Presents the fundamental principles of toxicology and its application to both human and environmental situations. Starts with the means of defining and quantifying toxic effects through dose response curves (e.g. LD50, EC50, LOEL, NOEL). Then focuses on absorption pathways for toxicants as well as the degradation metabolism pathways for toxicants. Finally focuses on the mechanism of toxic action for common poisons and environmental pollutants. Emphasizes toxicants that students are likely to encounter in forensics and environmental fields.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: BCH 361 (or BCH 371 or LSC 394: Modern Concepts in Biochemistry) and BIO 353. Credit is allowed for only FOR or LSC 475
LSC	480	Advanced Topics in Human Forensic DNA Typing	Examines the science of current forensic DNA typing methods by focusing on the technology behind STR, Y-STR and mtDNA typing, real-time PCR, serology tests, capillary electrophoresis, expert systems and statistics.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): FOR 380 or LSC 380; Credit is allowed for only FOR 480 or LSC 480 or FOR 494 (Advanced Topics in Human Forensic DNA Typing) or LSC 494 (Advanced Topics in Human Forensic DNA Typing)
LSC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
LSC	486	Peer Mentoring in the Life Sciences	Advanced students learn and apply mentoring skills in teaching labs.	N	SEM	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Prerequisite(s): minimum 45 hours
LSC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
LSC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
LSC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
LSC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	IND	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7	L	
LSC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
LSC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LAB	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LAB	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSC	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	540	Theoretical Views of Learning in the Learning Sciences	Theoretical perspectives that inform learning scientists. Examines affordances and limitations of theories for designing productive learning environments.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EDP 540 or LSE 540
LSE	542	Research Methods in the Learning Sciences	Develops a strong methodological toolkit for building, testing and advancing learning theory through innovations that achieve meaningful impact. The field of the learning sciences is interdisciplinary, drawing on multiple theoretical perspectives and research paradigms to build understandings of the nature and conditions of learning, cognition and development.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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LSE	570	Case Exemplars of Learning Systems	Examines in-depth cases of learning systems in order to examine different ways of explaining learning, knowing and teaching and attendant strategies for generating data about these systems.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	571	History of the Learning Sciences	Examines the history of the interdisciplinary field of the learning sciences in relation to the various disciplinary traditions from which it derives.	N	SEM	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		
LSE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	683	Fieldwork		Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
LSE	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
LSE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
LSE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LTC	343	Landscape Construction I	Landscape constructions focusing on landform transformations. Topics include landform analysis, grading, and earthwork.	N	STO	N	OPT	Herberger Inst Design & Arts	The Design School	3		Co-requisites: LDE 361
LTC	344	Landscape Construction II	Characteristics of materials and methods used in landscape architectural construction.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Landscape Architecture student; LTC 343 with C or better; Co-requisites: LDE 363 and 461
LTC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LTC	446	Landscape Construction III	Landscape construction focusing on low-technology, biotechnical, regional, and experimental techniques or systems.	N	LEC	N	OPT	Herberger Inst Design & Arts	The Design School	3		Pre-requisites: Landscape Architecture student; LTC 344 with a C or better; Co-requisites: LDE 462 and LPH 411
LTC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
LTC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
LTC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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LTC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
LTC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		Pre-requisites: MAE Freshman student
MAE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	212	Engineering Mechanics	Force systems, resultants, moments and equilibrium. Kinematics and kinetics of particles, systems of particles and rigid bodies. Energy and momentum principles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Mechanical or Aerospace Engineering student; PHY 121 C or better; Pre- or Corequisite(s): MAT 274 or 275 (with C or better if completed) or Non-Mech/Aero student; PHY 121; Pre- or Corequisite(s): ; MAT 274 or 275
MAE	213	Solid Mechanics	Equilibrium, strain-displacement relations, and stress-strain-temperature relations. Applications to force transmission and deformations in axial, torsional, and bending of bars. Combined loadings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): CEE 210 (or CEE 211) or MAE 212 with C or better; MAT 274 or 275 with C or better; PHY 122 with C or better
MAE	214	Computer-Aided Engineering I	Introduces geometry and construction techniques in CAD, technical drawing conventions, generating drawings from CAD models.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Pre-requisites: Mechanical & Aerospace Engineering student; MAE 212 (or ECE 212 or ECE 214) with C or better or Co-requisite: MAE 212
MAE	215	Introduction to Programming in MATLAB	Introduces basic topics and concepts of computer programming in MATLAB.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Mechanical and Aerospace engineering BSE student; MAT 265 (or 270); Credit is allowed for only MAE 215 or 294 (Introduction to Programming)
MAE	240	Thermofluids I	Introductory concepts in thermodynamics and fluid mechanics. Conservation of mass, momentum and energy. First and second laws of thermodynamics; application to nozzles, turbines, compressors, heat exchangers. Introduction to thermodynamic cycles. Bernoulli equation. Fluid statics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Mechanical and Aerospace Engineering majors: CHM 114 or CHM 116 with C or better; MAE 212 with C or better; MAT 274 or MAT 275 with C or better OR all other students: CEE 212 or CNE 212 or MAE 212 with C or better
MAE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MAE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		Prerequisite(s): Barrett Honors student
MAE	301	Applied Experimental Statistics	Introduces key concepts in probability and statistics with engineering applications. Emphasizes modeling variation in observations, characterizing its distribution, and making inferences with regard to quality assurance and control. Develops critical skills such as fitting multivariate models, experimental design, and hypothesis testing, utilizing data from engineering projects, simulations, and laboratory experiences.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Aerospace or Mechanical Engineering BSE major; With C or better: CSE 100, CSE 110, or MAE 215; MAE 384; MAT 242, 342, or 343; MAT 274 or 275; MAT 267 or 272; Credit is allowed for only MAE 301 or MAE 394 (Applied Experimental Statistics)

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MAE	318	System Dynamics and Control	Dynamics of physical systems, system modelling, feedback control, computer simulations and real-time experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	5		Prerequisite(s): Aerospace or Mechanical Engr BSE major; EEE 202 with C or better; MAE 212 & 384 with C or better; MAT 267 or 272 with C or better; PHY 131 & 132 with C or better; Pre- or corequisite(s): MAE 301 or 394 (Applied Experimental
MAE	341	Mechanism Analysis and Design	Positions, velocities, and accelerations of machine parts; cams, gears, flexible connectors, and rolling contact; introduces synthesis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 212 with a C or better
MAE	345	Structures in a Space Environment	Space mission environment; mechanical behavior of materials and structures for space; analysis and design of space structures; finite element procedures.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Fulton Engineering undergraduate student; MAE 213 and 214 and 384 with C or better; Pre- or corequisite(s): MAE 318 and 384 with C or better if completed
MAE	351	Manufacturing Processes	Production technique and equipment. Casting and molding, forming, machining, joining and assembly, computer-integrated manufacturing, rapid prototyping, and electronics manufacturing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MSE 250 with C or better; Credit is allowed for only IEE 360 or MAE 351
MAE	372	Fluid Mechanics	Applies basic principles of fluid mechanics to problems in viscous and compressible flow.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; AEE 360 (or MAE 360) or MEE 340 (or MAE 340) with C or better; MAE 384 with C or better
MAE	384	Advanced Mathematical Methods for Engineers	Methods for numerical solutions to engineering problems. Nonlinear equations, quadrature, ordinary differential equations. Analytical and numerical solutions to partial differential equations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3	CS	Prerequisite(s): FSE undergraduate; With C or better; MAT 274 or 275; MAT 242 or 343 (or 342 if not MAE); MAE 215 (or MAE 294 Intro to Programming, CSE 100, or 110); Pre- or corequisite(s): MAT 267 or 272 with C or better; Credit for only CEE or MAE 384
MAE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Prerequisite(s): Fulton Engineering undergraduate student
MAE	400	Engineering Profession	Impact of mechanical and aerospace engineering in a global and societal context; effects of and on globalization, environment, sustainability, economy, politics; engineering ethics and business practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3	L	Prerequisite(s): Aerospace Engineering or Mechanical Engineering BSE majors; MEE 322, MAE 322, AEE 325, MAE 325, or MAE 394 (Aerospace Structures and Materials) with C or better
MAE	404	Finite Elements in Engineering	Formulation and application of the finite element method through integration of theory, code development and application to problems in heat transport and solid mechanics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; CEE 213 or MAE 213 with C or better; CEE 384 or MAE 384 with C or better
MAE	406	Advanced CAE Simulation	Solution of advanced engineering problems with engineering software for structural, dynamic, nonlinear, contact and kinematic problems; selection of modeling parameters; reliability tests on software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: MAE 323; MAE 342 with C or better. Credit is allowed for only MAE 406 or MAE 546
MAE	417	Control System Design	Tools and methods of control system design and compensation, including simulation, response optimization, frequency domain techniques, state variable feedback, and sensitivity analysis. Introduces nonlinear and discrete time systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 318 with C or better
MAE	436	Combustion	Thermochemical and reaction rate processes; combustion of gaseous and condensed-phase fuels. Applications to propulsion and heating systems. Pollutant formation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 340 with C or better; Credit is allowed for only MAE 436 or MAE 536

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MAE	455	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): FSE undergrad or Materials minor; With C or better: CEE 213, MAE 213, or MSE 211; MAT 242, 342, or 343; MSE 250 or Aerospace major with MAE 325 (394); Credit is allowed for only MAE 455, 513, 598 (Polymers and Composites), MSE 470 or 513
MAE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MAE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		Prerequisite(s): Barrett Honors student
MAE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
MAE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Prerequisite(s): Fulton Engineering undergraduate student
MAE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-7		Prerequisite(s): Fulton Engineering undergraduate student
MAE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		
MAE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	501	Linear Algebra in Engineering	Development and solution of systems of linear algebraic equations. Applications from mechanical, structural, and electrical fields of engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite: graduate Engineering major except MS Electrical Engineering, MS Electrical Engineering (AME), MSE Electrical Engineering, PhD Electrical Engineering, or PhD Electrical Engineering (AME). Credit is allowed for only MAE 501 or MSE 501
MAE	502	Partial Differential Equations in Engineering	Development and solution of partial differential equations in engineering. Applications in solid mechanics, vibrations, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Graduate Engineering students; credit is allowed for only MSE 502 or MAE 502
MAE	504	Experimental Methods for Thermal and Fluid Processes	Theory of analog and digital signal analysis as applied to fluid and thermal measurements; optical diagnostics and micro sensors for measuring fluid velocity, pressure and temperature in unsteady flows; particle image velocimetry and thermal anemometry. Experimental methods are applied in a weekly laboratory. Students should have familiarity with Matlab or some programming language and have completed an intermediate level course in fluid dynamics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Graduate Engineering major
MAE	505	Perturbation Methods	Nonlinear oscillations, strained coordinates, renormalization, multiple scales, boundary layers, matched asymptotic expansions, turning point problems, and WKBJ method.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering students; Credit is allowed for only APM 575 or MAE 505
MAE	506	Advanced System Modeling, Dynamics, and Control	Lumped-parameter modeling of physical systems with examples. State variable representations and dynamic response. Introduces modern control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major. Pre- or corequisite(s): APM 505 or MAE 501
MAE	507	Fundamentals of Control and Optimization	Optimal control of continuous-time dynamic systems. Linear systems and signal spaces, robust and LQR optimal control, optimization methods and LMIs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Graduate Engineering major; MAE 506 with C or better

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MAE	508	Digital Control: Design and Implementation	Analysis and design of control systems in which the digital computer plays a major role. Review of continuous control and introduction to the key effects of sampling. Elements of discrete system analysis; z-transform; sampled-data systems; sampling theorem and combined discrete and continuous system and the phenomenon of aliasing. Deterministic design methods for digital control systems (root-locus, frequency response, pole placement and estimators). Multivariable, optimal control and Kalman filtering, followed by nonlinear control and system identification. Emphasizes digital control implementation topics and a case study on robot control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only MAE 508 or MAE 598 (Digital Control: Design and Implementation)
MAE	510	Dynamics and Vibrations	Lagrange's and Hamilton's equations, rigid body dynamics, gyroscopic motion, and small oscillation theory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering students
MAE	512	Random Vibrations	Reviews probability theory, random processes, stationarity, power spectrum, white noise process, random response of single and multiple DOF systems, and Markov processes simulation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2-3		Pre-requisite: Graduate Engineering major
MAE	513	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering or Science & Engr of Materials student; Credit is allowed for only MAE or MSE 513
MAE	514	Vibration Analysis	Free and forced response of single and multiple degree of freedom systems, continuous systems; applications in mechanical and aerospace systems numerical methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Mechanical or Aerospace Engineering major; Credit is allowed for only AEE 415 (or MAE 415) or MAE 514 or MAE 598 (Vibration Analysis)
MAE	515	Structural Dynamics	Free vibration and forced response of discrete and continuous systems, exact and approximate methods of solution, response spectra, computational techniques, special topics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 510 with C or better; Credit is allowed for only CEE 536, MAE 494 (Structural Dynamics) or 515
MAE	518	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Fulton Engineering Graduate students; Credit is allowed for only CHE 518, EEE 518, MSE 475, MSE 518 or MAE 518
MAE	520	Stress Analysis	Introduces tensors: kinematics, stress analysis, and constitutive assumptions leading to elastic and plastic behavior. Strain energy and energy methods; applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	521	Structural Optimization	Linear and nonlinear programming. Problem formulation. Design sensitivity analysis. FEM-based optimal design of structural and mechanical systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 501 with C or better; CEE 526 or MAE 527 with a C or better
MAE	523	Fracture Mechanics	Linear elastic fracture mechanics. Nonlinear problems. Fatigue fracture. Experimental methods in fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major; MAE 520 or MAE 598 (Continuum Mechanics) with C or better
MAE	524	Theory of Elasticity	Elastic behavior in two and three dimensions. Airy stress functions and displacement potentials. Elements of fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major; MAE 520 or MAE 598 (Continuum Mechanics)
MAE	525	Mechanics of Smart Materials and Structures	Modeling and analysis of smart materials and adaptive structures. Application areas include vibration and shape control and damage detection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student; MAE 520 or MAE 598 (Continuum Mechanics)
MAE	526	Design of Aerospace Structures	Provides a fundamental understanding of the design of aerospace structures. Topics include flight vehicle loads, metallic and composite materials, manufacturing methods, buckling and crippling of aerospace structures, fatigue, damage tolerance, finite element structural analysis, and design of joint and fittings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Mechanical or Aerospace Engineering graduate student; Credit is allowed for only AEE 426 (or MAE 426) or MAE 526 or MAE 598 (Design of Aerospace Structures)
MAE	527	Finite Elements for Engineers	Direct stiffness, method of weighted residuals, weak formulation, and variational techniques in the solution of engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student; APM 505 or MAE 501 with C or better; Credit is allowed for only CEE 526 or MAE 527

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAE	529	Continuum Mechanics	Tensors, Eulerian/Lagrangian strains, compatibility equations, Cauchy/nominal stresses, balance laws, Reynolds transport theorem, laws of thermodynamics for a continuum; equations of state, restrictions on constitutive laws, Newtonian fluids, inviscid flows, viscoelasticity.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Mechanical or Aerospace Engineering graduate student; Credit is allowed for only MAE 529 or MAE 598 (Continuum Mechanics)
MAE	533	Transport Processes I	Unified treatment of momentum, heat, and mass transfer from molecular theory, and continuum points of view. Continuum equations of microscopic and macroscopic systems and multicomponent and multiphase systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only BME 533 or CHE 533 or MAE 533
MAE	536	Combustion	Thermodynamics; chemical kinetics of combustion. Explosion and ignition theories. Reactive gas dynamics. Structure, propagation, and stability of flames. Experimental methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student. Credit is allowed for only MAE 436 or 536
MAE	540	Advanced Product Design Methodology	Surveys research in engineering design process, artifact and design, knowledge, formal and informal logic, heuristic and numerical searches, theory of structure and complexity.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: Mechanical or Aerospace Engineering graduate student
MAE	541	CADTools for Engineers	Elements of computer techniques required to develop CAD software. Data structures, including lists, trees, and graphs. Computer graphics, including 2- and 3-D algorithms and user interface techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	542	Design Geometry and Kinematics	Selected topics in geometry related to current potential applications in CAD/CAM, design theory, kinematics, and robotics. Euclidean isometrics, transformations; 4-D geometry; screw theory and its applications to robotics and assemblies. Differential geometry; curvature and torsional properties of curves and surfaces.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: Mechanical and Aerospace Engineering graduate student; Credit is allowed for only MAE 542 or 598 (Design Geometry & Kinematics)
MAE	544	Mechanical Design and Failure Prevention	Modes of mechanical failure; applies principles of elasticity and plasticity in multiaxial state of stress to design synthesis; failure theories; fatigue; creep; impact.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	546	Advanced CAE Simulation	Solution of advanced engineering problems with analysis software for structural, dynamic, nonlinear, contact and kinematic problems; selection of modeling parameters; reliability tests on software.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Engineering Graduate student; Credit is allowed for only MAE 406 or 546
MAE	547	Modeling and Control of Robots	Homogeneous transformations, workspace, forward and inverse kinematics, differential kinematics, statics and dynamics, motion planning, motion and force control.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major. Pre- or corequisite(s): APM 505 or MAE 501
MAE	557	Mechanics of Composite Materials	Analysis, design, and applications of laminated and chopped fiber reinforced composites. Micro- and macromechanical analysis of elastic constants, failure, and environmental degradation. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major; MAE 520 or MAE 598 (Continuum Mechanics)
MAE	561	Computational Fluid Dynamics	Finite-difference and finite-volume techniques for solving the subsonic, transonic, and supersonic flow equations. Method of characteristics. Numerical grid-generation techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Graduate Engineering students; Credit is allowed for only AEE 471 or MAE 471, 561
MAE	563	Aircraft Propulsion	Fundamentals of gas-turbine engines. Analysis and design of components. Alternative aircraft propulsion systems. Recommend a background in thermodynamics and high-speed aerodynamics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student; Credit is allowed for only AEE 463 or MAE 463 or MAE 563 or MAE 598 (Aircraft Propulsion) or MAE 598 (Propulsion)
MAE	564	Advanced Aerodynamics	Advanced topics in aerodynamics with application to design. Slender body theory. Thin airfoil theory. Transonic and supersonic effects. Sweep theory. Wave drag. Post-stall (vortex) flows. Supersonic and hypersonic flows.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Aerospace Engineering major
MAE	565	Rocket Propulsion	Rocket flight performance, nozzle design, combustion of liquid and solid propellants, component design, advanced propulsion systems, interplanetary missions, testing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Mechanical or Aerospace Engineering graduate student; Credit is allowed for only AEE 465 (or MAE 465) or MAE 565 or EGR 598 (Rocket Propulsion) or MAE 598 (Rocket Propulsion)
MAE	566	Rotary-Wing Aerodynamics	Introduces helicopter and propeller analysis techniques. Momentum and blade-element, helicopter trim. Hover and forward flight. Ground effect, autorotation and compressibility effects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MAE 466 or 566
MAE	570	Intermediate Thermodynamics	Applied thermodynamics; gas mixtures, psychrometrics; property relationships, power and refrigeration cycles, and reactive systems. A basic knowledge of thermodynamics is required to be successful in this course.	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major; Credit is allowed for only MAE 482 or MAE 570 or MEE 482

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MAE	571	Fluid Mechanics	Basic kinematic, dynamic, and thermodynamic equations of the fluid continuum and their application to basic fluid models.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre- or corequisite(s): MAE 502; MAE 529 or MAE 598 (Continuum Mechanics)
MAE	573	Advanced Fluid Mechanics	Mechanics of fluids flows where either the effects of inertia or viscosity are significant. Exact and approximate solutions of the Navier-Stokes equations, laminar flow and flow at low and high Reynolds numbers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	574	Multiphase Flow	Models for multiphase flows including dispersed and continuous phase flow models, particle-fluid and particle-particle interactions, droplet collision and coalescence, atomization, and numerical and experimental methods for analyzing multiphase flows.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): MAE 502; MAE 529; MAE 571; Credit is allowed for only MAE 574 or MAE 598 (Multiphase Flow)
MAE	575	Turbulence	Homogeneous, isotropic, and wall turbulence. Experimental results. Introduces turbulent-flow calculations.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	577	Advanced Turbulence	Reynolds equations and their closure. Modeling of simple and complex turbulent flows, calculations of internal and external flows, and application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; MAE 571 with C or better
MAE	578	Geophysical and Environmental Fluid Dynamics	Dynamics of large-scale flows under the influence of stratification and earth rotation. Thermally and mechanically driven flows in turbulent boundary layer. Waves and instability of geophysical flows. Global-scale circulation. Applications to environmental prediction.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
MAE	579	Wind Energy	Wind energy systems convert kinetic energy in the wind into electrical energy. Focuses on flow machines, including for example, aerodynamics and fluid dynamics. Begins with wind resource assessment utilizing atmospheric boundary layer science and then proceeds to computational fluid dynamics to understand the tools of modern wind resource assessment. Includes applications of the Navier-Stokes equations and some basics from turbulence theory. Resource assessment also includes modern remote sensing techniques such as lidar, radar and in situ instrumentation. Also includes discussions from current events and policy. Requires a background in applied experimental statistics, thermodynamics or aerodynamics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student; Credit is allowed for only MAE 494 (Wind Energy) or MAE 579 or MAE 598 (Wind Energy) or MEE 441
MAE	581	Advanced Thermodynamics	Basic concepts and laws of classical equilibrium thermodynamics; applications to engineering systems; introduction and applications of statistical mechanics and kinetic theory; Boltzmann integro-differential equation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	582	Renewable Energy: Mechanical Systems	Renewable energy systems are energy conversion systems that rely on naturally replenishing flows of energy. Considers the foundational principles behind many renewable energy systems, and application of these principles to practical systems. Emphasizes covering the following energy systems, some only at an introductory level and some with significant depth: solar, wind, geothermal, biomass, hydropower, energy storage, electric power generation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering major; Credit is allowed for only MEE 440 or MAE 582 or MAE 494 (Renewable Energy Engineering) or MAE 598 (Renewable Energy Engineering)
MAE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	585	Solar Thermal Engineering	Solar energy availability, flat-plate and concentrating solar thermal collectors, solar heating and cooling, concentrating solar power (CSP).	N	LEC	N	GNA	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Graduate Engineering student; credit is allowed for only MAE 585 or 598 (Solar Thermal Engineering)
MAE	586	Advanced Heat Transfer	Basic concepts and governing equations. Analysis of laminar and turbulent heat transfer for internal and external flows. Natural and mixed convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	587	Radiation Heat Transfer	Advanced concepts and solution methodologies for radiation heat transfer, including exchange of thermal radiation between surfaces, radiation in absorbing, emitting, and scattering media and radiation combined with conduction and convection.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): graduate Engineering student
MAE	588	Solar Energy Colloquium	Discussion-oriented class focusing on topical issues in solar energy. Knowledge of thermodynamics or electric power systems is recommended to succeed in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisites: Graduate Engineering major; Credit is allowed for only MAE 588 or SEC 588
MAE	589	Heat Transfer	Basic concepts; physical and mathematical models for heat and mass transfer. Applications to conductive, convective, radiative, and combined mode heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Pre-requisites: Graduate Engineering student; Credit is allowed for only MAE 494 topic (Heat and Mass Transfer) or 589
MAE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): graduate MAE major
MAE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisite(s): Mechanical or Aerospace Engineering graduate student

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MAE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisite(s): Mechanical or Aerospace Engineering graduate student
MAE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): graduate Engineering student
MAE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
MAE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		Prerequisite(s): graduate Engineering student
MAE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Pre-requisites: Mechanical or Aerospace Master's degree student
MAE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MAE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Prerequisite(s): Mechanical or Aerospace Doctoral student
MAE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
MAE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-15		Prerequisite(s): Mechanical or Aerospace Doctoral student
MAS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MAS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Interdisciplinary Studies Masters student
MAS	501	Methods for Interdisciplinary Inquiry	Critical survey of current models of inquiry, tools, processes, and methods in different fields.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Pre-requisites: Interdisciplinary Studies Masters student
MAS	502	Perspectives in Interdisciplinary Studies	Introduces interdisciplinarity through explorations of epistemological and rhetorical practices that bridge traditional disciplines.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	505	Theories of Change, Culture, and Mind	Introduces graduate-level interdisciplinary study of key thinkers, movements, theories, and paradigms in 20th-century thought.	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	510	Science and Religion: Cosmologies and Worldviews	Examines science and religion, stressing modern scientific findings and philosophical and historical debates and dialogues.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Credit is allowed for only IAS 430 or MAS 510
MAS	513	Sociology of Everyday Life	Examines institutional ethnography, a way of exploring the particular and generalized social relations that shape people's everyday experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	514	Continental Philosophy	Contemporary European thought emerges out of a crisis of the Enlightenment that unfolds throughout the nineteenth and twentieth centuries. Course dovetails with other fields like communication, cultural studies, law, political science, religious studies, literature and various social sciences.	N	SEM	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only MAS 514 or MAS 598 (Studies in Critical Theory) or MAS 598 (Continental Philosophy and Religion)

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MAS	550	Philosophical and Spiritual Issues in Death and Dying	From Plato to Maimonides to Heidegger to Kubler-Ross, scholars, clinicians, and spiritual writers have recognized that attitudes about death and dying contribute to understandings of human existence. Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to integration of body-mind-spirit, this course introduces basic concepts and practices of care ethics and spirituality. Focuses on relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. Theoretically, the course is inter-faith in approach, holistic in scope, and specialized in content. Practically, students examine real-life issues in care ethics and spirituality from multiple perspectives	N	SEM	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3-9		Prerequisite: Graduate (degree or nondegree) student; Credit is allowed for only MAS, PHI 550 or REL 585
MAS	573	Art and Politics	Explores issues and relationships between the arts and politics through historical examples, significant artists and works, key thinkers, and theoretical approaches. Considers topics such as: the arts and ideology, art and the politics of representation, propaganda, censorship, state-supported art, human rights, revolution and war, cultural change, and political aesthetics. Emphasizes interdisciplinary arts and period study, including the arts and The Russian Revolution, the art in the Weimar Republic and Nazi Germany, and, generally, the arts, art and social movements (e.g., U.S. Civil Rights era, Eastern Europe's solidarity movement and Velvet Revolutions), as well as the arts and politics in selected contemporary contexts (e.g., China, the Middle East).	N	LEC	N	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAS	585	Capstone Course	Assists students in preparing their capstone project, which represents the culmination of their study for the MA in Interdisciplinary Studies.	N	RSC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3-4		Pre-requisites: Interdisciplinary Studies Masters student
MAS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Interdisciplinary Studies Masters student
MAS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Interdisciplinary Studies Masters student
MAS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Pre-requisites: Interdisciplinary Studies Masters student
MAS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Pre-requisites: Interdisciplinary Studies Masters student
MAS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	106	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): Mathematics Placement Test
MAT	106	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): Mathematics Placement Test
MAT	106	Intermediate Algebra	Topics from basic algebra such as linear equations, polynomials, factoring, exponents, roots, and radicals.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): Mathematics Placement Test

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MAT	110	Enhanced Freshman Mathematics	Individually paced, computer-mediated course designed to prepare students for college-level mathematics. Students work on various modules in an online adaptive learning technology platform created to help students progress through the course material based on individual needs in preparation for enrollment in the next level math course required by the student's major (pre-MAT 117 "Track 1" or pre-MAT 142 "Track 2"). Upon completion of this course, students should see improvement of basic math skills, an increase in the confidence in mathematical abilities, and advancement in ability to relate math to real-life applications. Credit for this course does not count towards university graduation requirements	N	LEL	N	ELG	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0-3		Prerequisite(s): Mathematics Placement Test below 32% for majors that require MAT 142 OR Mathematics Placement Test 32-39.9% for majors that require MAT 117 or higher (consult your major map)
MAT	110	Enhanced Freshman Mathematics	Individually paced, computer-mediated course designed to prepare students for college-level mathematics. Students work on various modules in an online adaptive learning technology platform created to help students progress through the course material based on individual needs in preparation for enrollment in the next level math course required by the student's major (pre-MAT 117 "Track 1" or pre-MAT 142 "Track 2"). Upon completion of this course, students should see improvement of basic math skills, an increase in the confidence in mathematical abilities, and advancement in ability to relate math to real-life applications. Credit for this course does not count towards university graduation requirements	N	LEL	N	ELG	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	0-3		Prerequisite(s): Mathematics Placement Test below 32% for majors that require MAT 142 OR Mathematics Placement Test 32-39.9% for majors that require MAT 117 or higher (consult your major map)
MAT	110	Enhanced Freshman Mathematics	Individually paced, computer-mediated course designed to prepare students for college-level mathematics. Students work on various modules in an online adaptive learning technology platform created to help students progress through the course material based on individual needs in preparation for enrollment in the next level math course required by the student's major (pre-MAT 117 "Track 1" or pre-MAT 142 "Track 2"). Upon completion of this course, students should see improvement of basic math skills, an increase in the confidence in mathematical abilities, and advancement in ability to relate math to real-life applications. Credit for this course does not count towards university graduation requirements	N	LEL	N	ELG	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	0-3		Prerequisite(s): Mathematics Placement Test below 32% for majors that require MAT 142 OR Mathematics Placement Test 32-39.9% for majors that require MAT 117 or higher (consult your major map)
MAT	117	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics.	N	LEL	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): Mathematics Placement Test with a score of 0-49.9% or higher, or MAT 110 with skills mastered for MAT 117 if completed
MAT	117	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics.	N	LEL	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): Mathematics Placement Test with a score of 0-49.9% or higher, or MAT 110 with skills mastered for MAT 117 if completed
MAT	117	College Algebra	Linear and quadratic functions, systems of linear equations, logarithmic and exponential functions, sequences, series, and combinatorics.	N	LEL	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): Mathematics Placement Test with a score of 0-49.9% or higher, or MAT 110 with skills mastered for MAT 117 if completed
MAT	119	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 117, 170, 210, or 270 with C or better or Mathematics Placement Test with a score of 50% or higher
MAT	119	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 117, 170, 210, or 270 with C or better or Mathematics Placement Test with a score of 50% or higher
MAT	119	Finite Mathematics	Topics from linear algebra, linear programming, combinatorics, probability, and mathematics of finance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 117, 170, 210, or 270 with C or better or Mathematics Placement Test with a score of 50% or higher
MAT	142	College Mathematics	Applies basic college-level mathematics to real-life problems. Topics include numerical reasoning, sets, counting techniques, probability, basic statistics and finance. Appropriate for students whose major does not require MAT 117 or 170.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 110 with skills mastered for MAT 142 if completed, or MAT 117 with C or better, or Mathematics Placement Test with a score of 0-39.9% or higher

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	142	College Mathematics	Applies basic college-level mathematics to real-life problems. Topics include numerical reasoning, sets, counting techniques, probability, basic statistics and finance. Appropriate for students whose major does not require MAT 117 or 170.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 110 with skills mastered for MAT 142 if completed, or MAT 117 with C or better, or Mathematics Placement Test with a score of 0-39.9% or higher
MAT	142	College Mathematics	Applies basic college-level mathematics to real-life problems. Topics include numerical reasoning, sets, counting techniques, probability, basic statistics and finance. Appropriate for students whose major does not require MAT 117 or 170.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 110 with skills mastered for MAT 142 if completed, or MAT 117 with C or better, or Mathematics Placement Test with a score of 0-39.9% or higher
MAT	170	Precalculus	Intensive preparation for calculus. Topics include functions (including trigonometric), vectors and complex numbers.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 117 with C or better or completed the Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only MAT 170 or 171
MAT	170	Precalculus	Intensive preparation for calculus. Topics include functions (including trigonometric), vectors and complex numbers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 117 with C or better or completed the Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only MAT 170 or 171
MAT	170	Precalculus	Intensive preparation for calculus. Topics include functions (including trigonometric), vectors and complex numbers.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 117 with C or better or completed the Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only MAT 170 or 171
MAT	171	Precalculus: Science, Technology, Engineering and Mathematics (STEM)	Robust treatment of advanced algebraic skills and trigonometry that are vital in calculus. Algebra topics include functions, compositions, inverses, transformations, complex numbers, roots of polynomial functions, rational functions, exponential and logarithmic functions and their properties. Trigonometry is approached via the unit circle as well as the right triangle. Topics include the trigonometric functions, their graphs and identities, inverse trigonometry, the laws of sine and cosine, vectors and the dot product with an application toward work, and polar coordinates and roots of complex numbers (deMoivre's theorem).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4	MA	Prerequisite(s): MAT 117 with C or better or completed the Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only MAT 170 or MAT 171
MAT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
MAT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0-5		
MAT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	0-5		
MAT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	0-5		
MAT	207	Algebra and Geometry in the High School	Provides a conceptually rigorous treatment of the central ideas of algebra and geometry in high school. Explores and develops familiar mathematical content from a very different perspective. Focuses squarely on creating meaning for concepts and on building coherence of meaning across concepts and various representations of them. As such, course activities and assessments (class/lab activities, homework assignments, and exams) reflect these expectations, focusing on both doing high school mathematics with meaning and on expressing and communicating that meaning accurately and coherently in verbal and written form. Prior to enrolling in this course, students should have experience with algebra/geometry to at least the high school level.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Co-requisite: MTE 210
MAT	208	Discrete Mathematics for Secondary Teachers	Potential secondary teachers of mathematics should master the Math Standards proposed by the National Council of Teachers of Mathematics for college-intending students. Focuses on those aspects of these standards that apply to discrete mathematics with particular emphasis on: mathematical problem solving, mathematics as communication, mathematical reasoning, and discrete mathematics. Taking a broader view, introduces mathematics as a discipline that uses known methods to discover and verify new conclusions through the study of discrete mathematics.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	210	Brief Calculus	Differential and integral calculus of elementary functions with applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 117, 119, 170, or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT	210	Brief Calculus	Differential and integral calculus of elementary functions with applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 117, 119, 170, or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT	210	Brief Calculus	Differential and integral calculus of elementary functions with applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Prerequisite(s): MAT 117, 119, 170, or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT	211	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	211	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	211	Mathematics for Business Analysis	Topics in business analysis, including: Lagrange multipliers, linear programming, linear algebra, intermediate probability, random variables, discrete distributions, and continuous distributions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	242	Elementary Linear Algebra	Introduces matrices, systems of linear equations, determinants, vector spaces, linear transformations, and eigenvalues. Emphasizes development of computational skills.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	2		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better
MAT	243	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: Minimum Sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	243	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: Minimum Sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	243	Discrete Mathematical Structures	Logic, sets, functions, elementary number theory and combinatorics, recursive algorithms, and mathematical reasoning, including induction. Emphasizes connections to computer science.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: Minimum Sophomore standing; MAT 210, MAT 251, MAT 265, or MAT 270 with C or better
MAT	251	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT	251	Calculus for Life Sciences	Differential and integral calculus of elementary functions. Introduces differential and difference equations. Emphasizes applications to the life sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 56% or higher; Credit is allowed for only MAT 210 or MAT 251
MAT	265	Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 170 or 171 with C or better OR Mathematics Placement Test with a score of 60% or higher and the Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or MAT 270

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	265	Calculus for Engineers I	Limits and continuity, differential calculus of functions of one variable, introduction to integration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 170 or 171 with C or better OR Mathematics Placement Test with a score of 60% or higher and the Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or MAT 270
MAT	266	Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT	266	Calculus for Engineers II	Methods of integration, applications of calculus, elements of analytic geometry, improper integrals, Taylor series.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT	267	Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 267 or 272
MAT	267	Calculus for Engineers III	Vector-valued functions of several variables, partial derivatives, multiple integration.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 267 or 272
MAT	270	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 60% or higher and Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or 270
MAT	270	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 60% or higher and Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or 270
MAT	270	Calculus with Analytic Geometry I	Real numbers, limits and continuity, and differential and integral calculus of functions of 1 variable.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	MA	Prerequisite(s): MAT 170 or 171 with C or better or Mathematics Placement Test with a score of 60% or higher and Advanced Mathematics Placement test with a score of 38 or higher; Credit is allowed for only MAT 265 or 270
MAT	271	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences and series.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	MA	Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT	271	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences and series.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4	MA	Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT	271	Calculus with Analytic Geometry II	Methods of integration; applies calculus, elements of analytic geometry, improper integrals, sequences and series.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	MA	Prerequisite(s): MAT 265 or 270 with C or better; Credit is allowed for only MAT 266 or MAT 271
MAT	272	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	MA	Prerequisite(s): MAT 266 or MAT 271 with C or better; Credit is allowed for only MAT 267 or MAT 272
MAT	272	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	4	MA	Prerequisite(s): MAT 266 or MAT 271 with C or better; Credit is allowed for only MAT 267 or MAT 272
MAT	272	Calculus with Analytic Geometry III	Vector-valued functions of several variables, multiple integration, and introduction to vector analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	MA	Prerequisite(s): MAT 266 or MAT 271 with C or better; Credit is allowed for only MAT 267 or MAT 272

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	274	Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Pre-requisites: MAT 266 or MAT 271 with C or better; Credit is allowed for only MAT 274 or 275
MAT	274	Elementary Differential Equations	Introduces ordinary differential equations, adapted to the needs of students in engineering and the sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Pre-requisites: MAT 266 or MAT 271 with C or better; Credit is allowed for only MAT 274 or 275
MAT	275	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better; Credit is allowed for only MAT 274 or 275
MAT	275	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better; Credit is allowed for only MAT 274 or 275
MAT	275	Modern Differential Equations	Introduces differential equations, theoretical and practical solution techniques. Applications. Problem solving using MATLAB.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	MA	Pre-requisites: MAT 266 or MAT 271 with a C or better; Credit is allowed for only MAT 274 or 275
MAT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
MAT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
MAT	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
MAT	300	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): MAT 210, 251, 265, or 270 with C or better
MAT	300	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	L	Prerequisite(s): MAT 210, 251, 265, or 270 with C or better
MAT	300	Mathematical Structures	Logic and set theory, induction, functions, order and equivalence relations, cardinality. Emphasizes writing proofs.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	L	Prerequisite(s): MAT 210, 251, 265, or 270 with C or better
MAT	310	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): MAT 267 or 272 with C or better
MAT	310	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 267 or 272 with C or better
MAT	310	Introduction to Geometry	Congruence, area, parallelism, similarity and volume, and Euclidean and non-Euclidean geometry.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): MAT 267 or 272 with C or better
MAT	340	Theory of Interest	Compound interest, discount rates, annuities, present values, depreciation, and bond valuations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 210, 251, 265 or 270 with C or better; Credit is allowed for only ACT 310 or MAT 340
MAT	342	Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 267 or 272 with C or better; Credit is allowed for only MAT 342 or 343
MAT	342	Linear Algebra	Linear equations, matrices, determinants, vector spaces, bases, linear transformations and similarity, inner product spaces, eigenvectors, orthonormal bases, diagonalization, and principal axes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 267 or 272 with C or better; Credit is allowed for only MAT 342 or 343
MAT	343	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB.4	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 342 or 343
MAT	343	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB.4	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 342 or 343
MAT	343	Applied Linear Algebra	Solving linear systems, matrices, determinants, vector spaces, bases, linear transformations, eigenvectors, norms, inner products, decompositions, applications. Problem solving using MATLAB.4	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 266 or 271 with C or better; Credit is allowed for only MAT 342 or 343
MAT	350	Techniques and Applications of Applied Mathematics	Mathematical techniques and applications representative of the range of applied mathematics used in operations research, biology, economics, finance, and sociology. In depth exploration of these techniques in detail by focusing on selected applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): MAT 274 or 275; MAT 342 or 343; Corequisite(s): STP 420
MAT	350	Techniques and Applications of Applied Mathematics	Mathematical techniques and applications representative of the range of applied mathematics used in operations research, biology, economics, finance, and sociology. In depth exploration of these techniques in detail by focusing on selected applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): MAT 274 or 275; MAT 342 or 343; Corequisite(s): STP 420

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	351	Mathematical Methods for Genetic Analysis	Discrete mathematics, probability, statistics, and associated computer packages. Applications to genomics, bioinformatics, forensics, and DNA/protein sequence patterns.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 270 (or MAT 251 or 265) with C or better
MAT	355	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 119, 210, 243, 251, 265, 270 or STP 220, 231 or 226 with C or better; Credit is allowed for only BIO 355, CPI 480, MAT 355 or MBB 355
MAT	362	Advanced Mathematics for Engineers and Scientists	Vector analysis, Fourier analysis, and partial differential equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 272 (or 267) with C or better; MAT 274 (or 275) with C or better
MAT	370	Intermediate Calculus	Theory behind basic 1-variable calculus: continuity, derivative, Riemann integral, sequences, and series.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 272 (or 267) with C or better; MAT 300 (or 243) with C or better; Credit is allowed for only MAT 371 (with C or better) or MAT 370
MAT	371	Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 267 or 272 with C or better; MAT 300 with C or better
MAT	371	Advanced Calculus I	Real numbers, completeness, sequences/series, continuity, uniform theorems, derivative, Riemann integral, pointwise/uniform convergence, Taylor's theorem. Credit is allowed for only MAT 371 or 370 toward a mathematics degree.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): MAT 267 or 272 with C or better; MAT 300 with C or better
MAT	372	Advanced Calculus II	Open, closed, compact sets in R^n continuity, differentiation, partial differentiation, integration in R^n Inverse/implicit function theorems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 371 with C or better; Pre/Co-requisite: MAT 342 or 343 (with C or better if completed); Credit is allowed for only MAT 372 or MAT 460
MAT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
MAT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
MAT	410	Introduction to General Topology	Topological spaces, metric spaces, compactness, connectedness, and product spaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 300 with C or better; MAT 371 with C or better
MAT	411	History and Philosophy of Mathematics	Examines nature of mathematics from origins to present, revealed by its history and philosophy. Strong background in mathematics not required.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	HU & H	Credit is allowed for only IAS 411 or MAT 411
MAT	415	Introduction to Combinatorics	Enumerating permutations and combinations of sets and multisets, inclusion-exclusion, recurrence relations, generating functions, Pólya theory and combinatorial structures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 300 (or 243) with C or better; MAT 342 (or 242 or 343) with C or better; Credit is allowed for only MAT 415 or 512
MAT	416	Introduction to Graph Theory	Trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 300 (or 243) with C or better; MAT 342 (or 242 or 343) with C or better; Credit is allowed for only MAT 416 or 513
MAT	419	Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Prerequisite(s) with C or better: ACO 101 (or ACO 102 or CSE 100 or 110 or 205); MAT 242 (or MAT 342 or 343), 300
MAT	419	Introduction to Linear Optimization	Simplex method, duality, and network flows. Applications to game theory, geometry, combinatorics, graph theory, and posets.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s) with C or better: ACO 101 (or ACO 102 or CSE 100 or 110 or 205); MAT 242 (or MAT 342 or 343), 300
MAT	420	Scientific Computing	Surveys and applies programming languages, libraries, and scientific visualization tools. Programming assignments emphasize software development skills. Completion of advanced calculus recommended prior to this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: CSE 205; MAT 274 (or MAT 275), 342 (or MAT 343)
MAT	421	Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 272 (or 267) with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	421	Applied Computational Methods	Numerical methods for quadrature, differential equations, roots of nonlinear equations, interpolation, approximation, linear equations, floating-point arithmetic, and roundoff error.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisites: MAT 272 (or 267) with C or better
MAT	423	Numerical Analysis I	Solution of systems of linear and nonlinear equations, optimization, eigenvalues, round-off error, and floating point arithmetic. Fluency in computer programming is required for enrollment in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 342 (or 343) with C or better
MAT	425	Numerical Analysis II	Analysis of and algorithms for numerical interpolation, integration, and differentiation. Numerical solution of ordinary and partial differential equations, introductory level. Applications. Fluency in computer programming is required for success in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 274 (or 275) with C or better; MAT 371 recommended
MAT	429	Optimization	A variety of optimization models and their applications to management, economics, engineering, and science. Topics include linear programming, integer programming, nonlinear programming, and stochastic programming. Stresses formulation and modeling as well as numerous applications and solving algorithms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 343 with C or better; MAT 350 or 419 with C or better
MAT	440	Group Theory	Covers basic group theory. Students learn about the concept of a "group," related structures, their underlying theory and examples of how they arise in mathematics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 300; MAT 342 or 343
MAT	441	Ring Theory	Covers basic ring theory. Students learn about the concept of a "ring," related structures, their underlying theory, and examples of how they arise in mathematics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 300; MAT 342 or 343
MAT	442	Advanced Linear Algebra	Fundamentals of linear algebra, dual spaces, invariant subspaces, canonical forms, bilinear and quadratic forms, and multilinear algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: MAT 300; MAT 342 or 343
MAT	443	Introduction to Abstract Algebra	Introduces concepts of abstract algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: MAT 300; MAT 342 or 343. Students may not enroll in MAT 443 if credit earned in MAT 444.
MAT	443	Introduction to Abstract Algebra	Introduces concepts of abstract algebra.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: MAT 300; MAT 342 or 343. Students may not enroll in MAT 443 if credit earned in MAT 444.
MAT	444	Intermediate Abstract Algebra	Basic theory of groups, rings, and fields, including an introduction to Galois theory. Appropriate as preparation for MAT 543.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 300 or 440 or 441 or 442 with C or better
MAT	445	Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: MAT 300, 342 (or MAT 343)
MAT	445	Theory of Numbers	Prime numbers, unique factorization theorem, congruences, Diophantine equations, primitive roots, and quadratic reciprocity theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: MAT 300, 342 (or MAT 343)
MAT	447	Cryptography I	Block ciphers, stream ciphers, congruence arithmetic, information theory, public key cryptosystems, key exchange, electronic signatures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: CSE 100 (or CSE 110 or 205); MAT 242 (or MAT 342 or 343), 300
MAT	448	Cryptography II	Mathematical underpinnings of contemporary cryptosystems, electronic signatures, key exchange, primality testing and factorization algorithms.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 447. Credit is allowed for only MAT 448 or MAT 494. Cryptography II
MAT	450	Mathematical Models in Biology	Introduces mathematical models in biological systems. Applications range from the cellular level to systems level and may include applications from areas such as physiology, ecology, epidemiology, population biology, computational and systems biology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): MAT 342 or 343 with C or better; MAT 274 or 275 with C or better
MAT	450	Mathematical Models in Biology	Introduces mathematical models in biological systems. Applications range from the cellular level to systems level and may include applications from areas such as physiology, ecology, epidemiology, population biology, computational and systems biology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): MAT 342 or 343 with C or better; MAT 274 or 275 with C or better
MAT	451	Mathematical Modeling	Detailed study of one or more mathematical models that occur in the physical or biological sciences.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Prerequisite(s): MAT 274 or 275 with C or better; MAT 242 or 342 or 343 with C or better
MAT	451	Mathematical Modeling	Detailed study of one or more mathematical models that occur in the physical or biological sciences.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s): MAT 274 or 275 with C or better; MAT 242 or 342 or 343 with C or better
MAT	452	Introduction to Chaos and Nonlinear Dynamics	Properties of nonlinear dynamical systems; dependence on initial conditions; strange attractors; period doubling; bifurcations; symbolic dynamics; Smale-Birkhoff theorem; and applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): MAT 274 or 275 with C or better; MAT 242, 342, or 343 with C or better; MAT 371 is recommended
MAT	452	Introduction to Chaos and Nonlinear Dynamics	Properties of nonlinear dynamical systems; dependence on initial conditions; strange attractors; period doubling; bifurcations; symbolic dynamics; Smale-Birkhoff theorem; and applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 274 or 275 with C or better; MAT 242, 342, or 343 with C or better; MAT 371 is recommended

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MAT	452	Introduction to Chaos and Nonlinear Dynamics	Properties of nonlinear dynamical systems; dependence on initial conditions; strange attractors; period doubling; bifurcations; symbolic dynamics; Smale-Birkhoff theorem; and applications.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): MAT 274 or 275 with C or better; MAT 242, 342, or 343 with C or better; MAT 371 is recommended
MAT	460	Vector Calculus	Vectors, curvilinear coordinates, Jacobians, implicit function theorem, line and surface integrals, Green's, Stokes', and divergence theorems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 274 or 275 with C or better; MAT 242, 342 or 343 with C or better; MAT 371 is recommended; Credit is allowed for only MAT 372 or 460
MAT	461	Applied Complex Analysis	Analytic functions, complex integration, Taylor and Laurent series, residue theorem, conformal mapping, and harmonic functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 267 or 272 with C or better
MAT	462	Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 274 or 275 with C or better; MAT 242, 342 or 343 with C or better
MAT	462	Applied Partial Differential Equations	Second-order partial differential equations, emphasizing Laplace, wave, and diffusion equations. Solutions by the methods of characteristics, separation of variables, and integral transforms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 274 or 275 with C or better; MAT 242, 342 or 343 with C or better
MAT	472	Intermediate Real Analysis I	Introduces analysis in metric spaces with emphasis on the real line.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 371 with C or better
MAT	472	Intermediate Real Analysis I	Introduces analysis in metric spaces with emphasis on the real line.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): MAT 371 with C or better
MAT	473	Intermediate Real Analysis II	Analysis in \mathbb{R}^n : implicit function theorem, introduction to manifolds, Lebesgue integration, change of variables formula, convergence theorems for integrals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 472 with C or better
MAT	475	Differential Equations	Linear and nonlinear ordinary differential equations, asymptotic behavior of solutions, stability, existence and uniqueness, limit sets, Poincaré-Bendixson theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 242, 342 or 343 with C or better; MAT 274 or 275 with C or better; MAT 370 or 371 with C or better
MAT	476	Partial Differential Equations	First-order quasilinear, second-order linear (wave, Laplace, heat). Characteristics, harmonic functions, maximum principles, Fourier series, separation of variables.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 242, 342 or 343 with C or better; MAT 274, 275 or 475 with C or better; MAT 370 or 371 with C or better
MAT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): Minimum 45 hours
MAT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): Minimum 45 hours
MAT	485	History of Mathematics	Topics from the history of the origin and development of mathematical ideas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 267 or 272 with C or better
MAT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
MAT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
MAT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
MAT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
MAT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MAT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MAT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
MAT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MAT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
MAT	495	Supervised research in mathematical sciences	Supervised research in mathematical sciences.	N	RSC	Y	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): minimum 45 hours. Credit is allowed for only MAT 494 (UG Research in Math) or MAT 495
MAT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		

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MAT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
MAT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
MAT	501	Geometry and Topology of Manifolds I	Brief review of general topology, cell complexes, topological manifolds, fundamental groups, covering spaces, homology.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only MAT 501 or MAT 598 (Geometry and Topology of Manifolds)
MAT	502	Geometry and Topology of Manifolds II	Differentiable manifolds, vector and tensor fields, differential forms, flows, Lie groups, homogeneous spaces, de Rham cohomology, Riemannian metrics and curvature.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 501; Credit is allowed for only MAT 502 or MAT 598 (Geometry Topology of Manifolds II)
MAT	512	Introduction to Combinatorics	Enumerating permutations and combinations of sets and multisets, inclusion-exclusion, recurrence relations, generating functions, Polya theory and combinatorial structures. Same topics as MAT 415; mastery at much higher level required. Students with MAT 415 (even as undergraduates) may not enroll.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: Graduate student; Credit is allowed for only MAT 415 or 512
MAT	513	Introduction to Graph Theory	Rigorous introduction to graph theory. High-level mastery in topics such as trees, cycles, matchings, planarity, connectivity, hamiltonicity, chromatic number, Ramsey theory with emphasis on proof techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MAT 416 or 513
MAT	514	Enumerative Combinatorics I	First semester of a systematic development of enumerative combinatorics, including elementary counting techniques, sieve methods, and partially ordered sets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	515	Enumerative Combinatorics II	Second semester of a systematic development of enumerative combinatorics, including lattices, exponential structures, symmetric functions, and selected special topics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	516	Graph Theory I	First semester of a systematic development of graph theory, including matchings, connectivity, arboricity, planarity, coloring, network flows.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	517	Graph Theory II	Second semester of a systematic development of graph theory, including dense and sparse graphs, Ramsey theory, hamiltonicity, random graphs, minors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	541	"p"-Adic Numbers	Introduces "p"-Adic numbers and analysis. Topics include valuations, completions of number fields, extensions of the field of "p"-adic numbers and "p"-adic analysis. Students should have previously taken courses in analysis and algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	542	Elliptic Curves	Geometry and arithmetic of elliptic curves, points of finite order, the group of rational points, curves over finite fields, complex multiplication. Students should have previously taken a senior-level course in abstract algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	543	Abstract Algebra I	Groups, modules, rings and fields, Galois theory, homological algebra, and the representation theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	544	Abstract Algebra II	Continuation of groups, modules, rings and fields, Galois theory, homological algebra, and the representation theory	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 543
MAT	545	Abstract Algebra III	Covers modules, Galois theory, and preparation for advanced study in algebraic parts of mathematics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 544
MAT	547	Algebraic Number Theory	Algebraic properties of number fields and their completions. Topics include rings of integers, ramification, finiteness of the class group, and Dirichlet's unit theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 544
MAT	561	Ecological Modeling	Mathematical modeling of animal populations, food-web structural and ecological processes in space and time. May use modeling tools on computer clusters.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only ABS, BIO 560 or MAT 561
MAT	570	Real Analysis I	Lebesgue integration, selected function spaces, differentiation, abstract measure theory, and elements of functional analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	571	Real Analysis II	Continuation of Lebesgue integration, selected function spaces, differentiation, abstract measure theory, and elements of functional analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 570

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MAT	572	Complex Analysis I	Analytic functions, series and product representations, entire and meromorphic functions, normal families, Riemann mapping theorem, harmonic functions, and Riemann surfaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	573	Complex Analysis II	Continuation of analytic functions, series and product representations, entire and meromorphic functions, normal families, Riemann mapping theorem, harmonic functions, and Riemann surfaces.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 572
MAT	578	Functional Analysis I	Locally convex, normed, and Hilbert spaces. Linear operators, spectral theory, and application to classical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	579	Functional Analysis II	Continuation of locally convex, normed, and Hilbert spaces. Linear operators, spectral theory, and application to classical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 578
MAT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MAT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MAT	117S	College Algebra Stretch	For students who have an in-progress (Z) grade for MAT 117. The grade earned in MAT 117S replaces the Z grade for MAT 117. Course content is the same as MAT 117, which is intended to develop skills in linear functions, quadratic functions, general polynomial functions, rational functions, exponential functions and logarithmic functions. Also studies systems of linear equations. Emphasizes problem-solving techniques, specifically by means of discussing concepts in each of these topics.	N	LEL	N	NOG	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0		Prerequisite(s): MAT 117 with grade of Z

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MAT	117S	College Algebra Stretch	For students who have an in-progress (Z) grade for MAT 117. The grade earned in MAT 117S replaces the Z grade for MAT 117. Course content is the same as MAT 117, which is intended to develop skills in linear functions, quadratic functions, general polynomial functions, rational functions, exponential functions and logarithmic functions. Also studies systems of linear equations. Emphasizes problem-solving techniques, specifically by means of discussing concepts in each of these topics.	N	LEL	N	NOG	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	0		Prerequisite(s): MAT 117 with grade of Z
MAT	117S	College Algebra Stretch	For students who have an in-progress (Z) grade for MAT 117. The grade earned in MAT 117S replaces the Z grade for MAT 117. Course content is the same as MAT 117, which is intended to develop skills in linear functions, quadratic functions, general polynomial functions, rational functions, exponential functions and logarithmic functions. Also studies systems of linear equations. Emphasizes problem-solving techniques, specifically by means of discussing concepts in each of these topics.	N	LEL	N	NOG	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	0		Prerequisite(s): MAT 117 with grade of Z
MBB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	343	Genetic Engineering and Society	Introduces genetic engineering, with emphasis on applications (transgenic plants and animals, cloning, vaccines, therapeutics, and diagnostics).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4	L	Pre-requisites: MBB 347 or BIO 340 with a C or better; Credit is allowed for only BIO 343 or MBB 343
MBB	347	Molecular Genetics: From Genes to Proteins	Emphasizes molecular and cell biology and gene technology, both at the basic and applied research levels, in the growing areas of biotechnology and the molecular biosciences; focuses on molecular processes that allow genetic information to be expressed and regulated and by introducing applications to real-world situations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 282 (or BIO 181 and 182); CHM 116. Credit is allowed for only BIO 340 or BIO 349 or MBB 347
MBB	350	Applied Genetics	Introduces molecular genetics with emphasis on application of genetics to solve biological questions and to engineer organisms for biotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 340 or MBB 247 or MBB 347 with C or better; Credit is allowed for only MBB 350 or PLB 350
MBB	355	Introduction to Computational Molecular Biology	Introduces the mathematical skills used in molecular biology, genomics, and bioinformatics.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	CS	Pre-requisites: MAT 119 or MAT 210 or MAT 243 or MAT 251 or MAT 265 or MAT 270 or STP 220 or STP 231 or STP 226 with C or better. Credit is allowed for only MAT 355 or BIO 355 or CPI 480 or MBB 355.
MBB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	440	Functional Genomics	Covers emerging fields of genomics and proteomics. Discusses key technologies and their applications to the study of genomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or LSC 347 or MBB 347 with C or better; Credit is allowed for only BIO 440 or CBS 540 or MBB 440 or MCB 540
MBB	444	Techniques in Functional Genomics	Practical introduction to modern functional genomics techniques, including microarray analysis and DNA sequencing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: BIO 440 or MBB 440 (with C or better if completed)
MBB	445	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutagenesis; hybridization and sequence analysis; protein quantitation, immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or MBB 347 with C or better; MBB 247 or MIC 302 with C or better; Credit is allowed for only MBB 445 or MIC 445
MBB	446	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutagenesis; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB or MIC 446
MBB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Minimum 3.3 GPA; Molecular Biology student
MBB	490	Capstone: Issues in Biotechnology	Integrates science and biotechnology industry issues dealing with intellectual property, regulatory issues, business practices, and commercialization. Both MBB 490 and MBB 491 for L General Studies credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	2	L	Prerequisite(s): MBB 343 with C or better
MBB	491	Capstone: Issues in Molecular Biosciences	Integrates molecular science and societal issues dealing with ethics, regulatory issues, and societal needs that pertain to molecular biosciences. Both MBB 490 and MBB 491 for L General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2	L	Prerequisite(s): BIO 340 or MBB 347 with C or better
MBB	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MBB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MBB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MBB	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
MBB	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): Junior or senior standing; Credit is allowed for only BIO 496 or HPS 496 or MBB 496 or MIC 496
MBB	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Minimum 3.0 GPA; Molecular Bioscience/Biotechnology student
MBB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
MCB	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	501	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	503	Bioimaging Lab	Provides a fundamental understanding of light-based microscopy through the training and use of instruments contained within the SOLS Keck Bioimaging laboratory. Examines the use of bright field, contrast, epi-fluorescent, total internal reflective fluorescence (TIRF), confocal, multiphoton and atomic force microscopy and how they are applied to various research applications. Additional focus given toward image ethics, analysis, and presentation using programs such as Adobe Photoshop and ImageJ. During the second half of the semester, students propose and develop an experimental project, based on their graduate research, in which they collect data, do analysis, and prepare results for a final project presentation.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisites: BIO 504, MCB 504, or BIO 598 (Bioimaging Current Techniques); Credit is allowed for only BIO or MCB 503
MCB	504	Bioimaging	Lecture survey of modern techniques for imaging tissues, cells, and macromolecules, including light microscopy (e.g. video, fluorescence, confocal, multiphoton, single molecule), electron microscopy (e.g. transmission, scanning, cryogenic, tomographic) and ancillary techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO or MCB 504
MCB	506	Clinical Gross Anatomy	Dissection of the human body with an emphasis on the application of anatomical knowledge to clinical applications.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	6		Credit is allowed for only ASM, BIO or MCB 506
MCB	540	Functional Genomics	Functional relevance of genomic sequences; DNA arrays, proteomics, analysis of genomic information for metabolic physiology of organisms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only BIO 440 or CBS 540 or MBB 440 or MCB 540
MCB	555	Advanced Molecular and Cellular Sciences	Study of structural and functional organization of biomolecules and cells, based on current literature.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MCB or NEU 555
MCB	556	Advanced Molecular and Cellular Biology II	Continuation of MCB 555.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MCB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	701	Seminar: Molecular and Cellular Biology Colloquium	Presentation of current research by noted researchers in the field.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MCE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
MCE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MCE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MCE	447	Diversity in Families and Communities in Multicultural Settings	Diversity and the changing role of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
MCE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
MCE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
MCE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
MCE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MCE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student

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MCE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
MCE	548	Multicultural Perspectives on Teaching and Learning	Facilitates understanding of key components related to cultural diversity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MCE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student
MCE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Undergraduate Postbaccalaureate student

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MCO	101	Everyday Grammar	Helps students master the elements of English grammar.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Prerequisite(s): non-Journalism or non-Sports Journalism major; Credit is allowed for only MCO 101 or MCO 194 (Everyday Grammar)
MCO	120	Media and Society	Covers the role of newspapers, magazines, radio, television and motion pictures in American society.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB	Prerequisite(s): non-Journalism and Mass Communication major or non-Sports Journalism major; Credit is allowed for only JMC 110 or MCO 110 or MCO 120
MCO	120	Media and Society	Covers the role of newspapers, magazines, radio, television and motion pictures in American society.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): non-Journalism and Mass Communication major or non-Sports Journalism major; Credit is allowed for only JMC 110 or MCO 110 or MCO 120
MCO	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	240	Media Issues in American Pop Culture	Examines the production and consumption of popular culture as disseminated by the mass media with emphasis on the societal implications.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		
MCO	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	302	Media Research Methods	Surveys research methods used in the social sciences, with a focus on mass communication.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major with minimum cumulative 2.50 GPA OR nonmajor with minimum cumulative 2.00 GPA OR graduate Mass Communications major OR ASU Online student with minimum cumulative 2.00 GPA
MCO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
MCO	418	History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB & H	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR a non-Journalism & Mass Comm student with minimum 2.0 GPA OR ASU Online student with minimum 2.00 GPA OR Graduate Mass Communications student
MCO	418	History of Mass Communication	American journalism from its English and colonial origins to the present day. Development and influence of newspapers, magazines, radio, television, and news gathering agencies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & H	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR a non-Journalism & Mass Comm student with minimum 2.0 GPA OR ASU Online student with minimum 2.00 GPA OR Graduate Mass Communications student
MCO	420	Strategic Sports Communication	Covers the wide-ranging field of strategic sports communication. Prepares students for an entry-level position in the strategic sports communication field.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication or Sports Journalism or W.P. Carey major; minimum 45 hours

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MCO	425	Digital Media Literacy	Helps students begin to navigate the 21st-century media, starting by becoming active users of media, not just passive consumers. The Internet-fueled democratization of media creation has enabled anyone to be a publisher, and given audiences' almost infinite choices, with both great and questionable effects. In a world of information abundance, it can be difficult to discern fact from opinion and truth from fiction. We need to know how to wade through this barrage of information with a critical eye, to be better informed, and ultimately become creators of media ourselves.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism & Mass Communication major; minimum 2.50 GPA OR non-Journalism & Mass Communication major; min 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate MCO major. Credit for only MCO 425 or MCO 494 (Digital Media Literacy)
MCO	430	International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	G	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR a non-Journalism & Mass Comm student with minimum 2.0 GPA OR ASU Online student with minimum 2.00 GPA OR Graduate Mass Communications student
MCO	430	International Mass Communication	Comparative study of communication and media systems. Information gathering and dissemination under different political and cultural systems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	G	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR a non-Journalism & Mass Comm student with minimum 2.0 GPA OR ASU Online student with minimum 2.00 GPA OR Graduate Mass Communications student
MCO	435	Social Media	Explores and critically analyzes the social, cultural, legal, ethical, economic, and technological dimensions of social media tools from Facebook to Foursquare, Twitter to Flickr and beyond.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	450	Visual Communication	Theory and tradition of communication through the visual media with emphasis on the continuity of traditions common to modern visual media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	HU	Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	455	War and Mass Media	Provides a better understanding of the role and impact of the mass media in shaping public perceptions about one of humanity's most monumental undertakings, the act of war. Through a combination of lectures, readings, documentaries, and motion pictures, examines and critically analyzes media portrayals, real and fictional, of issues, events, and the changing dynamic among: the government, the military, and public opinion as shaped by the media.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	456	Political Communication	Theory and research related to political campaign communication. The persuasive process of political campaigning, the role of the media, the candidate, and image creation.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB	Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	460	Race, Gender, and Media	Readings seminar designed to give students a probing examination of the interface between AHANA Americans and the mass media in the United States.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	C	Pre-requisites: Journalism & Mass Communication student with minimum 2.5 GPA OR non-JMC student with minimum 2.0 GPA OR ASU Online student with a minimum 2.00 GPA OR Graduate Mass Communications student; Credit for AFR or MCO 460
MCO	465	Sports and Media	Designed for aspiring journalists and media users, explores why great sports journalism is essential to our society. Establishes the goals, dreams, and expectations for sports journalism and introduces ethical philosophy and popular ethical models and decision-making tools. Students then apply these tools to sports journalism.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	473	Sex, Love, and Romance in the Mass Media	The role of the mass media in constructing and/or reinforcing unrealistic mythic and stereotypic images of sex, love, and romance.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3	SB	Prerequisite(s): Journalism and Mass Communication major; minimum 2.50 GPA OR non-Journalism and Mass Communication major; minimum 2.00 GPA OR ASU Online student; minimum 2.00 GPA OR graduate Mass Communication major
MCO	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		Prerequisite(s): Barrett Honors student
MCO	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6	L	Prerequisite(s): Barrett Honors student
MCO	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		
MCO	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-6		Prerequisite(s): Barrett Honors student
MCO	498	Pro Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-7		
MCO	502	Journalism Skills	Teaches basic journalism skills for print, digital and broadcast. Students get significant hands-on practice writing and reporting stories on deadline as well as an immersion in the principles and practices of good journalism.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	8		Prerequisite(s): Master of Mass Communication or Sports Journalism MA major
MCO	503	Media Law	Examines philosophical and legal aspects of press freedom. Emphasizes First Amendment theory evolution from 1791 to present.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student
MCO	505	Depth Reporting	Teaches in-depth and investigative reporting and writing techniques. Students produce long-form, deeply sourced articles with the goal of publication.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication or Sports Journalism MA major
MCO	510	Data Journalism	Uses data to tell stories, negotiates with government officials for public records and uses the Internet and other online sources to find information and sources for stories. Uses computer spreadsheets, database software, mapping programs and statistical techniques and explores how these tools can be used across a wide variety of beats and stories.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student
MCO	515	Advanced Online Media	Covers online trends, Web design and usability, and copyright; legal, and ethical issues facing online journalists. Students critically examine journalistic Web sites and recognize excellence as well as mediocrity. Hands-on experience in using Photoshop, Dreamweaver, CSS, Soundslides, Final Cut, and Flash to produce original, compelling multimedia stories as well as an online magazine.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student
MCO	525	21st-Century Media Organization and Entrepreneurship	Focuses on the future of journalism, the future of journalism business organizations and entrepreneurship, new media experiences, online solutions to popular media problems, financial realities of the media, and media innovation.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication student
MCO	526	Advanced Issues in 21st-Century Sports and Media	Through critical analyses of major contemporary issues in sports and media, provides tools and information needed to more fully engage in and become fluent with the main conversations about the business, technology and the future of sports journalism.	N	SEM	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism MA major

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MCO	529	Ethics and Diversity in Sports Journalism	Explores the connection among sports media, journalism and society in an ethical and issue-oriented context. Students gain an understanding of the issues and ethics of the sports journalism profession while becoming better and more informed consumers of sports media. At the end of the course students have a better understanding of the importance of sports in our society and how that is reflected in coverage by local and national media outlets.	N	SEM	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism MA major; MCO 502
MCO	530	History, Philosophy, and Ethics of Journalism	Explores contemporary news media ethical problems in a seminar setting. Uses journalism ethical perspectives to obtain keys to unlock contemporary dilemmas surrounding the news media.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student
MCO	531	Advanced Broadcast Reporting	Teaches news and information practices of networks and local television stations. Students report, write and edit broadcast packages with an emphasis on video.	N	LEL	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication or Sports Journalism MA major
MCO	535	Latino and Transnational Issues	Provides background and understanding of some of the most pressing and controversial issues of the day that are taking place in the Southwest borderlands. Successful students move on to the Borderlands Initiative depth reporting project in the spring semester that includes an international reporting experience.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication or Sports Journalism MA major
MCO	536	Public Relations Research	Learns about the importance of research in communications, conducts research using qualitative and quantitative methods, and analyzes data to understand implications within a specific communications context. Critically evaluates published academic and professional research and exposes types of research and their application in the field of public relations.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Master of Mass Communication major. Credit is allowed for only MCO 536 or 598 (PR Research)
MCO	540	Sports Reporting	Sports reporting, writing, scriptwriting and video production. Fast-paced and demanding. Students report and write/produce professional-level, clear, well-reported, accurate stories and video packages about athletes and sports stories newsworthy in the Valley and beyond.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Sports Journalism MA major; MCO 502
MCO	550	Issues in Coverage of Business and the Economy	Exposes the basics of business and economic reporting, one of the fastest-growing areas of journalism. Students learn what skills are needed to cover business and economic stories as well as the basics of how private companies operate and the factors that drive the economy. They also learn about opportunities in the field and hear from leaders in business journalism.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): ASU graduate online student OR Masters of Mass Communication major
MCO	553	Reporting on Business and the Economy	Trains students in the basics of reporting about business and the economy. Helps students tell the stories behind companies, people and money, while improving competence in using numbers in stories. Offers the opportunity to have stories appear in print, online or broadcast.	N	LEL	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): Master of Mass Communication major; MCO 502; Credit is allowed for only MCO 553 or 598 (Reporting on Business and the Economy)
MCO	555	Digital Media Entrepreneurship	Students identify a marketable idea and transform it into a product and/or company. In the process, they learn about key concepts of entrepreneurship and practice skills that they can employ as entrepreneurs themselves. Students are exposed to a range of national and regional entrepreneurs and emerge with a deeper understanding of entrepreneurship's importance within the media and communications landscape.	N	LEC	N	GNA	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Prerequisite(s): graduate Mass Communication major. Credit is allowed for only JMC 455, JMC 494 (Digital Media Entrepreneurship), MCO 555, or MCO 598 (Digital Media Entrepreneurship)
MCO	560	Arizona Media Law	Case study approach to first amendment issues, media access, libel, confidentiality, and invasion of privacy as applied to media organizations in Arizona.	N	LEC	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Masters of Mass Communication student
MCO	570	Master of Mass Communication Capstone	Master's degree hands-on culminating experience. Students may specialize in the various areas, i.e. print, broadcast, online, digital media, or public relations.	Y	LEL	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3-9		Prerequisite(s): Master of Mass Communication student
MCO	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Pre-requisite: Masters of Mass Communication student
MCO	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MCO	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-4		Pre-requisite: Masters of Mass Communication student
MCO	710	Research Methodology in Mass Communication	Identifies research problems in mass communication and provides an overview of questionnaire construction as well as attention to survey, historical, content analysis, experimental and legal research methods.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism Mass Communication PHD students
MCO	711	Critical, Historical, Legal Research Methods in Mass Communication	Critical, legal and historical methods necessary to conduct qualitative mass communication research.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Journalism Mass Communication PhD student
MCO	712	Freedom of Expression Theory	Examines philosophical and legal aspects of press freedom; emphasizes First Amendment theory evolution from 1791 to present.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisite: Journalism Mass Communication PhD student
MCO	720	Mass Communication Theory	Analyzes various theoretic models of mass communication with emphasis on the applications of these theories to professional communication.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism and Mass Communication PhD student
MCO	722	Philosophy of Mass Communication	Mass media as social institutions, particularly interaction with government and public; emphasizes criticism and normative statements. Seminar. Prerequisite: Journalism and Mass Communication PhD student.	N	SEM	N	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	3		Pre-requisites: Journalism and Mass Communication PhD student
MCO	755	Research Apprenticeship	Students and faculty work on a research project with the expected outcome of a scholarly publication.	N	RSC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Pre-requisite: Journalism and Mass Communication PhD student
MCO	765	Teaching Apprenticeship	Assists PhD students with the transition from the industry to the classroom in order to become better university instructors.	N	REC	Y	OPT	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-2		Pre-requisites: Journalism and Mass Communication PhD student
MCO	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MCO	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Cronkite School-Journ/Mass Com	Walter Cronkite School of Journalism & Mass Comm	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MDC	211	Introduction to Digital Sound	Examines how technology is used as listeners, creators, critics, remixers, and a wide variety of other roles to participate in and gain a deeper understanding of music and its role in our lives.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Credit is allowed for MDC 211 or MUE 294 Open Minds, Digital Ears
MDC	311	Composing and Performing for Hybrid Ensembles	Provides opportunities to perform music in a variety of digital and hybrid contexts using both physical and digital instruments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only MDC 311 or MUE 394 (Performing in Digital and Hybrid Music Groups)
MDC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MDC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MDC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MDL	410	Laboratory Leadership	Clinical lab leadership and management. Applies the principles of personnel management and supervision, allocation of resources, and staff communication.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite: Admission to Medical Laboratory Science program
MDL	420	Advanced Clinical Urinalysis and Body Fluids	Theory and applications of principles in urinalysis with emphasis on the etiology, pathophysiology, and clinical manifestations of renal and other metabolic defects as reflected by the analysis of urine and other body fluids.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	2		Pre-requisites: BIO 182; Admission to Medical Laboratory Science program
MDL	421	Advanced Practicum in Clinical Urinalysis and Body Fluids	Correlation and application of theory in a supervised clinical laboratory. Processing, analysis, and evaluation of urine and body fluids, emphasizing manual and automated techniques of specimen analysis.	N	PRA	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisites: Medical Laboratory Sciences BAS major; MDL 420 with C or better

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MDL	430	Advanced Hematology and Hemostasis	Theory and application of principles in hematology, with emphasis on techniques to evaluate blood dyscrasias and analyze body fluids. Etiology, pathophysiology, clinical manifestations, and treatment of blood dyscrasias/hemostatic defects.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 182; Admission to Medical Laboratory Science program
MDL	431	Advanced Practicum in Hematology and Hemostasis	Correlation and application of theory in a supervised clinical laboratory. Processing, analysis, and evaluation of blood samples, emphasizing manual and automated techniques of specimen analysis.	N	PRA	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		
MDL	440	Advanced Immunohematology and Immunology	Theoretical and practical application of clinical immunology and immunohematology. Emphasizes serological techniques that aid disease diagnosis and blood donor selection.	N	LEL	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 182; MIC 205; Admission to Medical Laboratory Science program
MDL	441	Advanced Practicum in Immunohematology and Immunology	Correlation and application of theory in a supervised clinical laboratory. Processing, analysis, and evaluation of samples, emphasizing manual and automated techniques of specimen analysis.	N	PRA	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	2		Pre-requisites: Medical Laboratory Sciences BAS major; MDL 440 with C or better
MDL	450	Advanced Clinical Microbiology	Theoretical and practical application of clinical microbiology. Emphasizes identification of pathogenic organisms, molecular techniques, mycology, virology, and parasitology.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: MDL 410; 420; 421; 430; 431; 440; 441
MDL	451	Advanced Practicum: Clinical Microbiology	Introduces instructional strategies appropriate for the teaching of group exercise classes in secondary school settings.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisite: MDL 450 with C or better
MDL	460	Advanced Clinical Chemistry	Theoretical and practical applications of clinical chemistry with particular emphasis on correlation of test results to disease status, statistical analysis, pre-analytical testing, critical values, calibration, and trending and tracking of quality control results.	N	LEL	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: MDL 410; 420; 421; 430; 431; 440; 441
MDL	461	Advanced Practicum: Clinical Chemistry	Correlation and application of theory in a supervised clinical laboratory. Processing, analysis, and evaluation of samples, emphasizing manual and automated techniques of specimen analysis routinely used clinical chemistry testing.	N	LAB	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisites: MDL 460 with C or better
MDL	470	Research Paper	Focuses on the creation of a research paper, written in a scientific fashion, on a relevant topic in the clinical laboratory field.	N	RSC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisite: MDL 460
MDL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
MED	100	Introduction to Medical Studies	Presents basic concepts related to sciences, social sciences, humanities, statistics and other topics related to medical and health studies. Solidifies concepts through the use of assignments, exams and discussions.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	1		
MED	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-3		
MED	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
MED	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
MED	300	Historical and Contemporary Issues in Health	History of medicine in the modern world and its relationship to contemporary issues in medicine with emphasis on the broader context of ways in which technology, personalized medicine, genomics, ethical issues and shared decision making between patients and providers have evolved.	N	LEC	N	GNA	College of Health Solutions	School for the Science of Health Care Delivery	3	L	Prerequisite(s): minimum 30 hours
MED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		
MED	417	Impact of Violence on Health	Approaches violence from a public health perspective, using the Centers for Disease Control, National Center for Injury Prevention and Control, as a benchmark. Applies an interprofessional approach to violence, to include medicine, nursing, law, law enforcement, social work, psychology, economics and education, among others. Discusses principles of epidemiology, underlying etiologies and sequelae and evidence-based strategies for prevention throughout the course.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours
MED	445	Science of Helping in Health	One of the strongest weapons in the health care arsenal is helping people make healthier lifestyle choices. But this weapon is only effective when it results in sustained behavior change. Explores the complex interactions among genetics, biology, psychology and society that drive lifestyle choices and the science surrounding motivation and compliance in facilitating behavioral change.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): Minimum 45 hours
MED	450	Leadership and Professionalism	Leadership, leadership theory and inter-professionalism in practice. Applies didactic content to case studies and activities designed to promote critical thinking and effective teamwork. Solidifies concepts through the use of assignments, exams and discussions.	N	LEC	N	GNA	College of Health Solutions	College of Health Solutions	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only HCD 401 or MED 450
MED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	YGB	College of Health Solutions	College of Health Solutions	1-12		Prerequisite(s): minimum 3.00 GPA
MED	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	College of Health Solutions	1-6		Prerequisite(s): Barrett Honors student
MED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	PRA	N	Z1	College of Health Solutions	College of Health Solutions	1-6	L	Prerequisite(s): Barrett Honors student
MED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-4		

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MED	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	College of Health Solutions	1-7	L	
MED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	College of Health Solutions	College of Health Solutions	1-3		
MEE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		
MEE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MEE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MEE	322	Structural Mechanics	Three-dimensional stress and strain analysis, generalized Hooke's Law, failure theories for ductile and brittle materials, combined loading, stress concentrations, energy methods, mechanical vibrations and structural dynamics, fatigue.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	4		Prerequisite(s): Mechanical Engineering BSE student; MAE 213 and 384 with C or better; MAT 267 or 272 with C or better; Credit is allowed for only AEE 325 (or MAE 325), MEE 322, or MAE 394 (Structural Materials in Aerospace)
MEE	323	Computer-Aided Engineering II	Introduces finite-element analysis, pre- and postprocessing, solving problems with FEA.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	2		Prerequisite(s) with C or better: Aerospace Engineering BSE major: AEE 325 (or MAE 325 or 394 - Aerospace Structures and Materials); MAE 214 or Mechanical Engineering BSE major: MAE 214; MEE 322 (or MAE 322)
MEE	340	Thermofluids II	Intermediate concepts of thermodynamics, fluid mechanics, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 240 with C or better; MAT 267 or 272 with C or better; Pre- or corequisite(s): MAE 384 with C or better if completed
MEE	342	Principles of Mechanical Design	The design process; conceptual and embodiment design of mechanical elements; form synthesis; material selection, failure modes, manufacturability tolerances, common mechanisms and machine elements.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MEE 322 with C or better; MSE 250 with C or better; Pre- or corequisite(s): MAE 318 and MEE 323 with C or better if completed
MEE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MEE	434	Internal Combustion Engines	Performance characteristics, combustion, carburetion and fuel-injection, and the cooling and control of internal combustion engines. Computer modeling.	N	LEL	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MEE 340 or MEE 482 with C or better; Credit is allowed for only MEE 434 or MAE 598 (Internal Combustion Engines)
MEE	440	Renewable Energy: Mechanical Systems	Renewable energy systems are energy conversion systems that rely on naturally replenishing flows of energy. Considers the foundational principles behind many renewable energy systems and application of these principles to practical systems. Emphasizes covering the following energy systems, some only at an introductory level and some with significant depth: solar, wind, geothermal, biomass, hydropower, energy storage, electric power generation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Engineering BSE major; MEE 340 with C or better; Credit is allowed for only MEE 440 or MAE 582 or MAE 494 (Renewable Energy Engineering) or MAE 598 (Renewable Energy Engineering)

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MEE	441	Wind Energy	Wind energy systems convert kinetic energy in the wind into electrical energy. Focuses on flow machines, including for example, aerodynamics and fluid dynamics. Begins with wind resource assessment utilizing atmospheric boundary layer science and then proceeds to computational fluid dynamics to understand the tools of modern wind resource assessment. Includes applications of the Navier-Stokes equations and some basics from turbulence theory. Resource assessment also includes modern remote sensing techniques such as lidar, radar and in situ instrumentation. Also includes discussions from current events and policy. Requires a background in applied experimental statistics, thermodynamics or aerodynamics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Engineering BSE major; AEE 360 or MEE 340 with C or better; MAE 301 with C or better; Credit is allowed for only MAE 494 (Wind Energy) or MAE 579 or MAE 598 (Wind Energy) or MEE 441
MEE	446	Energy Systems Design	Applies mechanical engineering principles and techniques to modeling, analysis, and synthesis of energy systems and components. Design optimization. Design project.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Mechanical Engineering (Energy and Environment) BSE major; MAE 301 and 400 with C or better; MEE 340 and 342 and 482 with C or better
MEE	482	Intermediate Thermodynamics	Applied thermodynamics; gas mixtures, psychrometrics, property relationships, power and refrigeration cycles, and reactive systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MAE 240 with C or better; Credit is allowed for only MAE 583 or MAE 570 or MAE 598 (Thermodynamics) or MEE 482
MEE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-12		
MEE	488	Mechanical Engineering Design I	Conceptual and embodiment design; modeling; rapid prototyping. Team project. MEE 488 and 489 must be taken in consecutive semesters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Mechanical Engineering major; MAE 301 and 318 and 384 with C or better; MEE 340 and 342 with C or better; Pre- or corequisites(s): MAE 400 with C or better if completed
MEE	489	Mechanical Engineering Design II	Detail design; fabrication and testing. Team project. MAE 488 and 489 must be taken in consecutive semesters.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student; MEE 488 with C or better
MEE	491	Experimental Mechanical Engineering	Experimental and analytical studies of phenomena and performance of fluid flow, heat transfer, thermodynamics, refrigeration, and mechanical power systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	3	L	Prerequisite(s): Fulton Engineering undergraduate student; MAE 301 and 318 with C or better; MEE 340 with C or better
MEE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	PRA	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6		Prerequisite(s): Barrett Honors student
MEE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student
MEE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-4		
MEE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-7		
MEE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Mechanical and Aerospace Engineering Program	1-3		Prerequisite(s): minimum 45 hours
MET	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-3		
MET	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		

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MET	211	Statics	Vectors, forces and moments, force systems, equilibrium, analysis of basic structures and structural components, friction, centroids, and moments of inertia. May be repeated for credit.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre/Co-requisites: PHY 121 (or PHY 111 as pre-requisite); MAT 265 or MAT 270
MET	212	Applied Engineering Mechanics: Dynamics	Masses; motion kinematics; dynamics of machinery.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 211 (or CON 221 or MAE 212); MAT 266 (or MAT 271)
MET	213	Applied Mechanics of Materials	Stress, strain, stress-strain relations. Axial, shear, bending, torsional and combined loads and deflections.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: MET 211 or CEE 210, or MAE 212
MET	214	Applied Mechanics of Materials Laboratory	Measurements of loads and deformations relating stress and strain in axial, shear, bending, torsional, and combined loading configurations.	N	LAB	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1		Pre-requisites: MET 213, MAE 213, MSE 211, CON 223, CEE 213 OR be co-enrolled in MET 213
MET	230	Introduction to Engineering Materials	Introduces materials and their properties, emphasizing basic concepts and structures and how these properties relate to manufacturing and design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	2		
MET	231	Manufacturing Processes	Design documentation and material processes on plastics, ferrous and nonferrous materials, emphasizing orthographic projection, geometric dimensioning and tolerances.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 160 and MET 230
MET	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
MET	300	Applied Material Science	Principles of materials science emphasizing concepts relevant to design, manufacturing, and use. Covers metals, polymers, ceramics, and composites.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR MSE 250 OR Applied Science (Manufacturing Technology & Management) major; MET 230
MET	302	Welding Survey	Theory and application of industrial welding processes; introductory welding metallurgy and weldment design; SMAW, GTAW, GMAW, oxyacetylene, and brazing experiences.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): Fulton Schools of Engineering student
MET	309	Nondestructive Testing and Quality Assurance	Part and material inspection using metrology and nondestructive inspection tools and techniques. Theory and application with use of pertinent standards.	N	LAB	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR Applied Science (Manufacturing Technology & Management) major
MET	321	Introduction to Automotive Engineering	Engineering principles and the design of ground vehicles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MET 212. Pre- or corequisite(s): MET 213, 340
MET	331	Machine Design I	Applies mechanics to design of machine elements and structures. Stress analysis, failure modes, tolerances, cylindrical fits, and shaft design.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 213 (or CON 223 or MAE 213)
MET	340	Engineering Thermo-Fluids I	First and second laws of thermodynamics, systems, processes, equations of state, property tables. Fluid statics, conservation of momentum, Bernoulli's equation, applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MAT 266 or 271 with C or better; PHY 121 with C or better; Credit is allowed for only EGR 340 or MET 340
MET	341	Manufacturing Analysis	Organizational and functional requirements for effective production. Analysis of industrial specifications, geometric dimensioning and tolerancing, costs, and group technology. Writing assembly production plans.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR Applied Science (Manufacturing Technology & Management) major
MET	344	Casting and Forming Processes	Analyzes various forming processes to determine load requirements necessary for a particular metal-forming operation. Information used to select equipment and design tooling. Metal casting processes and design of castings. Introduces powder metallurgy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR Applied Science (Manufacturing Technology & Management) major
MET	345	Advanced Manufacturing Processes	Material removal processes emphasizing advanced turning, milling, and machinability studies using cutting tools. CNC programming for machining and turning centers.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EGR 218 OR EGR 294 (Engineering Materials & Manufacturing) OR MET 231 OR Applied Science (Manufacturing Technology & Management) major

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MET	351	Introduction to Automation	Introduces automation. Topics include assembly techniques, fixed and flexible automation systems, robots, material-handling systems, sensors, and controls.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: EST 210
MET	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
MET	396	Professional Orientation	Topics related to a successful career in engineering technology industry. Includes safety, life-long learning, ethics, and career planning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	1		Pre-requisite: Junior or Senior standing
MET	401	Quality Assurance	Statistical quality control methods, design of experiments, sampling, gauge requirements and specifications, use of quality assurance tools.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: STP 420 (or APM 301); Credit is allowed for only MET 401 or 501
MET	409	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Junior or Senior standing; Credit is allowed for only MET 409 or 509
MET	410	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisite: MET 341; Credit is allowed for only MET 410 or 510
MET	415	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 341; STP 420; Credit is allowed for only MET 415 or 515
MET	416	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3	CS	Pre-requisite: MET 341; Credit is allowed for only MET 416 or 516
MET	418	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 300 or MSE 250. Credit is allowed for only MET 418 or 518
MET	421	Vehicle Powertrains	Internal combustion engine design, performance and operation, and power transmission systems within vehicles.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 321
MET	423	Vehicle Chassis and Running Gear Design	Design and manufacture of chassis, structures, steering and braking systems and components, wheels and tires, suspension systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 321; MET 331
MET	424	Vehicle Electrical Systems	Vehicle electrical power and signal systems, computer control and analog control systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 210; MET 321; MET 421
MET	426	Vehicle Thermal Design	Heat management in vehicle systems, including thermal design of engine and transmission cooling systems, cabin heating, and air conditioning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 421; Pre/Co-requisite: MET 434
MET	427	Vehicle System Integration and Testing	Systems engineering principles. Design of the interfaces between vehicle subsystems. Testing of integrated systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 423; MET 424
MET	432	Engineering Thermo-Fluids II	Thermodynamic analysis of mixtures and power cycles. Design and analysis of fluid systems, conduction heat transfer, and introduction to convection and radiation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 340 with C or better; Credit is allowed for only EGR 432 or MET 432
MET	434	Engineering Thermo-Fluids III	Transient conduction, convection and radiation heat transfer, heat exchangers, thermo-fluid systems engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 340
MET	435	Alternate Energy Sources	Alternate energy systems, energy use and its impact on the environment, and demonstrating practical alternative energy sources to fossil fuels.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 340
MET	438	Machine Design II	Applies mechanics to the design of machine elements and structures. Emphasizes basics of gears, springs, brakes, clutches, and bearings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 331 OR Fulton Schools of Engineering graduate student
MET	440	Finite Element Analysis	Analyzes machine elements, frames, and aerospace structures employing finite element analysis and software. Includes sensitivity analysis and estimating accuracy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 331
MET	442	Specialized Production Processes	Nontraditional manufacturing processes, emphasizing EDM, ECM, ECG, CM, PM, HERF, EBW, and LBW.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218 (or EGR 294 [Engineering Materials & Manufacturing] or MET 231). Credit is allowed for only MET 442 or MET 502
MET	443	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 345; Credit is allowed for only MET 443 or 514
MET	444	Production Tooling	Design and fabrication of jigs, fixtures, and special industrial tooling related to manufacturing methods.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre- or corequisite(s): MET 309. Credit is allowed for only MET 444 or MET 504
MET	455	Automation Systems Integration	Applies sensors and devices and their integration with PLCs and computers into automated devices and systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 351
MET	460	Capstone Project I	Group project designing, evaluating, and analyzing components, assemblies, and systems. Develop products/manufacturing techniques demonstrating state-of-the-art technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 300; 331; 340; 345
MET	461	Capstone Project II	Small-group projects applying manufacturing techniques, with emphasis on demonstrating state-of-the-art technology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: MET 460
MET	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		

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MET	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
MET	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student
MET	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisites: Fulton Schools of Engineering student; Minimum Junior status
MET	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-7	L	Prerequisites: Fulton Schools of Engineering student; Minimum Junior status
MET	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-3		
MET	501	Statistical Quality Control Applications	SPC problem-solving techniques for implementation in industrial setting; design and analysis of experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 401 or 501
MET	502	Specialized Production Processes	Specialized production processes including lasers, electronic beam, abrasive and water jet, and chemical and thermal processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 442 or 502
MET	504	Applications of Production Tooling	Design and fabrication of fixtures, jigs, templates, and specialized industrial tooling for manufacturing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 444 or 504
MET	509	Applied Engineering Economics	Fundamentals of engineering economics in a practical, industry-based approach. Includes effects of depreciation, taxes, inflation, and replacement analysis.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): degree- or nondegree-seeking graduate; credit is allowed for only MET 409 or 509
MET	510	Manufacturing Resource Management	Measures like cycle time, throughput, capacity, work-in-process, inventory, variability, and how they drive operating relationships in a factory.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 410 or 510
MET	514	CNC Computer Programming	Theory and application of N/C languages using CAM software and CNC machine tools.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 443 or 514
MET	515	Manufacturing Simulation	Computer simulation of manufacturing operations. Discrete event simulation models range from individual processes to whole factories.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 415 or 515
MET	516	Applied Computer-Integrated Manufacturing	Techniques and practices of computer-integrated manufacturing as applied in a broad range of industry.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 416 or 516
MET	518	Composites Materials Manufacturing	Introduces composite materials and associated manufacturing issues, including tooling, processes, and quality control. Related issues, including testing and joining.	N	LEL	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MET 418 or 518
MET	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		
MET	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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MET	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MET	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MFG	308	Manufacturing System Project I	Focuses on design for product realization in a manufacturing environment. Projects are industry driven and applicable to low-volume product development.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 217 with C or better; EGR 218 with C or better
MFG	318	Manufacturing Systems Project II	Focuses on process development for high-volume manufacturing in the competitive global economy. Uses discrete event simulation software to model and study the manufacturing environments.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 with C or better; EGR 219 with C or better; MFG 382 with C or better
MFG	381	Manufacturing Processes and Validation Lab	Theory of basic manufacturing processes accompanied by the fundamental skills; safety practices while working with engineering drawings, machine tools and metrology equipment related to manufacturing.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 217 with C or better; EGR 218 with C or better
MFG	382	Modeling of Manufacturing Systems I	Modeling of manufacturing systems using discrete event simulation. Introduces basic manufacturing-related data and system configurations. Uses commercial simulation software to build and analyze model output data.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 219 with C or better; EGR 280 with C or better
MFG	383	Communications in a Production Environment	Effective communication is essential in all production environments for efficiency, yield and safety. Covers the major applications within a company and the expectations for the individual's capabilities.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 202 or EGR 240 with C or better
MFG	385	Design for Manufacturing	Introduces the methods employed to design and produce products that can compete in the global marketplace. Topics include design for manufacturability and assembly, product life-cycle, economics of design and reliability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218 with C or better
MFG	386	Integrated Circuit Manufacturing	Integrated circuit manufacturing combines judicious selection of materials with nano-meter features to create complex digital and analog circuits. The process demonstrates extreme applications of design, control and resource organization.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216 with C or better; EGR 280 with C or better
MFG	387	Industrial Automation	Introduces concepts and application of industrial automation systems. Topics include PLC control systems, embedded control systems, sensing technologies, robotics and material-handling systems.	N	LEL	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 219 with C or better
MFG	461	Manufacturing Enterprise Operations	Covers the role of engineers in the manufacturing environment. Aspects of this role include troubleshooting, performance control, risk mitigation and financial planning. Provides tools and approaches for understanding and representing costs and making decisions based on these costs.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 280; MAT 343
MFG	472	Additive Manufacturing	Additive Manufacturing (AM) is driving a paradigm shift in design and manufacturing. Provides a comprehensive overview of AM, from process physics and material chemistry to process and technology development. Explores new engineering and product design degrees of freedom enabled by AM. Topics include fundamentals of polymer, metal and composite AM processes; process capabilities such as rate and resolution; material properties and their dependence on material characteristics, process parameters and machine designs; existing and new applications of AM; and a perspective on current and future technical challenges in AM.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218
MFG	480	Advanced Statistical Approaches for Manufacturing	Applies experimental design and statistical process control in the manufacturing environment. Uses engineering statistical software to formulate and solve problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 280 with C or better
MFG	481	Enterprise Economics	All manufacturing is about cost. Considers the components of these costs and presents a number of mathematical tools and approaches for representing, understanding and making decisions based on them.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 280 with C or better

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MFG	482	Materials Science in Manufacturing	High-technology manufacturing combines and exploits the properties of a wide range of materials. Provides a science-based view of materials selection and optimization for product manufacturability and reliability.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	4		Prerequisite(s): EGR 218 with C or better
MFG	483	Manufacturing Systems Operations	Introduces key factory management strategies, lean and six sigma philosophies, and global manufacturing supply chains. Software and computer model-based analysis and observation of factory and supply chain performance.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MFG 382 with C or better
MFG	485	Engineering Internship	Experiential education. Local company oversees a student project experience at their facility.	N	PRA	N	GNA	Ira A. Fulton Engineering	Engineering Programs	1-3		Prerequisite(s): MFG 308 with C or better
MFG	486	CNC Computer Programming	Theory and applications of NC languages using CAM software and CNC machine tools. Overview of advanced manufacturing processes including production CNC part programming ranging from current design to inspection standards.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): MFG 381 with C or better
MFG	487	Casting and Forming Processes	Theory and practice of metal casting processes and design of castings. Analysis of various forming processes to determine load requirements. Theory and practice of tooling design for stamping operations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 218 with C or better
MFG	488	Plasma Processing	Plasma processing is widely used in advanced technology manufacturing. Combines the principles of chemistry, materials, RF power and control to demonstrate key applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite(s): EGR 216 with C or better; EGR 218 with C or better; EGR 280 with C or better
MFG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
MFG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student
MFG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
MGT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		
MGT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		
MGT	290	My Life Venture	Interdisciplinary course that engages students in aspects of self-discovery and entrepreneurship. Students learn about themselves, their decisions, and their goals, and see how entrepreneurship could play a role in their lives. Introduces students to concepts in entrepreneurship and personal finance in the context of not-for-profit, business, political, and artistic realms. Includes both individual and team activities and is open to any ASU student.	N	LEL	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Credit is allowed for only MGT 290 or MGT 294 (My Life Venture) or WPC 294 (My Life Venture)
MGT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		
MGT	300	Organization and Management Leadership	Analyzes strategic, behavioral, and human resource management perspectives, including principles of strategic management and leadership of human resources.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s) with C or better: ACC 231, 232 or 261; ECN 221 or ECN 231 or IEE 380 or STP 280; MAT 211, 266 or 271; WP Carey, Engr Mgmt, Sec Ed (Bus) major or Business minor; Pre- or corequisite(s): ACC 240, 241, 242 or 271 with C or better if complete
MGT	302	Principles of International Business	Multidisciplinary analysis of international economic and financial environment. Operations of multinational firms and their interaction with home and host societies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3	G	Pre-requisites: W. P. Carey BS or BA student (or non-business student with minimum 2.5 GPA and minimum 56 hours); ECN 212 or 214 with C or better; Credit is allowed for only AGB 302 or MGT 302 or BUA 394 Perspectives in Global Business
MGT	303	Honors Organizational Strategies, Leadership, and Behavior	Overview of business strategy principles, management processes, motivation, and leadership.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisites: W.P. Carey School of Business Honors student; PSY 101 (or PGS 101) or PSY 304 (or PGS 304) or SOC 101 or SOC 301 with C or better; ECN 221 or 231 with C or better. Pre- or corequisite: ACC 241 or 242 or 271 with C or better if completed

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MGT	310	Collaborative Team Skills	Development of skills in managing and working in collaborative environments. Theories and applications in small group dynamics and team facilitation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BS or BA student OR Non-business student with min 3.5 ASU cum GPA and min 56 earned hours.
MGT	320	Organizational Behavior	Management processes, fundamentals of business-level strategy, individual difference issues, motivation and leadership of people in organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites with C or better: ACC 241 (or ACC 242 or 271); ECN 221 (or ECN 231); MGT 300 (or MGT 303); PSY 101 (or PGS 101) or PSY 304 (or PGS 304) or SOC 101 (or SOC 301); BS Business Entrepreneurship or Management major
MGT	340	Creativity and Innovation	Teaches key concepts and useful tools and techniques of creativity and innovation to students in order to encourage development of creative skills and habits that can propel them in their career or guide them down a path to start a new venture of their own. Coursework and activities involve complex problem solving activities and relevant trend and environmental analysis in order to explore alternative approaches to challenges. Coursework includes both individual and team activities.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3	L or HU	Pre-requisite: W. P. Carey BS or BA student OR non-business student with min 2.50 ASU cum GPA and min 56 earned hours and Pre/Co-requisite: MGT 290 or 294 My Life Venture; Credit is allowed for only MGT 340 or MGT or WPC 394 (Creativity and Innovation)
MGT	360	Entrepreneurship and Value Creation	In-depth application of entrepreneurial concepts including opportunity recognition, value creation and new business management. Identifies the needs of a market and problem solves to meet those needs through innovation. Covers common mistakes made in the new venture process and how to work to avoid these mistakes.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): Business undergrad; ACC 241 or 242 w/ C or better OR Engineering junior OR non-business junior; min 2.50 cum ASU GPA; MGT 290 w/ C or better; Pre- or coreq(s): MGT 340 w/ C or better if completed; Credit is allowed for only FSE 301 or MGT 360
MGT	380	Management and Strategy for Nonmajors	Introduces the functions and applications of management in organizations, including controlling, decision making, leadership, motivation, planning, and social responsibility. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: Non-business student with a minimum ASU cumulative GPA of 2.00 and a minimum of 56 earned hours, OR be a non-degree student with minimum 2.0 ASU cum GPA, OR be a graduate student.
MGT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		Pre-requisites: W. P. Carey BS or BA student; Pre/Co-requisite: ACC 240 or ACC 241 or ACC 242 or ACC 271 with C or better
MGT	400	Cross-Cultural Management	Cultural role in international business relations; applied principles of cross-cultural communications, negotiations, and management; regional approaches to business relations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3	C & G	Pre-requisites: WP Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better.
MGT	404	Chinese Language and Global Business Communication	Capstone course designed to synthesize the knowledge acquired from business, language and cultural coursework in the BA in Business: concentration in Chinese Language and Culture. Analyzes case studies in which Chinese language and cultural skills are used to develop communication strategies in doing business in China. Learn new tools and techniques of analysis to enhance communication with Chinese business counterparts. Applies language and cultural skills to a major project in which students demonstrate complex and integrated knowledge of negotiating with the Chinese and using global business skills. Integrates international business knowledge into presentations, research and the use of sophisticated tools of analysis to provide practical training for the global business environment. Students are proficient in communicating in Chinese prior to taking this course.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): W.P. Carey BA or BS major; CHI 302 with C or better; LES 305 with C or better; MGT 300 with C or better; SCM 300 with C or better

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MGT	405	Spanish Language and Global Business Communication	Synthesizes the knowledge acquired from business, language and cultural coursework in the BA in Business: concentration in Spanish Language and Culture. Students proficient in communicating in Spanish analyze case studies in which Spanish language and cultural skills are used to develop communication strategies in doing business in Spanish-speaking countries. Students learn new tools and techniques of analysis to enhance communication with their Spanish-speaking business counterparts. Applies language and cultural skills to a major project in which students demonstrate complex and integrated knowledge of negotiating with Spanish speakers and using global business skills. Integrates international business knowledge into presentations, research and the use of sophisticated tools of analysis to provide practical training for the global business environment.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): W.P. Carey BA or BS major; LES 305 with C or better; MGT 300 with C or better; SCM 300 with C or better; SPA 314 with C or better
MGT	410	Responsible Management	Values, core beliefs, legal and ethical mandates and cultural norms as they apply to the conduct of organizations; application through a Service Learning project.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BS or BA student, or non-business student with minimum 3.5 gpa and minimum 56 hours; MGT 300, 303, 320 or 380 with C or better
MGT	411	Leading Organizations	Comprehensive overview of leadership in organizations. Provides students with understanding of leadership research and its applications to global organizations and the development of leaders.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BS or BA student or non-business student with minimum 2.50 ASU cum GPA and minimum 56 earned hours; MGT 300, 303, 320 or 380 with C or better
MGT	420	Human Resource Management	Development of skills and knowledge to lead associates effectively: hiring, developing, evaluating, retaining, and rewarding employees. Preparation for leadership roles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: WP Carey BS or BA student, OR non-business student with min 3.5 ASU cum GPA and min 56 earned hours; MGT 300 or 303 or 320 or 380 with C or better
MGT	421	Compensation in Organizations	Develops knowledge of theory and research in motivation, compensation and rewards, and skill in applying such knowledge to important compensation and reward decisions. Discusses strategic compensation and reward systems issues. Explores in detail a variety of monetary and nonmonetary reward systems; the motivational impact these systems have on employees, teams, and CEOs; and the performance impact they have on organizations.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better
MGT	422	Staffing	Focuses on the effective management of the flow of talent into and through organizations. Covers human resource planning, recruiting and selection, career transitions and other workforce movement. Provides opportunities to develop hands-on skills that are relevant to effectively managing talent flow.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better
MGT	423	Training and Development in Organizations	Familiarizes students with the training and development function in organizations. Although tailored to students interested in human resources management, the course may also be relevant to students who may at some point be involved in training and development within an organizational context.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better
MGT	424	Employment Law	Provides an overview of U.S. employment law at both the federal and state levels. Reviews employment at will and wrongful discharge, employment torts, privacy, discrimination law, worker's compensation, occupational safety and health, unemployment, federal compensation laws, and the law of noncompetition and trade secrets. Designed for individuals preparing for careers in human resource management, labor relations or dispute resolution.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better
MGT	425	Global Human Resources	Explores the importance of international business management in the context of international human resource management, including topics on culture, compensation and benefits, international organizations and their structures, international assignment management and the legal and regulatory considerations that global organizations face. Identifies differences in operating a domestic versus international business and how business practices need to be adapted to operate successfully in foreign markets. Covers global strategy and structure; understanding and managing cultural differences; design and alignment of global HRM practices; and the global HR function.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BA or BS major; MGT 420 with C or better

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MGT	430	Negotiations	Improves student's understanding of and skills in the art of negotiation. For most managers, negotiation is a significant aspect of their day-to-day jobs, not to mention a major element of everyday life. Give students experience in bargaining and negotiation, as well as provide a foundation in the essential knowledge bases crucial to being an effective negotiator. Emphasizes experiential learning—students spend most of their time participating in exercises and negotiation simulations, as well as discussing negotiation-based cases involving issues that often arise in the workplace. Provides a fundamental understanding of what it takes to be an effective negotiator, as well as several experiences to draw upon in future negotiation situations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): W.P. Carey BA or BS major, or nonbusiness student with minimum 3.00 ASU GPA and minimum 56 hours; MGT 300 or MGT 303 or MGT 310 or TMC 330 with C or better
MGT	440	Entrepreneurship	Prepares students for the challenges of assembling and growing high-potential innovative ventures through the use of analytical frameworks that encompass uncertainty inherent in entrepreneurship (or in entrepreneurial activity). In-depth discussion of cases provides a strong empirical foundation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BS or BA student; FIN 300, 302 or 303 with C or better; MGT 300, 310 or 303 with C or better
MGT	445	Business Model Development	Develops a complete strategic business model emphasizing the planning process undertaken by successful small business owners and entrepreneurs.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Pre-requisites: W.P. Carey BS or BA student; MGT 440 with C or better
MGT	446	Venture Capital Experience	Students learn the details of the startup funding process and available resources. Exposes the history of venture capital and other types of capital, current trends, and the trends that are anticipated in the future. Students learn due diligence process as performed by investors and applies these concepts to building and growing their own ventures. Coursework includes both individual and team activities and is open to students in any major of study with the required prerequisite.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): W.P. Carey BA or BS major; ACC 240, 241, or 242 with C or better OR non-business student; minimum 2.50 GPA; minimum 56 hours; Credit is allowed for only MGT 446 or MGT 494 (Venture Capital Experience)
MGT	447	Lean Launch	Students learn lean and customer development methodologies to test assumptions made about a new business concept that they wish to explore or launch. Teaches how to effectively utilize business models and critically assess the assumptions made through the testing of hypotheses to create innovative and market-ready ventures. Includes weekly presentations of learning points and team activities outside of the classroom. Open to students in any major of study with the required prerequisite.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	3		Prerequisite(s): W.P. Carey BA or BS major; ACC 241 or 242 or 271 with C or better OR non-Business student with minimum ASU 2.50 GPA; minimum 56 hours. Credit is allowed for only HON 447 or MGT 447 or MGT 494 (Lean Launch)
MGT	450	Consulting Projects	Describes and analyzes business processes. Generates and evaluates alternatives. Creates improvement and implementation plans.	N	PRA	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3	L	Prerequisite(s): W.P. Carey BS or BA major; ENG 301 or 302 with C or better; MGT 300 or 303; MGT 411 with C or better; MKT 300, 302 or 303 with C or better; Pre- or Corequisite: FIN 300, 302 or 303 (with C or better if taken)
MGT	459	International Management	Concepts and practices of multinational and foreign firms. Objectives, strategies, policies, and organizational structures for operating in various environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3	G	Prerequisite(s): W.P. Carey BS or BA student, OR non-business student with min 2.5 ASU cum GPA and min 56 earned hours; MGT 302 or ECN 306 with C or better
MGT	460	Strategic Management	Systems theory of organizations, strategy formulation and administration in organizations, creating organizational cohesiveness, and leading change within organizations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	3	L	Pre-requisites: W.P. Carey Management BS student; MGT 303 or 320 with C or better; MGT 410 or 411 with C or better; FIN 300, 302 or 303 with C or better; MKT 300, 302 or 303 with C or better
MGT	464	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 464 or MGT 464 or SOS 474
MGT	465	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 465 or IND 465 or MGT 465 or SOS 475
MGT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): W.P. Carey BA Human Resources or BS Business Entrepreneurship or BS Management major

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MGT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-6		Prerequisite(s): Barrett Honors student
MGT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-6	L	Prerequisite(s): Barrett Honors student
MGT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		Pre-requisites: W.P. Carey BS or BA student OR non-business with min 2.5 ASU cum GPA, min 2.5 ASU bus GPA and min 56 earned hrs; MGT 300 or 302 or 303 or 310 or IBS 300 with C or better
MGT	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-6		Prerequisite(s): Barrett Honors student
MGT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-7		Pre-requisites: W. P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students
MGT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Pre-requisites: W. P. Carey BS or BA student OR non Business students with a minimum GPA of 2.50 and either at least 56 earned hours or non degree students OR Graduate students
MGT	502	Leading People, Teams and Organizations: Organization Theory	Understands human side of organizations through management theories and applications. Develops knowledge and skills for successful management of self and others.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	2-4		Prerequisite(s): specific W.P. Carey students
MGT	513	Mindful Leadership	Provides a transformative experience that aids in developing skills associated with being a mindful leader. Focuses on introducing the concept of mindful leadership and explaining how to use it to achieve personal and professional goals. Then concentrates on using mindful leadership to lead individuals and teams. Specific learning goals include: (1) to enhance understanding of mindful leadership; (2) to improve skills in using mindful leadership to achieve personal goals; (3) to improve skills in using mindful leadership to lead individuals and teams; and (4) to propose a transformative plan aimed at increasing use of mindful leadership.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Prerequisite(s): W.P. Carey graduate student
MGT	520	High-Impact Leadership	Addresses the inherent ambiguity surrounding effective leadership by providing a toolkit of tangible behaviors to ensure leaders create "high impact" in all areas of their professional and personal lives. Emphasizes what high-impact leaders do differently and uniquely to achieve results while also inspiring loyalty in relationships. Covers core topics including building executive maturity and presence, developing and delivering compelling messages, inspiring those around you, building a strong relationship network, establishing credibility, and managing upward relationships. Includes peer dialogue, extensive presentation skills training, and assignments based on students' real-life leadership experiences.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Pre-requisite: W.P. Carey School of Business graduate student; Credit is allowed for only MGT 520 or 591 (High Impact Leadership)
MGT	525	Self-Transformation Through Executive Connections	A key objective of the W. P. Carey Full-Time MBA program is to develop each student's leadership competencies, which are essential competencies as the individual enters the workforce and advances through organizations. During the FT MBA program, each student participates in the Executive Connections program. This program gives each student an opportunity to enhance his or her understanding of key leadership competencies, apply an experiential process of leadership development, and meet one-on-one with an executive coach to deeply explore and reflect on personal leadership competencies and goals for development.	N	LEL	Y	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	0.5-2		Prerequisite(s): WPC MBA degree student; Credit is allowed for only MGT 525 or MGT 591 (Executive Connections)

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MGT	530	Mastering the Art of Influence and Negotiation	Improves students' understanding of and skills in the art of negotiation. For most managers, negotiation is a significant aspect of their day-to-day jobs, not to mention a major element of everyday life. Gives students experience in bargaining and negotiation, as well as provides a foundation in the essential knowledge bases crucial to being an effective negotiator. Emphasizes experiential learning—students spend most of their time participating in exercises and negotiation simulations (including negotiating job offers), as well as discussing negotiation-based cases involving issues that often arise in the workplace. The goal is to provide students with a fundamental understanding of what it takes to be an effective negotiator, as well as several experiences to draw upon in future negotiation situations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Prerequisite(s): W.P. Carey School of Business graduate student; Credit is allowed for only MGT 530 or MGT 591 (Negotiations)
MGT	540	Going Out on Your Own: Entrepreneurship	Capstone case-based course covering all aspects of starting a business: opportunity identification, evaluation, concept development, identifying required resources, acquiring those resources, launching the entity, managing growth, and ultimately, harvesting the enterprise. Revolves around a series of cases, readings and class discussions designed to build a comfort level with understanding and solving problems faced every day, in real life, by a broad spectrum of entrepreneurs at various phases of venture development. Significant emphasis on understanding the valuation and financing of entrepreneurial ventures interwoven through discussions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Prerequisite(s): W.P. Carey School of Business graduate student; ACC 502 with C or better; FIN 502 with C or better; Credit is allowed for only MGT 540 or MGT 591 (Entrepreneurship)
MGT	545	Becoming Leaders Who Matter	Addresses core questions: What does it mean to be a leader who really matters? How can you become such a leader? Today's competitive and complex environment requires leaders who are equipped with not just the functional and technical skills necessary to run a business but, more significantly, the leadership skills that allow the business and the people involved in it to thrive. Provides an opportunity to reexamine thinking about leadership and assess current skills and competencies in this area. Highly interactive learning environment with case analyses, exercises, discussion, guided reflection activities, assessments and group work. Covers topics such as self awareness (motivations, values, and leadership style), developing perspective as leaders, the social context of leadership, the role of emotions in the workplace, using life experiences to extract leadership lessons.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Pre-requisite: W.P. Carey School of Business graduate student; Credit is allowed for only MGT 545 or 594 (Leading w/Authenticity & EI OR Becoming Leaders Who Matter)
MGT	550	Toxic Leadership and Dysfunctional Organizations	Examines origins and impact of bad behavior in the workplace. Identifies and investigates dysfunctional organizational policies and toxic leadership practices. Case studies and consultation reports provide students with detailed accounts of destructive leaders motivated by or responding to greed, questionable ethics, organizational and marketplace pressures, crisis and psychopathology. Students learn best practices for early detection of toxic leadership and organizational dysfunction and strategies for positive intervention and transformation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Pre-requisite: W.P. Carey School of Business graduate student; Credit is allowed for only MGT 550 or 591 (Toxic Leadership and Dysfunctional Organizations)
MGT	559	International Management	Studies international and cross-cultural influences on management processes and development of global leadership capabilities for experienced management professionals.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-3		Pre-requisites: W.P. Carey Graduate student
MGT	565	Business Strategy and Public Policy	Takes a managerial perspective to examine the interface between businesses and their external political environments. Potential changes in public policy can affect current operations and future opportunities. Examines how managers can anticipate and affect the formation, modification and enforcement of public policy in various institutional environments.	N	LEL	Y	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		Prerequisite(s): W.P. Carey MBA Executive Program or W.P. Carey School of Business graduate student; Credit is allowed for only MGT 565 or MGT 591 (Business and Public Policy)
MGT	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	0-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	588	Sources of Competitive Advantage I	Explores the general manager as organizational leader. Focuses on competitive advantage and how each functional area contributes to it.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		Prerequisite(s): MBA degree student
MGT	589	Sources of Competitive Advantage II	Formulation of strategy and policy in the organization, emphasizing the integration of decisions in the functional areas.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Management and Entrepreneurship	2-4		Prerequisite(s): MBA degree student
MGT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	0-12		Pre-requisites: Graduate W.P. Carey students

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MGT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Pre-requisites: MBA degree student
MGT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	0-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management and Entrepreneurship	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MGT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	700	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
MGT	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Management and Entrepreneurship	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MGT	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Management and Entrepreneurship	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	140	Music as Culture	Introduces a range of practical and intellectual challenges presented by encounters with various kinds of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & G	Pre-requisites: Music major
MHL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	201	Media Literacy for Musicians	Instruction in basic Macintosh computer literacy, including generic applications and music-specific programs with hands-on experience.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	CS	
MHL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MHL	339	Undergraduate Bibliography I	Research tools and methods in musicology, concentrating on resources pertinent to the study of music from Antiquity to the Baroque.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): MHL 140; Corequisite(s): MHL 341
MHL	340	Undergraduate Bibliography II	Research tools and methods in musicology, concentrating on resources pertinent to the period 1750-present.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): MHL 140

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MHL	341	Music History I	Western European art music from Antiquity through Baroque. Identification/analysis through listening; application of historical and analytical concepts; research project comprising fresh thesis, detailed musical research, personal reflection, fluent English writing, correct citation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Pre-requisites: Music Education, Music Therapy or BA major: MTC 221 with C or better OR Non-Music Education, Music Therapy or BA major: MTC 223 with C or better
MHL	342	Music History II	Western European, American art music from Classical period to present. Identification/analysis through listening; transfer/application of music/analytical concepts; research project comprising fresh thesis, insightful musical research/reflection, fluent English writing, correct citation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Pre-requisites: Music Education, Music Therapy or BA major: MTC 221 with C or better OR Non-Music Education, Music Therapy or BA major: MTC 223 with C or better
MHL	344	Music in World Cultures	Examines the relations among music, dance, theatre, religion, and social status in Asia, Africa, Oceania, Europe, and the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & G	Prerequisite(s): minimum 42 hours
MHL	363	Survey of Russian Music	Examines music and musical life in Russia, the Soviet Union, and the post-Soviet C.I.S. from the Middle Ages to the present.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Prerequisite(s): Music student; MHL 342 with C or better
MHL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MHL	437	Music in the Baroque Era	Examines music, culture and aesthetics in the 17th and early 18th centuries.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): Music major or minor; minimum 45 hours. Credit is allowed for only MHL 437 or MHL 494 (Topics in Baroque Music) or MHL 494 (Music in the Baroque Era)
MHL	438	Topics in 18th-Century Music	Selected topics exploring the musical styles of the 18th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3	L & H	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with C or better
MHL	439	Topics in 19th-Century Music	Selected topics exploring the musical styles of the 19th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3	L & H	Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with C or better
MHL	440	Topics in 20th-Century Music	Selected topics exploring the musical styles of the 20th century and their cultural contexts.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3	L or HU	Prerequisite(s): Music major; MHL 341 with C or better; MHL 342 with C or better; MTC 223 with C or better
MHL	456	History of Opera	Development of opera from its creation ca. 1600 to present. Emphasis placed on major stylistic developments and representative works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	466	North American Indian Music	Various styles of Indian music in the United States, Canada, and Mexico. Open to Music majors and nonmajors.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	(L or HU) & C	
MHL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MHL	490	Capstone Project I: Undergraduate Thesis Research	Selection of topic and research toward the completion of an undergraduate thesis of no fewer than 50 pages.	N	RSC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): MHL 341; MHL 342
MHL	491	Capstone Project II: Undergraduate Thesis	Completion of an undergraduate thesis in musicology or ethnomusicology of no fewer than 50 pages.	N	RSC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): MHL 490
MHL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MHL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Prerequisite(s): Barrett Honors student
MHL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Music student; MHL 341 with C or better; MHL 342 with C or better; MTC 222 with C or better
MHL	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MHL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7	L	

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MHL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MHL	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	532	Music Bibliography	Major historical and analytical writings; systematic and historical collections of music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Graduate Music student
MHL	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MHL	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisites: Graduate Music student
MHL	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisites: Graduate Music student
MHL	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	632	Applied Musicology	Explores practice-oriented entrepreneurial opportunities and methods in musicology, acquires knowledge and develops skills in community engagement and outreach, explores pathways of professional publication and network building, and participates in organizing curated concert series and scholarly conferences.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): MHL 532
MHL	657	Topics in Symphonic Literature	Examines the evolution of the symphony and symphonic poem from the early classic era through the 19th century, with emphasis on the analysis of selected works.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	668	Introduction to Ethnomusicology	Experiencing theory and methodology by being ethnomusicologists through musical performance, primary writings on fieldwork, career structuring, the history of the discipline, its relationship with historical musicology, and the cultural theories which ethnomusicologists draw on.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	670	Area Studies in Ethnomusicology	Study of the music of a particular culture, country, or area (e.g., music of Mexico, Latin America, China, Africa).	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	675	History of Choral Music and Institutions	Examines the history of choral music through the lens of choral institutions: patronage, education, ritual, performing forces, status (professional vs. amateur), and locale.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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MHL	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	795	Cont Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	N	Z3	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MHL	798	Research Colloquium	Interactive research forum featuring research presentations and discussion among musicology students, faculty and guest speakers from across campus and other institutions. Encourages students to engage in constructive dialogue with their peers as well as with faculty and guest speakers in a collegial environment conducive to exchange and collaboration. Supervised by a faculty panel from the musicology division.	N	RSC	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MSI 601 or 602
MHL	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIC	205	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SG	Prerequisite(s): CHM 101 or 113
MIC	205	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	SG	Prerequisite(s): CHM 101 or 113
MIC	205	Microbiology	Introductory microbiology, emphasizing basic principles of microorganisms (bacteria, protozoa, algae, fungi, and viruses) and the role they play in health, ecology, and applied fields. May not be used for Microbiology credit unless a diagnostic test is passed. Both MIC 205 and MIC 206 required for SG General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SG	Prerequisite(s): CHM 101 or 113

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MIC	206	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit.	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SG	Pre- or corequisite(s): MIC 205 or 220 with C or better if completed
MIC	206	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1	SG	Pre- or corequisite(s): MIC 205 or 220 with C or better if completed
MIC	206	Microbiology Laboratory	Principles and lab techniques used in identifying and handling microorganisms. Both MIC 205 and 206 must be taken to secure SG General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SG	Pre- or corequisite(s): MIC 205 or 220 with C or better if completed
MIC	220	Biology of Microorganisms	Introductory microbiology for students majoring in the life sciences. Detailed study of microbial cells, their structure, genetics, physiology, and taxonomy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 181 or 282; CHM 116
MIC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
MIC	302	Advanced Bacteriology Laboratory	Advanced lab techniques in bacterial growth, physiology, and genetics, with an emphasis on quantitative data and formal lab reports. Both MIC 302 and 401 must be taken to secure L General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2	L	Pre-requisite: MIC 206 with C or better; MIC 220 with C or better
MIC	314	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
MIC	314	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only MIC 314 or SSH 314
MIC	360	Bacterial Physiology	Mechanisms and control of cell metabolism, structures, and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 220 with C or better
MIC	379	Medical Bacteriology	Principles of medical bacteriology with emphasis on bacterial infections, diagnostic testing, clinical symptoms, pathogenesis, and treatments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite(s): MIC 220 with C or better
MIC	380	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 220 with C or better
MIC	380	Medical Parasitology	Parasitic diseases of humans, including life cycle events and clinical manifestations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: MIC 220 with C or better
MIC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	401	Research Paper	Paper of 15 or more pages based on library or lab research in collaboration with a faculty member. Required of all Microbiology majors. Both MIC 302 and 401 must be taken to secure L General Studies credit.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1	L	Prerequisite(s): MIC 206, 220 with C or better; senior standing
MIC	420	Immunology: Molecular and Cellular Foundations	Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 353, BIO 360 or MIC 220 with C or better
MIC	420	Immunology: Molecular and Cellular Foundations	Antibody/antigen interactions, cellular response, cytokines, immunogenetics, immunoregulation, autoimmunity, psychoneuroimmunology research/medical perspectives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: BIO 353, BIO 360 or MIC 220 with C or better
MIC	421	Experimental Immunology	Introduces the basic techniques, methods, and assays used in immunology.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre-requisite: MIC 220, MBB 247, BIO 353 or BIO 360 with C or better
MIC	425	Advanced Immunology	Surveys recent advances in immunology, including lymphocyte membranes, lymphokines/biochemistry, molecular genetics, theoretical immunology, immunoregulation, neuroimmunology, and immunologic diseases.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 420 with C or better
MIC	426	Medical Immunology	Concepts and clinical applications of medical immunology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: BIO 181 (or BIO 188 or MBB 247) and BIO 182 (or BIO 187 or MBB 245) and BIO 353 with C or better
MIC	427	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3	L	Pre-requisite: MIC 420, PSY 325, PSY 425, BIO 353, BIO 462, or BIO 467 with C or better; Credit is allowed for only MIC 427 or PSY 427
MIC	428	Immunophilosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 420, PHI 317, HPS 314, or PHI 428 with C or better; Credit is allowed for only MIC 428 or PHI 428
MIC	441	Bacterial Genetics	Surveys genetic exchange and regulatory processes in bacteria and their viruses. Bacteria and viruses as tools in genetic engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite(s): BIO 340 or MBB 347 with C or better; MIC 220 with C or better
MIC	442	Bacterial Genetics Laboratory	Techniques of mutagenesis, mapping, and strain and genetic library construction.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	1		Pre/Co-requisite: MIC 441

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MIC	443	The Microbial Universe	Diversity and physiology of microorganisms with emphasis on recent advances in the biology of microorganisms of environmental and medical importance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: BIO 353 (LSC 353) with C or better; Pre/Co-requisite: MIC 444 (LSC 445) (with C or better if completed); Credit is allowed for only MIC 205 or 443
MIC	444	The Microbial Universe Laboratory	Techniques used to explore the microbial universe with emphasis on structural, metabolic, genetic, and growth characteristics relevant to the identification and characterization of microorganisms of environmental and medical importance. Not open to students with credit in MIC 206.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1		Pre-requisite: LSC 444 or MIC 443 with C or better or co-enrolled in MIC 443
MIC	445	Techniques in Molecular Biology/Genetics	Molecular genetic principles: plasmid construction, purification, and characterization; PCR; mutagenesis; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): BIO 340 or MBB 347 with C or better; MBB 247 or MIC 302 with C or better; Credit is allowed for only MBB 445 or MIC 445
MIC	446	Techniques in Molecular Biology/Genetics Lab	Molecular genetic techniques; plasmid construction, purification, and characterization; PCR; mutagenesis; hybridization and sequence analysis; protein quantitation; immunologic detection, and electrophoresis.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Life Sciences	2		Pre/Co-requisites: MBB 445 or MIC 445 (with C or better if completed); Credit is allowed for only MBB 446 or MIC 446
MIC	461	Geomicrobiology	Past and present interactions among microbial life, geological materials, and biogeochemical cycles involving carbon, sulfur, phosphate, nitrogen, and metals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
MIC	470	Bacterial Diversity and Systematics	Biology, classification, and enrichment culture of the nonpathogenic bacteria.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisites: MIC 302 with C or better
MIC	475	Astrobiology	Origin, early evolution, distribution, and future of life on Earth and elsewhere in the cosmos.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite with C or better: AST 112 (or BIO 182 or BIO 282 or GLG 102 or SES 122), one 300-level course in AST or BIO or CHM or GLG or MIC or PHY or SES. Credit is allowed for only AST 460 or GLG 460 or MIC 475
MIC	481	Bacterial Pathogenesis	Human host-bacterial interactions in infectious diseases with emphasis on pathogenesis and molecular mechanisms of bacterial virulence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisite: MIC 220 with C or better; MIC 360 or MIC 441 with C or better
MIC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
MIC	485	General Virology	Fundamental principles of viruses, their molecular biology, replication, genetics, and pathogenesis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: MIC 206 with C or better; MIC 220 with C or better
MIC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
MIC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Life Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MIC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
MIC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
MIC	495	Undergraduate Research	Supervised research in biology/microbiology/molecular biosciences and biotechnology/or plant biology.	N	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-3		Pre-requisite: Junior or senior standing
MIC	496	Undergraduate Thesis	Guided research culminating in the preparation of an undergraduate thesis based on supervised research done in this and previous semesters.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): junior or senior standing; Credit is allowed for only BIO 496 or HPS 496 or MBB 496 or MIC 496
MIC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Prerequisite(s): Barrett Honors student
MIC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-7		
MIC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-3		
MIC	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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MIC	501	Foundations in Microbiology	Provides overview of the field of microbiology including: bacterial genetics and physiology, virology and host/pathogen interactions through lectures, reading, presentations and discussion of papers in the field of microbiology and immunology. Students read all papers, participate in class discussions and present papers during the semester.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Life Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only MIC 501 or MIC 591 (Milestones in Microbiology)
MIC	520	Evolution and Ecology of Emerging Infectious Diseases	Applying principles and concepts from Ecology, Evolution, and Epidemiology for studying emerging infectious diseases. Emphasizing the interplay of these areas. Intended for life sciences majors and first year graduate students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only EVO or MIC 520
MIC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MIC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MIS	101	Introduction to the Military I	Overview of mission, organization, and structure of the Army and its role in national defense; discussion of current military issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	102	Introduction to the Military II	Introduces problem-solving methods, critical thinking, decision making, and group cohesion as applied in a military environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		

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MIS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-3		Pre-requisite: Freshman standing; Maximum 25 hours
MIS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	201	Introduction to Leadership Dynamics I	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	202	Introduction to Leadership Dynamics II	Introduces interpersonal dynamics involved in military team operations; theory and application of military leadership principles.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	205	Leader's Training Course	6-week training program emphasizing practical hands-on skills and leadership development. Taken in lieu of MIS 101, 102, 201, 202. Conducted at Fort Knox, Kentucky.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4		
MIS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	301	Advanced Military Science I	Theory and dynamics of the individual soldier and military units in offensive combat operations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3	L	
MIS	302	Advanced Military Science II	Theory and dynamics of military units in defensive combat operations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3	L	
MIS	303	National Advanced Leadership Camp	6-week training program emphasizing leadership development and advanced military skills, including tactics, land navigation, and physical training. Conducted at Fort Lewis, Washington.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	4		
MIS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	401	Advanced Military Science III	Military legal system; preparation and conduct of military training; leadership development; ethics and professionalism of the military officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	402	Advanced Military Science IV	Military correspondence; career planning and personal affairs in service; conduct of training; leadership development; ethics and professionalism of the military officer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3		
MIS	410	American Defense Policy I	Evolution, organization, and execution of U.S. national security policy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3	SB & G & H	
MIS	412	American Defense Policy II	Contemporary problems and analytical issues in the formation and implementation of U.S. national security.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Military Science	3	SB & G & H	
MIS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-12		
MIS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Military Science	1-6	L	Prerequisite(s): Barrett Honors student
MIS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-4		
MIS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Military Science	1-7		
MIS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Military Science	1-3		
MIS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Military Science	0		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-3		
MKT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		
MKT	300	Marketing and Business Performance	The dynamic role of marketing within society and organizations. Emphasizes frameworks and analytical tools that ensure customer focus and drive organizational performance.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Marketing W.P. Carey BA or BS or non-business major with minimum 2.50 ASU GPA and minimum 56 hours; ECN 211, 212, 213, or 214 with C or better; Credit is allowed for only MKT 300 or MKT 301 (Fundamentals of Marketing)

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MKT	302	Applied Marketing Management and Leadership	Market planning, execution, and assessment. Emphasizes decision and communication skills related to market opportunity analyses and marketing program development as a core business function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3	L	Prerequisite(s): W.P. Carey Marketing BS major; ECN 221 or 231 with C or better; MAT 211 with C or better. Pre- or corequisite(s): ACC 241 or 242 or 271 with C or better
MKT	303	Honors Marketing Theory and Practice	Covers basic applications of marketing concepts to problems that are common to marketing managers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3	L	Prerequisite(s): W.P. Carey Honors student; ECN 221 or 231 with C or better; MAT 211 with C or better; Pre- or corequisite(s): ACC 241 or 242 or 271 with C or better if completed; Credit is allowed for only MKT 300 or MKT 302 or MKT 303
MKT	311	Sports Business	Focuses attention on components ranging from professional sports to collegiate sports, as well as sports-related products.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Carey Sports and Media Studies BA major or W.P. Carey BS major obtaining Certificate in Sports Business; minimum 56 hours; Pre- or corequisite(s): MKT 300, 302, or 303 with C or better
MKT	352	Marketing Research	Knowledge and skills to make intelligent decisions in the design, evaluation and application of marketing research and market data.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3	L	Prerequisite(s): W. P. Carey Marketing student; MKT 302 or MKT 303 with C or better
MKT	365	Advertising Management	Advertising as a communications tool in marketing and business. Consideration of market segmentation and positioning, creative strategy, media management, and metrics of effectiveness.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BS student; MKT 300, 302 or 303 with C or better
MKT	370	Professional Sales and Relationship Management	Investigate the vital role of sales, its relationship to other functions within the firm, and its impact on customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): MKT 300 or 302 or 303 with C or better; W.P. Carey BA or BS major, or non-business major with minimum 2.50 ASU GPA and minimum 2.50 ASU business GPA and minimum 56 hours
MKT	390	Essentials of Marketing	Focuses on the nature and processes of marketing with an emphasis on practical application. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business student; Minimum ASU cumulative GPA of 2.00; Minimum 56 hours OR Non-degree OR be a Graduate student (degree seeking or nondegree seeking)
MKT	391	Essentials of Selling	Focuses on the selling process and its practical applications within consumer and business markets. Not open to business majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-business student, and minimum ASU cumulative GPA of 2.00, and minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student
MKT	392	Essentials of Business Marketing	Provides the tools and specialized knowledge for developing and executing marketing strategy in the business-to-business market. Covers how to identify forces that drive buying behavior in organizations, measure market opportunity, identify profitable segments and develop strategy, particularly for turbulent, high-technology markets.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business major; Minimum 2.00 ASU cumulative GPA; Minimum 56 hours; MKT 390 with C or better; or Non-degree seeking undergraduate or Degree seeking or Non-degree seeking graduate student
MKT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): Non-business student, and minimum cumulative GPA of 2.00, and minimum 56 hours OR be a Non-degree student with minimum 2.0 ASU cum GPA OR be a graduate student

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MKT	395	Essentials of Advertising and Marketing Communication	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BA major or non-business major; minimum 2.00 GPA; minimum 56 hours, OR non-degree student with minimum 2.0 GPA OR graduate student; Credit is allowed for only BUA 382 or MKT 395
MKT	396	Essentials of Services Marketing	Focuses on challenges of managing service brands and delivering quality service to customers across industry sectors. Emphasizes skills and knowledge needed to implement quality service and service strategies, frameworks for customer-focused management, and how to increase customer satisfaction and retention through service strategies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business major; Minimum 2.00 ASU cumulative GPA; Minimum 56 hours; MKT 390 with C or better; OR BA Business(Retail Management) major OR Nondegree-seeking student; OR Graduate student (degree seeking or nondegree seeking)
MKT	397	Essentials of Global Marketing	Introduces the concepts of globalization in markets and gives an appreciation and understanding of the differences between marketing in the student's home country and marketing globally. The rapid adoption of technology has fundamentally changed the dynamics of marketing and created new competitive paradigms that must be understood for firms to be successful.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): Non-Business major; Minimum 2.00 ASU cumulative GPA; Minimum 56 hours; MKT 390 with C or better; or Non-degree seeking undergraduate or Degree seeking or Non-degree seeking graduate student
MKT	398	Essentials of Sports Business	Introduces the concepts of sports business. Builds knowledge, skills and understanding of the fundamentals of sports business. Develops an appreciation for and understanding of the multiple stakeholders and diverse interests in and around sports business, and how they impact sports business practice and performance.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): non-Business major; minimum 2.00 ASU cumulative GPA; minimum 56 hours; MKT 390 with C or better, OR non-degree seeking undergraduate, or degree seeking or non-degree seeking graduate student
MKT	402	Consumer Behavior	Applies behavioral concepts in the analysis of consumer behavior and the use of behavioral analysis in marketing strategy formulation.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W. P. Carey Marketing student; MKT 352 with C or better
MKT	410	Sales Management	Constructive investigation of selling processes, their application in business and consumer contexts, and management of the sales function.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W. P. Carey BA or BS major; MKT 300, 302, or 303 with C or better
MKT	420	Retail Management	The role of marketing in retailing and retail performance. Challenges and processes of retail management across various institutions.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BA Business (Retail Management) major; MKT 300 or 302 or 303 with C or better
MKT	421	Fan Behavior and Sports Marketing	Focuses on what it means to be a consumer in a sports marketing context society and what, as a marketer, you need to know to develop, evaluate and implement effective marketing strategies for fans.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey Sports and Media Studies BA major; MKT 300, 302, or 303 with C or better; MKT 311 with C or better
MKT	425	Global Marketing Management	Analyzes marketing strategies and practices developed by firms to compete in global markets and adapt to changing international environments.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3	G	Prerequisite(s): W.P. Carey BA or BS major, or non-business major with minimum 2.50 ASU cum GPA and minimum 2.50 ASU business GPA and 56 earned hours; MKT 300 or 302 or 303 with C or better
MKT	430	Sports Business	Builds knowledge, skills, and understanding of sports business; exposure to leading-edge thought, methods, and practices in sports business.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W. P. Carey BS student, must have completed MKT 300, MKT 302 or MKT 303 with a grade of C or better.
MKT	431	Sports Events and Facility Management	Project-based course that encompasses the administration, coordination and evaluation of any type of event related to sports.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey Sports and Media Studies BA major or W.P. Carey BS major obtaining Certificate in Sports Business; MKT 300, 302, or 303 with C or better; MKT 311 with C or better

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MKT	435	Entrepreneurial Marketing	Identifies and evaluates marketing opportunities; motivates an appreciation of entrepreneurial marketing and its different environmental contexts for general marketing principles.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey BA or BS student; MKT 300, MKT 302, or MKT 303 with grade of C
MKT	440	Creating Digital Experiences	Marketing is about creating meaningful experiences between brands and the people they serve. Designed to jump start learning for any student interested in marketing goods and services in contemporary society, this course covers digital ideation and planning as well as digital media, all with a focus on practical application.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	1-3		Prerequisite(s): W.P. Carey major; MKT 302 (or 303) with C or better; Credit is allowed for only MKT 440 or 494 (Digital Marketing in Practice)
MKT	441	Sports Revenue Generation	Focuses on selling and how to create, maintain and build relationships within the sports context. Students gain knowledge and develop skills in choosing a sales career including attributes of a sales person, sales call preparation, value propositions, creating value for the client, team selling, questioning and listening techniques, negotiating, persuasion and closing techniques.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey Sports and Media Studies BA major or W.P. Carey BS major obtaining Certificate in Sports Business; MKT 300, 302, or 303 with C or better; MKT 311 with C or better
MKT	442	Services Marketing Strategy	Concepts, skills, and strategies for addressing the imperative marketing challenges and opportunities involving service.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W.P. Carey Marketing major; Minimum 2.50 GPA; Minimum 56 earned hours; MKT 302 or MKT 303 AND MKT 352 with C or better; Pre/Co-requisite: MKT 402
MKT	450	Social Media and Content Marketing	Centers on how to effectively use social media and content marketing to build relationships between a company and its customers. Students learn to create content, how to deliver content through social media and community management, as well as how to optimize content for maximum effectiveness.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	1-3		Prerequisite(s): W.P. Carey Marketing major; MKT 302 (or 303) with C or better; Credit is allowed for only MKT 450 or 494 (Social Media Mktg and Com Mgmt)
MKT	452	Business-to-Business Marketing Strategy	Concepts, skills, and strategies for performing competitively in the business market where organizations rather than households are the customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): MKT 302 (or MKT 303), 352 with C or better; W.P. Carey Marketing major with minimum 2.50 ASU GPA, minimum 2.50 ASU business GPA and minimum 56 hours. Pre- or corequisite(s): MKT 402
MKT	455	Brand Management	Focuses on understanding brand management and the concepts associated with building brand equity and managing brand identity and positioning. Students learn how firms create a competitive advantage by incorporating consumer insight into an effective branding strategy. In addition, students gain an understanding of the role of branding on product portfolio management. Heavily features case discussion, projects and real brands. Applies brand management knowledge to an actual branding strategy project for a small firm.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey Marketing major; MKT 302 (or 303) with C or better; Credit is allowed for only MKT 455 or 494 (Brand Management)
MKT	460	Sports Revenue Generation	Focuses on providing a sophisticated understanding of revenue generation in the context of sports. Students gain knowledge of key marketing, management and administrative functions that play a critical role in revenue-generation strategies.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W.P. Carey BS major; MKT 300 (or 302 or 303) with C or better
MKT	462	Competitive Marketing Strategy	Strategy formulation and decision making by the marketing executive. Integrates marketing programs and considers competitive marketing issues.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Pre-requisites: W.P. Carey Marketing student; MKT 302 with C or better (or MKT 303 with C or better), MKT 352 with C or better; Pre/Co-requisite: MKT 402 with C or better if completed
MKT	465	Projects in Sports Business	Focuses on providing students with an innovative opportunity to work directly with sports business industry professionals to address real-world and real-time issues faced by these organizations. Students develop an appreciation for and understanding of the multiple stakeholders and diverse interests in and around sports business, and of their constantly changing and interactive impact on sports business practice and performance.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): W.P. Carey Sports and Media Studies BA major or W.P. Carey BS major; MKT 300 or 302 or 303 with C or better; MKT 311 or 430 with C or better
MKT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): W.P. Carey BA or BS major; MKT 300, 302, or 303 with B- or better; minimum 3.00 GPA
MKT	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MKT	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	W.P. Carey School of Business	Department of Marketing	1-6	L	Prerequisite(s): Barrett Honors student
MKT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W. P. Carey BS or BA student; MKT 300 (or 302 or 303) with C or better
MKT	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	IND	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-6		Prerequisite(s): Barrett Honors student
MKT	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-7		Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours
MKT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-3		Pre-requisites: Business students with professional status or non-business students with a minimum cumulative GPA of 2.50 and 56 earned hours
MKT	502	Create and Deliver Customer Value: Marketing Management	Managing the marketing function; market and environmental analysis; marketing planning, strategy, and control concepts. Development and management of marketing programs.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): specific W.P. Carey graduate students only
MKT	520	Co-Creating Value and Innovating Through Services	Focuses on challenges of managing service brands and delivering quality service to customers across industry sectors. Emphasizes skills and knowledge needed to implement quality service and service strategies, frameworks for customer-focused management, and how to increase customer satisfaction and retention through service strategies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	525	Excel in Services	Focuses on challenges of managing services and delivering quality service to customers. The attraction, retention, and building of strong customer relationships through quality service (and services) are at the heart of the course content. The course is equally applicable to organizations whose core product is service and to organizations that depend on services for competitive.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	530	Creativity and Innovation	Multidisciplinary approaches to theories and practices of inspiring and managing innovation and change for sustainable competitive advantage. Focuses on both the student's individual creativity and the planning and implementation of innovations, technologies, processes, or systems that pose significant uncertainty. Places special attention on the processes surrounding understanding the consumer, ideation and implementation. Inclusive in this are methods such as environmental scanning, scenario planning, contextual research, storytelling, concept testing and prototyping. Also includes the many aspects of the organization's structure and culture regarding innovation and creativity.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	535	Global Marketing Strategy	Introduces the concepts of globalization in markets and gives an appreciation and understanding of the differences between marketing in a home country and marketing globally.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	540	Branding and Consumer Markets	Provides an intensive examination of factors that drive consumer behavior. Covers topics such as understanding factors contributing to a superior value proposition, identifying elements associated with the stability of the existing alternative, specifying components linked to reducing the level of uncertainty associated with the new alternative; articulating independent influences (e.g., regulatory and social) operating in a particular change context, and comprehending biases that exist in the search and decision making process. Also places additional emphasis on brand development as well as on the role that social media assumes in the change process.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	545	Entrepreneurial Marketing	Introduces the process of developing a plan for starting a business and presenting that plan to potential investors in order to obtain financing. Covers the purposes of a business plan, the varying objectives of different types of investors or financial institutions, and how they complement or conflict with the interests of an entrepreneur. Topics include proprietary positioning, types of organization, and differing management objectives.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	550	Creating the Future: Product and Service Innovation	Intimately familiarizes students with the front end of the new product design process and provides concrete tools for determining strategies for developing new products based on input from customers.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	555	B2B: Capturing Value Through Products, Services and Customer Solutions	Provides the tools and specialized knowledge for developing and executing marketing strategy in the business-to-business market. Covers how to identify forces that drive buying behavior in organizations, measure market opportunity, identify profitable segments, and develop strategy, particularly for turbulent, high-technology markets.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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MKT	560	Customer Relationship Management	Focuses on the tools, metrics, and systems used to measure and manage customer relationships. Key to the development and use of sound customer metrics are market research skills including competencies in research design, sampling, measurement, data collection, and data analysis. Covers how to use types of data such as surveys, purchased data, transactional data, the Web, and social media to measure and manage customer relationships.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	570	Advanced Marketing Strategy	Covers strategic marketing concepts (portfolio management and resource allocation, market segmentation and positioning, competitive advantage); marketing tools (perceptual mapping, conjoint analysis, portfolio analysis, regression); and market and competitive analysis (analyze changes in market attractiveness, evaluate different courses of action, plan long term).	N	LEC	N	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	GNA	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W.P. Carey MBA Full Time student.
MKT	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: Global Management Graduate student; MKT 502 with C or better
MKT	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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MKT	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Marketing	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
MKT	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Marketing	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	W.P. Carey School of Business	Department of Marketing	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MKT	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Marketing	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
MLS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-7	L	
MLS	501	Writing about Social Issues: Culture, Gender, Society, and Well-Being in the Southwest	Reading and discussion of nonfiction writing on social issues that integrate cultural, gender, and societal issues that affect the well-being of urban communities with special attention to the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3		Pre-requisite: Master of Liberal Studies student
MLS	502	Religion, Culture, and Health: Where Cultures Intersect	Focuses on how cultural and religious notions may come into conflict around issues of health. Contrasts two societies, not necessarily contemporary, from different continents.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3		Pre-requisite: Master of Liberal Studies student
MLS	503	Ethics, Science, and Culture	Introduces ethics related to the practice of art, science, and medical practice in modern and premodern society.	N	LEC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3		Pre-requisite: Master of Liberal Studies student
MLS	504	Film Analysis	Introduce formal and cultural issues important to understanding movies.	N	REC	N	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	3		Pre-requisite: Master of Liberal Studies student OR MAS in American Media and Popular Culture student. Credit is allowed for only FMS or MLS 504
MLS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-12		Pre-requisite: Master of Liberal Studies student
MLS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MLS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Dean, College of Liberal Arts and Sciences	1-4		Pre-requisite: Master of Liberal Studies student
MND	101	First-Year Chinese I	Beginning course in Modern Standard Chinese designed for students who have little or no previous background in the language. Adopts different pedagogical approaches such as group practice, role play and situational dialogues to help students acquire basic skills in listening, speaking, reading and writing in Modern Standard Chinese. While linguistic elements are the focus of this course, also includes cultural information that go along with language use.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	5		Credit is allowed for only CHI 101 or MND 101
MND	102	First-Year Chinese II	Beginning course in Modern Standard Chinese designed for students who have completed MND 101. Different pedagogical approaches such as group practice, role play and situational dialogues are designed to help students acquire basic skills in listening, speaking, reading and writing in Modern Standard Chinese. While linguistic elements are the focus of this course, also includes cultural information with application to global business communication.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	5		Prerequisite(s): MND 101; Credit is allowed for only CHI 102 or MND 102
MND	201	Second-Year Chinese I	First part of a two-semester course of intermediate Modern Standard Chinese for students who have successfully completed First-Year Chinese I and II. Adopts different pedagogical approaches such as group practice, role play and situational dialogues to help students acquire basic skills in listening, speaking, reading and writing. While linguistic elements are the focus of this course, also includes cultural information that accompanies language use along with a deep emphasis on global work situations.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	5		Prerequisite(s): MND 101; MND 102; Credit is allowed for only CHI 201 or MND 201

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MND	202	Second-Year Chinese II	Second part of a two-semester course of intermediate Modern Standard Chinese for students who have successfully completed three semesters of Modern Standard Chinese at the college level or equivalent. Builds on the vocabulary introduced in the first three courses, with deeper emphasis on global work situations. Adopts different pedagogical approaches such as group practice, role play and situational dialogues to help students acquire basic skills in listening, speaking, reading and writing Modern Standard Chinese. While oral proficiency is the focus of this course, also includes cultural information that accompanies language use in the teaching as well.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	5		Prerequisite(s): MND 101; MND 102; MND 201; Credit is allowed for only CHI 202 or MND 202
MSA	101	Elementary Arabic I	Introductory Arabic language focuses on pronunciation of Arabic sounds and basic writing skills. Students learn Arabic culture through standard greetings, common phrases, vocabulary and performance of appropriate social behaviors common in the Arab world which prepares students for work in global organizations.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Credit is allowed for only ARB 101 or MSA 101
MSA	102	Elementary Arabic II	Continuation of Elementary Arabic I, adopts different pedagogical approaches such as group practice, role play and situational dialogues to help increase listening, speaking, reading and writing skills. While linguistic elements are the focus, cultural and intellectual contexts provide a medium for understanding the Arab-Islamic world and the global business setting.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Prerequisite(s): MSA 101; Credit is allowed for only ARB 102 or MSA 102
MSA	201	Intermediate Arabic I	Directed to students who have completed the first two courses of college-level Arabic. Students reach an advanced level of oral proficiency through concentrating on new verbs, vocabulary and unique structures of sentences which enable them to master a highly sophisticated usage of the language.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Prerequisite(s): MSA 101; MSA 102; Credit is allowed for only ARB 201 or MSA 201
MSA	202	Intermediate Arabic II	Provides advanced ability to understand, read, write and communicate in Arabic and is directed to students who have completed the first two Arabic elementary courses and the first intermediate course. Focuses on transitive, intransitive and passive and active verbs which enable students to express themselves in highly sophisticated Arabic styles and discourse. Students study how Arabic people perceive and communicate important cultural, historical and economic themes as well as major historical figures and their contributions to Arabic society.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Prerequisite(s): MSA 101; MSA 102; MSA 201; Credit is allowed for only ARB 202 or MSA 202
MSE	100	Introduction of Materials Engineering	Engineering design process, concepts about materials, and the materials engineering profession, including teaming, computer models, communication, and societal impact. A basic understanding of high school algebra, computing, and physics are necessary to be successful in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	2		Pre-requisites: Undergraduate Engineering or University College student
MSE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-3		
MSE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
MSE	208	Patterns in Nature	Examines topics from optics to analytical techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	4	SQ	Credit is allowed for only MSE 208 or PHS 208
MSE	211	Introduction to Mechanics of Materials	Topics include stress, strain, elasticity, axial loading, torsion, bending, yield criteria, fracture, general energy methods and Castigliano's Theorem.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: PHY 121; PHY 122; MSE 250 with a C or better
MSE	215	Materials Synthesis	Introduces contemporary techniques for synthesizing both traditional and novel materials and the corresponding correlation to synthesized materials properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre/Co-requisite: MSE 250 with C or better if completed
MSE	250	Structure and Properties of Materials	Basic concepts of material structure and its relation to properties. Application to engineering problems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): CHM 114 or 113 with Pre- or corequisite(s): CHM 116 ** DO NOT TOUCH REQUIREMENTS W/OUT SUPERVISOR APPROVAL!**
MSE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
MSE	301	Materials and Civilization	Focuses on exploring how materials technology can change people's lives. Traces how societies evolved based on the access to materials and the ability to exploit them and trade them among nations. Studies the role of materials in a variety of contexts such as food, art, warfare, transportation, medicine, information and energy from the Stone Age through the industrial revolution to the modern world. Analyzes the connection between the dramatic developments in civilization and advances in materials through the lens of structure, properties and processing of materials.	N	LEC	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisites: Minimum Junior standing; Credit is allowed for only MSE 301 or 394 (Materials and Civilization)
MSE	308	Sensing the World	Project-oriented science course develops critical thinking and technical skill using Internet modules on the five senses.	N	LEL	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	4	SQ	Pre-requisite: MSE 208

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MSE	330	Thermodynamics of Materials	Principles of statistical mechanics, statistical thermodynamics of single crystals, solutions, phase equilibrium, free energy of reactions, free electron theory, and thermodynamics of defects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate or Materials minor student, OR other majors with minimum 3.00 GPA; MSE 250 or ECE 350
MSE	335	Materials Kinetics	Introduces kinetics in processing of materials as illustrated through real-world materials processing examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or students with approved Materials minor; MSE 330
MSE	355	Structure and Defects	Intermediate-level grounding in crystallography, crystal defects, surfaces and interfaces.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or students with approved Materials minor; MSE 250 with a C or better; Pre- or corequisite(s): MAT 343 OR Fulton Engineering graduate student
MSE	356	Structures, Properties, and Defects Lab	Lab experiments correlating atomic structure, defects and microstructure of processed metals, ceramics polymers and composites to their mechanical and thermal properties.	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Pre/Co-requisite: MSE 355
MSE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
MSE	415	Mathematical and Computer Methods in Materials	Mathematical, computational, and statistical methods and computer programming used to model materials science phenomena and materials engineering applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3	CS	Prerequisite(s): Fulton Engineering undergraduate student or Materials minor, OR other majors with minimum 3.00 GPA; MAT 274 or 275 with C or better; MSE 250 with C or better; Credit is allowed for only MSE 415 or MSE 598 (Math and Comp Mthds in Matrls)
MSE	420	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, deformation, and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 355 OR Fulton Engineering graduate student; Credit is allowed for only MSE 420 or MSE 514
MSE	421	Physical Metallurgy Laboratory	Focuses on analysis of microstructure of metals and alloys and includes correlation with mechanical properties to some extent.	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Pre/Co-requisite: MSE 420
MSE	440	Mechanical Behavior of Materials	Effects of environmental and microstructural variables of mechanical properties, including plastic deformation, fatigue, creep and brittle fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 355; Credit is allowed for only MSE 440 or MSE 516
MSE	442	Fatigue, Fracture, and Creep of Materials	Relationship between microstructure and fracture; fatigue and creep properties of materials. Environmental effects and recent developments. Current theories and experimental results.	N	LEC	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 250 with C or better; Credit is allowed for only MSE 442 or MSE 494 (Fatigue, Fracture, Creep) or MSE 540
MSE	450	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; PHY 131; MSE 355; Credit is allowed for only MSE 450 or MSE 510
MSE	451	Introduction to Materials Characterization Lab	Lab for materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES.	N	LAB	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; Corequisite(s): MSE 450

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MSE	458	Introduction to Electronic, Magnetic, and Optical Properties	Introduces electrical, optical, and magnetic properties of solids and microstructure effects as examined through materials-based examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 415; PHY 241 or 361; Credit is allowed for only MSE 458 or MSE 515 or MSE 598 (Intro to Electronic, Magnetic & Optical Properties)
MSE	460	Nanomaterials in Energy Production and Storage	Emphasizes the relationship among fundamental materials properties, chemical and energy transformation, as well as energy storage. Applications include the role of materials for photovoltaics, nanocatalysts, batteries, and fuel cells. Stresses fundamental principles and charge transfer processes in nanostructured materials in addressing energy needs.	N	LEC	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 250; Credit is allowed for only MSE 460 or MSE 494 (Nanomat. In Energy Production) or MSE 560 or MSE 598 (Nanomat. In Energy Production)
MSE	470	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): FSE undergrad or Materials minor; With C or better: CEE 213, MAE 213, or MSE 211; MAT 242, 342, or 343; MSE 250 or Aerospace major with MAE 325 (394); Credit is allowed for only MAE 455, 513, 598 (Polymers and Composites), MSE 470 or 513
MSE	471	Introduction to Ceramics	Principles of structure and property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 355
MSE	475	Fundamentals of Microelectronics Packaging	Multidisciplinary foundation course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 250 with C or better; Credit is allowed for only MSE 475 or MSE 518 or EEE 518 or MAE 518 or CHE 518
MSE	476	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering undergraduate student or Materials minor; MSE 250 with C or better; Credit is allowed for only MSE 476 or MSE 519
MSE	482	Materials Engineering Design	Principles of the design process. Feasibility and optimization. Manufacturing processes, materials selection, failure analysis, and economics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3	L	Prerequisite(s): Fulton Engineering undergraduate student; MSE 420 OR Materials minor, Chemistry, Engineering, or Physics major; MSE 355 and 356; minimum 87 hours; Pre- or corequisite(s): MSE 470 and 471 OR Fulton Engineering graduate student
MSE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
MSE	489	Capstone Design Project I	Covers how to plan an open-ended design project, including experience with technical writing and technical presentations. Both MSE 489 & 490 must be taken to secure L General Studies designation.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1	L	Co-requisite: MSE 482
MSE	490	Capstone Design Project II	Students learn how to conduct an open-ended design project, including experience with technical writing and technical presentations. Both MSE 489 and 490 must be taken to secure L General Studies designation.	N	RSC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	2	L	Prerequisite(s): MSE 489
MSE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-6		Prerequisite(s): Barrett Honors student
MSE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-6	L	Prerequisite(s): Barrett Honors student

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MSE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		Prerequisite(s): Fulton Engineering undergraduate student
MSE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-7		Prerequisite(s): Fulton Engineering undergraduate or graduate student
MSE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-3		
MSE	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	501	Linear Algebra in Engineering	Development and solution of systems of linear algebraic equations. Applications from mechanical, structural, and electrical fields of engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): graduate Engineering major except MS Electrical Engineering, MS Electrical Engineering (AME), MSE Electrical Engineering, PhD Electrical Engineering, or PhD Electrical Engineering (AME). Credit is allowed for only MAE 501 or MSE 501
MSE	502	Partial Differential Equations	Development and solution of partial differential equations in engineering. Applications in solid mechanics, vibrations, and heat transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MAE or MSE 502
MSE	510	Introduction to Materials Characterization	Introduces materials characterization techniques for analysis of thin films and bulk materials by TEM, SEM, XRD, XPS, and AES.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 450 or 510
MSE	513	Polymers and Composites	Relationship among chemistry, structure, and properties of engineering polymers. Design, properties, and behavior of fiber composite systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering or Science & Engr of Materials student; Credit is allowed for only MAE or MSE 513
MSE	514	Physical Metallurgy	Crystal structure and defects. Phase diagrams, metallography, solidification and casting, and deformation and annealing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 420 or 514
MSE	515	Introduction to Electronic, Magnetic, and Optical Properties	Electrical, optical and magnetic properties of solids and microstructure effects as examined through materials-based examples.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Graduate Engineering major; Credit is allowed for only MSE 515 or 598 (Intro to Electronic, Magnetic & Optical Properties)
MSE	516	Mechanical Behavior of Materials	Effects of environmental and microstructural variables of mechanical properties, including plastic deformation, fatigue, creep and brittle fracture.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): graduate Engineering or Science & Engr of Materials student; Credit is allowed for only MSE 440 or MSE 516
MSE	517	Introduction to Ceramics	Principles of structure, property relations in ceramic materials. Processing techniques. Applications in mechanical, electronic, and superconducting systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	519	Growth and Processing of Semiconductors	Briefly introduces semiconducting materials and emphasizes the characteristics of defects in semiconductors and their influence on electronic properties. Covers principles of growth of bulk crystals, epitaxial growth, oxidation, diffusion, ion implantation, and metallization. Discusses the introduction of defects during growth and processing of semiconductors and their influence on device behavior.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering student; Credit is allowed for only MSE 476 or 519
MSE	523	Structural and Mechanical Properties of Materials	Designed for first-year PhD students in the School of Materials. Topics include crystallography theory, tensor properties of materials, elasticity, crystal defects, dislocation theory, plasticity, fracture, fatigue, and creep.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
MSE	524	Advanced Thermodynamics	Equilibrium thermodynamics. Chemical reactions, phase equilibria, and stability in multicomponent systems. Aqueous solutions and electrochemistry. Introduces statistical thermodynamics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only CHM 541 or MSE 524

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MSE	526	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only MSE 526 or NAN 511 or PHY 511
MSE	527	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; MSE 526; Credit is allowed for only PHY 482 or PHY 512 or NAN 512 or MSE 527
MSE	540	Fracture, Fatigue, and Creep	Relationship between microstructure and fracture; fatigue and creep properties of materials. Environmental effects and recent developments. Current theories and experimental results.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisites: Graduate Engineering student; Credit is allowed for only MSE 442, 494 (Fatigue, Fracture, Creep) or 540
MSE	544	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only CHM 544 or MSE 544 or NAN 544 or PHY 444 or PHY 544
MSE	546	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only NAN 546 or MSE 546 or PHY 546
MSE	548	Fundamentals of Microelectronics Packaging	Multidisciplinary course in addressing electrical, thermal, materials, chemical, manufacturing, and reliability problems in packaging.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): graduate Fulton Engineering student. Credit is allowed for only CHE 518 or EEE 518 or MAE 518 or MSE 475 or MSE 548
MSE	550	Advanced Materials Characterization	Analytical instrumentation for characterization of materials; SEM, SIMS, Auger, analytical TEM, and other advanced research techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Pre-requisite: Graduate Engineering OR Science and Engineering of Materials student
MSE	552	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only MSE 552 or NAN 552 or PHY 552 or SEM 552
MSE	553	Electron Microscopy Laboratory I	Lab support for MSE 552.	N	LAB	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Corequisite(s): MSE 552 or PHY 552; Credit is allowed for only MSE 553 or PHY 553
MSE	554	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent-beam diffraction, and electron holography. Novel developments and applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only MSE 554 or PHY 554
MSE	555	Electron Microscopy Laboratory II	Lab support for MSE 554.	N	LAB	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student
MSE	560	Nanomaterials in Energy Production and Storage	Emphasizes the relationship among fundamental materials properties, chemical and energy transformation, as well as energy storage. Applications include the role of materials for photovoltaics, nanocatalysts, batteries, and fuel cells. Stresses fundamental principles and charge transfer processes in nanostructured materials in addressing energy needs.	N	LEC	N	GNA	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): graduate Chemistry, Engineering or Physics major. Credit is allowed for only MSE 460 or MSE 494 (Nanomaterials In Energy Production and Storage) or MSE 560 or MSE 598 (Nanomaterials In Energy Production and Storage) or NAN 560
MSE	561	Phase Transformations, Kinetics, and Diffusion in Solids	Hetero/homogeneous diffusion-controlled transformations, order-disorder transformations, and shear martensitic) athermal transformations in solids. Courses in advanced thermodynamics and structure and properties of materials are strongly recommended in preparation for this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MSE	565	Structural Materials in Nuclear Power Systems	Provides an overview of reactor systems and discusses the structural materials used in reactor components (e.g., fuel/core, wall/blanket, heat exchanger, and steam turbine materials). Discusses design considerations and materials degradation processes that occur in service. Emphasizes the effect of radiation damage on materials properties. Reviews reactor systems, including fission- (e.g., PWR, LWR, BWR, LMFBR) and fusion-based reactors.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): graduate Engineering major. Credit is allowed for only MAE 494 (Structural Materials in Nuclear Power Systems) or MSE 494 (Structural Materials in Nuclear Power Systems) or MSE 565
MSE	571	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples from physics, chemistry and nanoscience.	N	LEC	N	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	3		Prerequisite(s): Fulton Engineering graduate student; Credit is allowed for only MSE 571 or NAN 571 or PHY 571
MSE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
MSE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		Pre-requisite: Graduate Engineering student OR Science & Engr of Materials student
MSE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisite: Materials & Science Engineering Masters student
MSE	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	SEM	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student
MSE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Prerequisite(s): Fulton Engineering graduate student

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MSE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		Pre-requisite: Materials Science & Engineering PhD student
MSE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		Prerequisite(s): Fulton Engineering graduate student
MSE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-15		Pre-requisite: Materials Science & Engineering PhD student
MSI	601	Contemporary Topics in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from the arts and other disciplines that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): doctoral Music students
MSI	602	Current Issues in Music Research	Required for all PhD in Music students. Content includes readings and discussions of topics drawn from current public policies, events, and popular culture that impact and interact with music, music practices, and music research. Requires literature review or research paper.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): doctoral Music students
MSI	755	Historical Research in Music	Required for all PhD in Music students. Knowledge and insights related to conducting historical research in music. Includes development of a mini-proposal for a dissertation on the history of music education, or draft of a historical research paper suitable for presentation or publication.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): doctoral Music students
MTC	123	Beginning Composition	Intended for freshmen and sophomores in the composition concentration. Introduces composing. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Theory and Composition student
MTC	125	Basic Music Theory	Notation, scales, keys, modes, intervals, chords, basic part writing and composition. Development of related aural skills through sight-singing and dictation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student
MTC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	221	Music Theory: 18th Century	Styles, techniques, and idioms of 18th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 125 with C or better
MTC	222	Music Theory: 19th Century	Styles, techniques, and idioms of 19th-century music; emphasis on analysis, composition (part writing), and related aural skills, with applications for performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 221 with C or better
MTC	223	Music Theory: 20th Century	Styles, techniques, and idioms of 20th-century music; emphasizes innovative treatments of musical elements, analysis, and composition; related aural skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 222 with C or better
MTC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MTC	315	Modern Arranging I	Analysis of scores and recordings, application of orchestration and four and five-part harmonization techniques frequently used in arranging for the contemporary jazz ensembles and studio orchestra.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MUP 236 with C or better
MTC	316	Modern Arranging II	A continuation of MTC 315, analysis of scores and recordings, application and creation of new arrangements for contemporary jazz ensembles and/or studio orchestra.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Bachelor of Music student; MTC 315 with C or better
MTC	320	Modal Counterpoint	Counterpoint based on 16th-century vocal polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MTC 221 with C or better
MTC	321	Tonal Counterpoint	Counterpoint based on 18th-century polyphonic style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MTC 221 with C or better
MTC	323	Composition	Writing music compositions, with emphasis on basic techniques and smaller structures. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Prerequisite(s): MTC 123 with C or better OR BMUS Theory and Composition (Composition) or BMUS Theory and Composition (Theory) major with minimum 55 hours
MTC	327	Intermediate form and Analysis	Organizing elements in the most important contrapuntal and homophonic musical forms from the Renaissance through the 19th century.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 222 with C or better
MTC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	422	Musical Acoustics	Properties of sound and tone. Harmonic series, instruments, the ear, auditorium acoustics, and the reproduction of sound. Assumes a thorough knowledge of musical notation, intervals, scales, and harmony, or 2 years of music theory.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; Passed audition

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MTC	425	Studies in 20th-Century Theory	Continued development of analytical techniques and aural skill, with an examination of theoretical systems applicable to 20th-century music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 223 with C or better
MTC	428	Advanced form and Analysis	Organizing principles of the large forms of musical composition in the 19th and 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music student; MTC 223 with C or better
MTC	429	Canon and Fugue	Writing of canons and fugues in tonal style.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MTC 321 with C or better
MTC	430	20th-Century Counterpoint	Counterpoint studies utilizing 20th-century idioms.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MTC 223 with C or better
MTC	433	Orchestration	Studies scoring music for full and chamber orchestras; examines individual orchestral instruments (characteristics and performance techniques). Requires a working knowledge of a computer music notation program.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): Music major
MTC	436	Electronic Studio Techniques I	The study of computer music systems emphasizing advanced audio synthesis and resynthesis as well as their application to professional compositional environments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: MTC 223
MTC	437	Electronic Studio Techniques II	Principles of digital electronic music systems and their applications in the composition of electronic music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		
MTC	440	Jazz Theory and Ear Training	Advanced study of jazz harmonic systems. Daily oral drills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		
MTC	441	Jazz Composition	Creative writing in the smaller forms and in the idiom of jazz.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Music student; MTC 440; MUP 236 with C or better
MTC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MTC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Prerequisite(s): Barrett Honors student
MTC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MTC	495	Final Project	Half recital of compositions or approval of a large-scale composition or a research paper.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	0		
MTC	496	Theory Project	Supervised individual writing project dealing with music theory.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MTC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MTC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7	L	
MTC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MTC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	516	Baroque Music	Detailed analysis of selected examples of music from the Baroque period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	517	Classic Music	Detailed analysis of selected examples of music from the Classic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	518	Romantic Music	Detailed analysis of selected examples of music from the Romantic period.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	519	Late 19th-Early 20th Century Music	Detailed analysis of selected examples of music from the late 19th and early 20th centuries.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	520	Analytical Techniques	Analytical techniques systematically applied to music. Concentration on structural and compositional procedures.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	523	Advanced Composition	Advanced music composition, including complex techniques and larger structure. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-3		Pre-requisite: Graduate Music student
MTC	525	Pedagogy of Theory	Practices and principles of teaching music theory. Emphasizes most desirable and practical offerings possible. Comparative studies of existing practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	528	History of Music Theory	Theory from the 17th century to the present. Need not be taken in sequence with MTC 527.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	540	Jazz Theory and Ear Training	Surveys some of the most influential trends in the jazz tradition with in-depth analysis of harmonic systems, linear elements, and compositional strategies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Graduate Music student
MTC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student

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MTC	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Pre-requisite: Graduate Music student
MTC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre-requisite: Graduate Music student
MTC	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MTC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MTC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MTC	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MTC	723	Advanced Composition	Special problems in writing in complex forms and textures.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): doctoral Music student
MTC	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MTC	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MTC	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MTC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MTC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MTC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): doctoral Music student
MTC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): doctoral Music student
MTE	180	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	Integrative Sciences & Arts	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better

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MTE	180	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE	180	Mathematics for Elementary Teachers I	Numbers, number systems, operations on numbers; patterns, algebraic reasoning, and functions; problem solving. For prospective elementary education and special education teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: MAT 117, MAT 142 or MAT 170 with C or better
MTE	181	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MTE 180 with C or better
MTE	181	Mathematics for Elementary Teachers II	Data analysis, probability, and discrete mathematics; geometry and measurement; structure and logic. For prospective elementary education and special education teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: MTE 180 with C or better
MTE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Pre-requisite: Freshman standing; Maximum 25 earned hours
MTE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MTE	210	Mentored Tutoring Internship	Introduces math education students to issues of balancing the content of precalculus mathematics with the needs of someone learning it. Addresses core issues, including articulating what is involved in learning the mathematical idea(s); interpreting students' questions; analyzing student thinking and inferring their underlying rationale from a learner-centered perspective; techniques of question-posing, problem-posing, and instructional scaffolding.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Co-requisite: MAT 207
MTE	250	Technology and Mathematical Visualization	Uses several software packages for exploring mathematics and for preparing mathematical materials, starting from introductory skills and leading to advanced techniques. Places particular emphasis on using computer software with the aim of visualizing mathematical relationships, structures, and processes.	N	LEL	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 207, 270, and MTE 210 with C or better
MTE	280	Investigating Quantity: Number, Operations & Numeration Systems	Investigation of mathematical principles and processes regarding the real number system and its properties develop number sense and qualitative reasoning abilities. Designed to meet the requirements for preservice elementary school teachers.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): General Studies MA course with C or better
MTE	281	Investigating Space: Geometry, Measurement, and Visualization	Explores three aspects of geometry: spatial visualization, measurement, and proof. Uses visualization, spatial reasoning, and geometric modeling to solve problems. Provides opportunities for participants (1) to use physical models, technology, and pattern-finding strategies to identify properties of and develop formulas for measuring two- and three-dimensional shapes; and (2) to develop powerful ways of thinking to justify geometric relationships	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): General Studies MA course with C or better
MTE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
MTE	301	Investigating Change: Patterns, Functions, and Modeling	Examines different conceptions of algebra as the study of (1) generalized arithmetic, (2) reasoning with symbols, (3) reasoning with patterns and functions, (4) structure in the number system, and (5) modeling. Distinguishes arithmetic from algebraic reasoning, and develops an appreciation for the pervasiveness of the function concept in the K-8 school mathematics curriculum. Features algebraic thinking and representation using algebra tiles and other concrete models, realistic problems, dynamic geometry software, graphing calculators, and a variety of virtual tools and Web sites. Topics include, but are not limited to: patterns, relations, functions and covariational thinking; multiple conceptions of quantity, variables, constants, and unknowns; inductive, deductive, and analogical reasoning; rate of change and proportional thinking; algebra learning trajectories; and comparisons of additive vs. multiplicative, absolute vs. relational, and arithmetic vs. algebraic thinking.	N	LEC	N	GNA	Integrative Sciences & Arts	School of Mathematical and Statistical Sciences	3		Prerequisite(s): admission to the Professional Program
MTE	301	Investigating Change: Patterns, Functions, and Modeling	Examines different conceptions of algebra as the study of (1) generalized arithmetic, (2) reasoning with symbols, (3) reasoning with patterns and functions, (4) structure in the number system, and (5) modeling. Distinguishes arithmetic from algebraic reasoning, and develops an appreciation for the pervasiveness of the function concept in the K-8 school mathematics curriculum. Features algebraic thinking and representation using algebra tiles and other concrete models, realistic problems, dynamic geometry software, graphing calculators, and a variety of virtual tools and Web sites. Topics include, but are not limited to: patterns, relations, functions and covariational thinking; multiple conceptions of quantity, variables, constants, and unknowns; inductive, deductive, and analogical reasoning; rate of change and proportional thinking; algebra learning trajectories; and comparisons of additive vs. multiplicative, absolute vs. relational, and arithmetic vs. algebraic thinking.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program

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MTE	320	Conceptual Foundations of 12 Mathematics Curricula and Assessment	Focuses on concepts of mathematics curricula and their relationships to perspectives on learning, instruction, and assessment. Using a variety of participation formats (e.g., individual and small group work, and whole group discussions) and directed activities, participants examine curricular principles underlying the historical development of mathematics curricula and assessment, and current curricula and curricular recommendations and controversies surrounding them.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MAT 207; MTE 210 and 250 with C or better
MTE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	402	Service Learning	K-12 tutoring and mentoring internship related to academic course work in mathematics education. Requires weekly reflective reading and writing. May be repeated for credit.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	C	Pre/Co-requisite: MAT 117 or MAT 142 or other course meeting General Studies MA requirement
MTE	412	Mathematics in Elementary Schools	Methods of teaching mathematics to all students at the K-8 level, instructional planning and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 412 or MTE 412 or SPE 410
MTE	430	The Development of Mathematical Thinking	This capstone course requires students' sustained engagement with, and analysis of, artifacts from research on learning mathematics from instruction. The artifacts include: curricular/instructional task sequences, samples of student work, video-cases showcasing students' involvement in instruction, problem-solving interviews, and teaching experiments.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisite: MTE 320 with C or better
MTE	482	Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices, Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 310 with C or better; admission to the Professional Program
MTE	482	Methods of Teaching Mathematics in Secondary School	Examines secondary school curricular material and analyzes instructional devices, Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): MAT 310 with C or better; admission to the Professional Program
MTE	483	Mathematics in the Secondary School	Topics in geometry, number theory, algebra, and analysis. Emphasizes unifying principles.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Pre-requisites: MAT 310 with C or better
MTE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	485	Teaching Standards-Based Middle and High School Mathematics	Detailed exploration of the Common Core State Standards (CCSS) for middle school and high school mathematics. In addition to an in-depth coverage of the CCSS content and practices, students engage with, review and analyze existing instructional task sequences addressing the CCSS. Students also design and construct partial and complete lesson plans to cover specific mathematical content and practices.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): MAT 271 or minimum 45 hours; Credit is allowed for only MTE 485 or MTE 494 (Adv Mthds Tchng Math Sec Sch)
MTE	485	Teaching Standards-Based Middle and High School Mathematics	Detailed exploration of the Common Core State Standards (CCSS) for middle school and high school mathematics. In addition to an in-depth coverage of the CCSS content and practices, students engage with, review and analyze existing instructional task sequences addressing the CCSS. Students also design and construct partial and complete lesson plans to cover specific mathematical content and practices.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): MAT 271 or minimum 45 hours; Credit is allowed for only MTE 485 or MTE 494 (Adv Mthds Tchng Math Sec Sch)
MTE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
MTE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Prerequisite(s): Barrett Honors student
MTE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
MTE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
MTE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		
MTE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
MTE	585	Modern Geometry for Teachers	Euclidean, projective, and non-Euclidean geometries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		
MTE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		

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MTE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		
MTE	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MTE	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
MTE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	605	Research-based Practices, Pedagogy and Instructional Leadership in Mathematics	Examines research-based practices, pedagogy, and instructional leadership in mathematics classrooms K-8. Emphasizes learning and teaching mathematics for understanding. Featured practices and pedagogy for fostering symbolic thinking include inductive and deductive concept development, problem-based learning, cognitively guided instruction, learning trajectories, and use of physical manipulatives and virtual tools to facilitate mathematical thinking. Mathematics instructional leadership projects emphasize development of mentoring techniques and professional development expertise. Prepares K-6 and 5-9 mathematics teachers as mathematics teacher leaders, specialists, or coaches in middle schools and the elementary grades.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MTE	610	Number and Operations 2	Examines different conceptions of number and operations as the study of (1) patterns and relationships of numbers, (2) the meaning of operations, (3) reasoning through estimations and conjectures, (4) structure in the number system, and (5) modeling. Participants develop a deeper sense of numbers and operations as they progress through the K-8 curriculum. Various manipulatives and electronic tools facilitate investigations. Topics include: base systems, composing and decomposing numbers, operational relationships, operational strategies, integer meaning, and rational numbers.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MTE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
MTE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MTE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		
MTE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
MUD	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
MUD	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
MUD	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
MUD	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		

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MUD	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
MUD	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
MUD	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
MUD	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
MUD	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
MUE	101	The ASU School of Music Experience	Introduces all new first-time ASU students to the unique elements, culture, challenges and opportunities of their university, the School of Music and the Herberger Institute for Design and the Arts. Covers the music education and music therapy programs in the School of Music.	N	REC	N	GNA	Herberger Inst Design & Arts	School of Music	1		Credit is allowed for only MUE 101 or MUE 194 (ASU School of Music Experience for Music Education)
MUE	110	Introduction to Music Education	Overview of music education and career options. Orientation to student characteristics, teacher roles, teaching qualities, and philosophical and historical foundations. Requires school observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music major
MUE	154	Gesture and Sound	Covers fundamentals of musical leadership through gestures associated with sounds in the performance of music.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	1		
MUE	161	Introduction to Music Therapy	Overview of the profession of music therapy and its applications in mental health, rehabilitation, and special education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		
MUE	162	Introduction to Music Therapy Lab	Develops skills needed to lead music experiences in a variety of settings.	N	LAB	N	GNA	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music education or therapy major; Corequisite(s): MUE 161
MUE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	211	Music in Recreation	Materials, methods, and organizational structures appropriate for recreational music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		
MUE	261	Music Therapy as a Behavioral Science	Orientation to preclinical experience with emphasis on observation skills, assessment, goal setting, and professional ethics. Requires off-campus observations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music student; MUE161 with C or better
MUE	262	Music Therapy as a Behavioral Science Lab	Develops skills needed to lead music experiences in a variety of settings.	N	LAB	N	GNA	Herberger Inst Design & Arts	School of Music	1		Corequisite(s): MUE 261
MUE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUE	310	Music in Early Childhood	Examines music through the lens of the culture(s) of young children, which (though they intersect with adult cultures) are unique, different from adult experiences, and particular to them. Emphasizes the musical content of children's songs as well as the music they hear, and the kinds of musical engagements that are particular to young children. Also emphasizes the uses, functions, and meanings of music for children.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Pre-requisites: ENG 102 with C or better; minimum 30 hours
MUE	311	Music in the Lives of Children and Youth	Examines the role of music in the lives of young people with particular attention to child and youth learning and development (cognitive, social, emotional, personal/identity, musical). Includes examination and critique of music intended for children and youth (e.g., social and gendered meanings), as well as consideration of how music is related to individual and social identity.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Pre-requisites: BLE 220, RDG 291, SPE 222 or TEL 215, or minimum 30 hours
MUE	317	Strings Lab	Students apply educational theory to the development and refinement of specialized skills in string teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music major; Passed music education interview

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MUE	319	Digital and Hybrid Lab	Provides a foundation for integrating a range of technologies and digital media in music teaching and learning. Encourages critical and creative thinking while considering the possibilities for innovative applications of technology and digital media based upon contemporary curricular, theoretical and pedagogical frameworks. Students demonstrate skills and understanding related to using technology and digital media in the context of musicianship, music teaching and learning.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUE	321	Jazz Lab	Jazz rehearsal and performance techniques and repertoire appropriate for rehearsing jazz ensembles in K-12 schools.	N	LEC	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music Education major; Credit is allowed for only MUE 321 or MUE 394 (Jazz Lab)
MUE	323	Keyboard Lab	Piano keyboard skills appropriate for music educators.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): minimum 45 hours; Credit is allowed for only MUE 323 or MUE 394 (Keyboard Lab)
MUE	325	Voice/Choral Lab	Skills for developing voices and rehearsing choral ensembles.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MUE 110; Credit is allowed for only MUE 325 or MUE 394 (Voice/Choral Lab)
MUE	327	Brass Lab	Students apply educational theory to the development and refinement of specialized skills in brass teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music major; Passed music education interview
MUE	334	Guitar Lab	Guitar skills for teaching guitar classes in K-12 schools.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music Education major; Credit is allowed for only MUE 334 or MUE 394 (Guitar Lab)
MUE	335	Educational Methods for Guitar	Students apply educational theory to the development and refinement of specialized skills in guitar teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music major; Passed music education or therapy interview
MUE	336	Percussion Lab	Students apply educational theory to the development and refinement of specialized skills in percussion teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music major; Passed music education interview
MUE	337	Woodwinds Lab	Students apply educational theory to the development and refinement of specialized skills in woodwind teaching. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Music major; Passed music education interview
MUE	338	Educational Methods for Double Reed Instruments	Students apply educational theory to the development and refinement of specialized skills in woodwind teaching. 3 hours per week.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music major; Passed music education interview
MUE	381	Music Therapy Research	Statistics and research design appropriate for investigations in music therapy.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	L	Pre-requisite: Music Therapy student
MUE	384	Therapy Preclinical I	Paired students provide music therapy for small groups at a community agency for mentally retarded, geriatric, or physically disabled clients for a minimum of 10 clock hours.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	385	Therapy Preclinical II	Individual placement in ASU Music Therapy Clinic.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	386	Therapy Preclinical III	See MUE 385.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	387	Therapy Preclinical IV	Individual clinical work in a community mental health facility.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	388	Therapy Preclinical V	See MUE 387.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		
MUE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisites: Music Education or Music Therapy student
MUE	413	The Art of Teaching Children Music	Methods of instruction, planning, and presentation of appropriate contents in music. For music educators and music therapists.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music student
MUE	415	The Art of Teaching Contemporary Musicians	Curriculum, student characteristics, and teaching strategies for general music.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music major
MUE	436	Percussion Methods for Music Therapy	Provides knowledge and practical performance skills on percussion instruments, further improving the effectiveness of the student in the practice of music therapy. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music Therapy student
MUE	441	Psychology of Music	Psychological and physiological aspects of music emphasizing musical behavior, function, perception, and learning.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUE	463	Music Therapy Techniques	Organization, administration, and use of music in rehabilitation with various client populations.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music Therapy student; MUE 467 with C or better
MUE	465	Children's Music for Music Therapy	Methods of music therapy instruction, planning, and presentation of appropriate contents in music for children ages 2-12.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music Therapy student; Minimum Junior standing

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUE	467	Music Therapy Theory and Practice in Psychopathology	Influence of music on behavior; principles and practices of music therapy and psychiatric clients.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music Therapy student; MUE 261 with C or better; MUE 211 with C or better
MUE	475	Group Process and Music Therapy	Principles of group process, verbal counseling, professional writing, as related to music therapy practice.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-3		Pre-requisite: Music Therapy student; MUE 463 (MUE 362) with C or better or Graduate student in Clinical Music Therapy
MUE	476	Internship in Music Therapy	Full-time, 6-month, off-campus residency in an approved clinical institution.	N	PRA	N	Z1	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music Therapy student; MUE 211 with C or better
MUE	480	The Art of Teaching Choral Musicians	Methods of instruction, organization, and presentation of appropriate content in choral music classes.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music major with passed audition; minimum 55 hours
MUE	481	The Art of Teaching Beginning Instrumentalists	Instrumental music as a means of developing music skills, understandings, and attitudes in elementary and secondary school students.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music major with passed audition; minimum 55 hours
MUE	482	The Art of Teaching Advanced Instrumentalists	Advanced instrumental music as a means of developing music skills, understandings, and attitudes in elementary and secondary school students.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	4		Pre-requisite: Music major with passed audition; minimum 55 hours
MUE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUE	489	Repertoire for Music Therapy	Music skills repertoire for music therapy, including units on brass, strings, woodwinds, electronic instruments, computer music, and improvisation techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy student; MUE 211 with C or better
MUE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Prerequisite(s): Barrett Honors student
MUE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUE	501	Introduction to Professional Music Therapy	Introduces the profession of music therapy through lecture, active discussion, and observations of clinical sessions. Experiential learning is achieved through music making in peer groups.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy graduate student or Clinical Music Therapy graduate student
MUE	536	Percussion Methods for Music Therapy	Designed to provide knowledge and practical performance skills on percussion instruments, further improving the effectiveness of the student in the practice of music therapy. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music Therapy MM Student
MUE	548	Introduction to Research in Music Education	Survey of research methods and literature in music education. Focuses on interpretation and evaluation.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	549	Foundations of Music Education	A treatment of historical perspectives, philosophy-aesthetics identified with music education, and learning theories applied to music teaching/learning. Basic research and writing skills appropriate to graduate studies in music education.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	550	Studies in Music Curricula	Scope and sequence of musical experiences. Develops criteria for the evaluation of music curricula.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	551	Listening and Creating	Studies the nature of music listening and music creating and their relationship. Reviews research and pedagogical practices.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student
MUE	552	Advanced Studies in Secondary General Music	Organization and content of school music classes that are not performance oriented.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	555	String Pedagogy and Rehearsal Techniques	String pedagogy and orchestral rehearsal skills for teachers who work with K-12 string classes.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only MUE 555 or MUE 598 (String Pedagogy and Rehearsal Techniques)
MUE	559	Social and Cultural Studies in Music Education	Considers how music education is shaped by social and cultural concepts.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student; Credit is allowed for only MUE 559 or MUE 598 (Social and Cultural Studies in Music Ed)
MUE	560	Jazz Pedagogy	Study of pedagogy, repertoire, and technique of instruction in jazz styles, ensemble techniques, and performance practice for school	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student

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MUE	562	Jazz Rehearsal Techniques	Conducting and rehearsal techniques for school jazz ensembles.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): graduate Music student
MUE	563	Music Therapy Techniques for Children	Organization, administration, and use of music in rehabilitation with children and adolescents with special needs.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy MM student; MUE 581 with C or better
MUE	564	Instrumental Music, Advanced Rehearsal Techniques	In-depth analysis of instrumental techniques in preparation for a thorough discussion of band tuning problems and solutions. Discussion of productive conducting and rehearsal techniques for school music teachers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	565	Children's Music for Music Therapy	Methods of music therapy instruction, planning, and presentation of appropriate contents in music for children ages 2-12.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: Music Therapy Graduate student
MUE	566	Instrumental Literature and Pedagogy for Schools	Provides an in-depth examination of ensemble music and teaching techniques to instrumental music teachers.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	567	Professional Practicum I	Students provide music therapy for small groups at a community agency providing services to people who are intellectually disabled, physically disabled, and the elderly.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): graduate Music Therapy student
MUE	568	Choral Music, Advanced Rehearsal Techniques	Musical and vocal techniques necessary for presentation of choral literature. Analysis and experimentation with psychological, acoustical, and other problems of rehearsal and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	569	Professional Practicum II	Students continue to provide music therapy for small groups at a community agency providing services to people who are intellectually disabled, physically disabled, and the elderly.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): graduate Music Therapy student; MUE 567 with C or better
MUE	570	Choral Literature for Schools	Comprehensive study and analysis of choral music for the high school with special emphasis on octavo literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	571	Music Therapy Seminar I: Supervision and Administration	Covers health care administrative skills pertinent to music therapy practice, including budgeting, resource allocation, and staff supervision.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): graduate Music student
MUE	572	Music Therapy Seminar II with Lab: Advanced Practice in Music	Deepens and broadens knowledge and skills in music therapy clinical practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	573	Music Therapy Seminar III with Lab: Music Therapy Theory and Philosophy	Explores current theory in music therapy and develops the theoretical basis for the profession.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy MM student
MUE	574	Music Therapy Music Skills I: Improvisation	Teaches new forms of musical improvisation pertinent to music therapy practice, broadening and deepening existing skills.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music Therapy MM student
MUE	575	Music Therapy Music Skills II: Accompaniment	Teaches new forms of musical accompaniment pertinent to music therapy practice, broadening and deepening existing skills.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music Therapy MM student
MUE	579	Psychology of Music	Nature of musicality and its evaluation. Review of recent research.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	581	Music Therapy Theory and Practice in Psychopathology	Influence of music on behavior; principles and practices of music therapy and psychiatric clients.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy Graduate student or Clinical Music Therapy Graduate student
MUE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	585	Vocal Acoustics and Production	In-depth approach to the psychological/physiological workings of the vocal mechanism.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): graduate Music student
MUE	586	Music Therapy Graduate Clinical Project	Develops clinical- and research-based music therapy skills in selected cognate area.	N	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	2-6		Pre-requisites: MUE 571, 572, 574, and 575
MUE	589	Repertoire for Music Therapy	Music skills repertoire for music therapy, including units on brass, strings, woodwinds, electronic instruments, computer music, and improvisation techniques.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Music Therapy MM Student
MUE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisite(s): graduate Music student

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MUE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUE	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MUE	754	Teacher Education Research and Policy	Reading and discussion of research and policy documents in teacher education with a focus on arts and music teacher preparation. Includes development of a research project or essay suitable for publication or presentation, an abbreviated prospectus for a dissertation, or literature review.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Doctoral Student in Music Education
MUE	756	Qualitative Research in Music Teaching and Learning	Studies qualitative research and methods in music education, including readings and discussion, data collection and data analysis. Includes development of an abbreviated prospectus for a qualitative dissertation, or a draft of a qualitative research paper suitable for presentation or publication. Prerequisite: doctoral student in music education.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Doctoral Student in Music Education
MUE	757	Quantitative Research in Music Teaching and Learning	Studies quantitative research and methods in music education, including readings and discussion, data collection, and analysis. Includes development of an abbreviated prospectus for a quantitative dissertation or a draft of a quantitative research paper suitable for presentation or publication.	N	LEC	N	Z1	Herberger Inst Design & Arts	School of Music	3		Pre-requisites: Doctoral Student in Music Education
MUE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MUE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MUE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MUE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MUE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): doctoral Music student
MUE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): doctoral Music student
MUE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): doctoral Music student
MUE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Prerequisite(s): doctoral Music student
MUP	100	Concert Attendance	6 semesters required for all music majors. A total of 4 convocations and 6 approved recitals required each semester.	N	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	0		
MUP	101	The ASU School of Music Experience	Orientation to university and School of Music resources and procedures as well as career planning and guidance. Through various course discussions and assignments, music students examine the concept of academic integrity and its potential impact on their future and learn about taking an interdisciplinary perspective. Required for all music majors.	N	REC	N	GNA	Herberger Inst Design & Arts	School of Music	1		Credit is allowed for only MUP 101 or MUP 194 (ASU School of Music Experience)
MUP	111	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	117	Applied Jazz Improvisation	Principles, methods, and theory of jazz performance and pedagogy. May be repeated for credit.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUP	121	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	127	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	4		Prerequisite(s): Music major who has passed audition
MUP	131	Class Piano	4-semester sequence (with MUP 132, 231, and 232) designed for those with little or no piano experience. Emphasizes keyboard technique, sight reading, simple accompaniments, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student
MUP	132	Class Piano	4-semester sequence designed for those with little or no piano experience. Emphasizes keyboard technique, simple accompaniments, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	GNA	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music student; MUP 131 with C or better
MUP	133	Class Voice	4-semester sequence (with MUP 134, 233, and 234) open to all students. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	134	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student
MUP	170	Music Theatre I	Development of performance skills for opera and music theater emphasizing the portrayals of simple and complex emotions, character development, solo and ensemble performance, music and dialogue analysis, body awareness, and freedom of the vocal and breath mechanisms.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Music	2		
MUP	172	Music Theatre II	Further development of performance skills for opera and music theater, broadening the portrayals of simple and complex emotions, character development, solo and ensemble performance, music and dialogue analysis, body awareness, and freedom of the vocal and breath mechanisms. Students learn to research and develop characters in order to perform various types of songs and dramatic scenes.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: MUP 170
MUP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		Prerequisite(s): Music major who has passed audition
MUP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisite(s): Music major who has passed audition
MUP	209	Beginning Choral Conducting	Essentials of choral conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	210	Beginning Instrumental Conducting	Essentials of instrumental conducting techniques. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	217	Applied Jazz Improvisation	Emphasizes basic jazz literature, chord symbol reading, melodic patterns and concepts, ear training, analysis of improvised solos, and pedagogical issues.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 117 with C or better
MUP	231	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music student; MUP132 with C or better
MUP	232	Class Piano	See MUP 131.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student; MUP231 with C or better
MUP	233	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	234	Class Voice	See MUP 133.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student
MUP	235	Jazz Piano	2-semester sequence (with MUP 236) designed for jazz keyboard experience. Emphasizes chord symbol reading, simple improvisation, and voicing. 2 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student
MUP	236	Jazz Piano	See MUP 235.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	250	Diction for Singers	Use of phonetics in the study of song and opera literature. Language emphasis differs each semester. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	270	Music Theatre III	Further development of performance skills for music theater emphasizing the portrayals of simple and complex emotions, character development, solo and ensemble performance, music and dialogue analysis, body awareness, and freedom of the vocal and breath mechanisms. Students learn to develop characters and project various moods and scenarios through song.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 172

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUP	272	Music Theatre IV	Further development of performance skills for opera and music theater emphasizing the portrayals of simple and complex emotions, character development, solo and ensemble performance, music and dialogue analysis, body awareness, and freedom of the vocal and breath mechanisms. Students conduct in-depth analyses of characters from both the historical and contemporary repertoire of music theatre.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 270
MUP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		Prerequisite(s): Music major who has passed audition
MUP	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Barrett Honors Music students who have passed audition
MUP	301	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 232. Emphasizes accompaniments, ensemble playing, score reading, advanced harmonizations, repertoire, technique, and improvisation. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: Music student; MUP 232 with C or better
MUP	302	Advanced Class Piano	Required for the choral-general concentration of the Music Education major. Open to other music majors who have completed MUP 301. A sequential continuation of MUP 301 skills that include both group and studio instruction. 2 hours per week. May not be taken for audit.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisite: Music student; MUP301 with C or better
MUP	311	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	317	Applied Jazz Improvisation	Emphasizes listening, analysis, and performance of advanced jazz literature and composition in contemporary styles. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	319	Advanced Audio Engineering in the Arts	Synthesis and application of analog and digital recording methods (voices and instruments), mixing and the advanced skills needed to create professional recordings (CDs, DVDs, internet sound files, etc.). Further emphasis on electronic music production, computer based applications, MIDI, and contemporary studio hardware.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Minimum Junior standing in the Herberger Institute for Design in the Arts
MUP	321	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	327	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May be repeated for credit. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Prerequisite(s): Music major who has passed audition
MUP	337	Studio Instruction: Collaborative Piano	Repertoire to be selected from vocal and instrumental literature. 1 hour lesson per week. May be repeated for credit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	339	Choral Conducting	Elements of choral conducting technique and interpretation. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 209 or MUP 210
MUP	340	Instrumental Conducting	Fundamentals of score reading and interpretation of instrumental music. 3 hours per week.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: MUP 210 with C or better
MUP	370	Music Theatre V	Development of specific skills for musical-dramatic interpretation and of specific physical theatre skills for the actor. Performance-based class provides an opportunity to connect physically, emotionally and intellectually to the body of the musical theatre actor, and provides an opportunity to explore strong, clear acting choices. Students participate in various movement theories and techniques in class and complete independent performance projects utilizing the body and the body with voice, choosing a song from various categories to workshop and perform.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MUP 272
MUP	373	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus). May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	374	Music Theatre Technical Production	In-depth study of approaches to Technical Music Theatre. Classroom study of costumes, sets and lighting (Section 1, Topic: Tech) is followed by practical experience on a technical running crew for a Lyric Opera Theatre production (Section 2 Topic: Problems). The two sections should be taken in consecutive semesters.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	385	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	388	Collaborative Piano	Performance class for collaborative piano majors. Repertoire includes vocal and instrumental selections. Advanced analysis of ensemble techniques, style and performance practice in preparation for graduate study or professional application.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre-requisites: 4 terms of MUP 127 with C or better
MUP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		

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MUP	440	Keyboard Harmony	Performance-oriented class emphasizing chord progressions, harmonization, figured bass realization, stylistic improvisation, <u>transposition, open score reading, and sight reading.</u>	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	442	Instrumental Ensembles	Students participate in numerous ensembles and artistic and educational projects that together, comprise a rich assortment of musical experiences. During the academic year, each student participates in a variety of projects that present a wide range of musical experiences. Curriculum accommodates the distinctive needs of each student in that artistic-educational experiences are, to a large extent, tailor made to each individual's career aspirations. Consequently, learning outcomes are highly individualized and student driven, rather than institutionally convenient. Each artistic-educational project focuses on specific pedagogical and/or musical learning outcomes that, in various ways, promote the primary course objective: the enhancement of musical diversity and artistic depth in every student.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): Music major or nonmajor who has passed audition
MUP	443	Choral Ensembles	Active, thoughtful participation in music ensembles can provide for development beyond the possibilities of individual study alone. The ensemble setting is, in part, a forum for the synthesis of component parts of a complete music education. Includes the study and performance of diverse musical expressions that represent a variety of historical and cultural perspectives. These ensembles provide the opportunity to prepare and present varied music composed for the mixed choir from the major stylistic periods with the intent of serving composers, performers and listeners by performing choral music of the highest possible quality.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): Music major or nonmajor who has passed audition
MUP	448	Classical Style: Performance and Analysis	Integrates historical and theoretical analysis with performance, examining classical period repertoire.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music major who has passed audition; Junior standing; Credit is allowed for only MUP 448 or 494 (Classical Style: Performance and Analysis)
MUP	449	The Unaccompanied Music of JS Bach: Performance and Analysis	Integrates historical and theoretical analysis with performance, examining the unaccompanied works of J.S. Bach.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music major who has passed audition; Junior standing; Credit is allowed for only MUP 449 or 494 (Unaccompanied Bach: Performance & Analysis)
MUP	450	Choral Union	Large mixed ensemble focuses on the study, synthesis, and performance of major choral masterworks while gaining in-depth understanding of significant choral repertoire and historical ramifications. <u>An audition is required to participate in the ensemble.</u>	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): minimum 45 hours
MUP	451	Repertoire	In-depth study of music for performing, involving advanced interpretive and technical concepts from historical, stylistic, and performance-related perspectives.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Completed 4 semesters of 100-level studio instruction
MUP	453	Song Literature	Early Italian, English, German, and French art song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	454	Song Literature	American, Russian, Spanish, Scandinavian, and contemporary song.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	455	Men's Chorus	Membership in this ensemble involves the in-depth study and application of specialized musical skills in the performance of a variety of historically and musically standard male repertoire, within historical context. <u>An audition is required to participate in the ensemble.</u>	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): minimum 45 hours
MUP	457	Women's Chorus	Membership in this ensemble involves the in-depth study and application of specialized musical skills in the performance of historically and musically important repertoire for treble voices. <u>An audition is required to participate in the ensemble.</u>	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		
MUP	459	Barrett Choir	The Barrett Choir is an opportunity for students from all over the university, but primarily from Barrett, The Honors College, to participate in a high-quality choral ensemble. The group seeks to harness the creativity and intellect of honors students to create a collaborative ensemble that operates on a unique model of student-centered learning. The repertoire, mostly chosen by the members, is highly varied, ranging from world music to pieces in the great choral tradition to newer music and popular music. There are normally two major concerts per semester, with some occasional smaller performances.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): minimum 45 hours
MUP	460	The Visiting Quartet Residency Program	Develops skills as a chamber musician and provides opportunities to work with members of the visiting string quartet in residence.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Pre-requisite: Music major (bass, cello, viola, violin) who has passed audition

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MUP	461	Marching and Concert Bands	Development of specific professional performing skills through staging of formations and drills for football games and other events (Marching Band); the development of specific professional performing skills for concert settings, with in-depth study of masterpieces of symphonic band literature (Concert Band). An audition may be required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	465	Music Theatre VI	Membership in this ensemble involves the in-depth study and application of specialized musical skills in the performance of a variety of historically and musically standard male repertoire, within historical context. An audition is required to participate in the ensemble.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MUP 370; Credit is allowed for only MUP 465 or MUP 494 (Acting for Singers)
MUP	466	Broadway Dance	Designed for students in the collaborative performance areas of musical theatre (music, theater and dance). Examines the development of landmark styles and theories specifically in musical theater and Broadway dance.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MUP 465
MUP	470	Music Theatre VII	Designed for students in the collaborative performance areas of musical theatre (music, theater and dance). Examines the development of landmark styles and theories specifically in musical theater and Broadway dance.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MUP 465; Credit is allowed for only MUP 470 or MUP 494 (Musical Theatre Dance) or MUP 566
MUP	471	Music Theatre: Workshops	Development of specific skills for musical-dramatic interpretation. Section 1 (Aria Preparation); Section 2 (Broadway I); Section 3 (Broadway II).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite: Music major
MUP	472	Music Theatre VIII	Development of specific skills and effective practices for musical theatre auditioning and development of specific skills for musical-dramatic interpretation. This is a performance-based class providing an opportunity to explore strong, clear acting choices for the musical theatre performer in a setting with a scene partner or scene partners, requiring the performance of songs, monologues, scenes, and choreography.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): MUP 470
MUP	476	New Music Ensemble	In-depth study, synthesis, and performance of classical works written within the last twenty years for small ensemble and for instruments with electronics. Involves discussion and realization of advanced interpretive and technical concepts related to contemporary music.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	479	Chamber Music Ensembles	Faculty-coached ensembles involving in-depth study and application of specialized, professional skills in performing with two or more players of like or unlike instruments and/or voice.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	481	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field. May be repeated for credit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisites: Music students who have passed audition
MUP	482	Piano Pedagogy	Continuation of MUP 481 (Piano). Problems and techniques of teaching intermediate to advanced piano students.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Music major who has passed audition
MUP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): Music major who has passed audition
MUP	486	Jazz Band	Analysis, rehearsal and performance of new, traditional, and Latin literature for jazz ensembles. Development of advanced sight-reading and instrumental doubling skills. 4 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	487	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week. May not be taken for audit.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): Music major who has passed audition
MUP	489	Ethnomusicology Ensembles	Students apply indigenous music theories to actual practice, contextualized in background reading and listening, as they refine their ability to perform orally generated music and sometimes dance traditions. This course is open to non-music majors by audition or consent of instructor.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		
MUP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Barrett Honors Music students who have passed audition
MUP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Pre-requisites: Barrett Honors Music students who have passed audition
MUP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	495	Performance	For candidates of a BM degree in which 1/2 recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0		Prerequisite(s): Music major who has passed audition
MUP	496	Performance	For candidates of a BM degree in which a full recital is a requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	0		Prerequisite(s): Music major who has passed audition
MUP	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Pre-requisites: Barrett Honors Music students who have passed audition
MUP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7	L	Prerequisite(s): Music major who has passed audition

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MUP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	STO	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		Prerequisite(s): Music major who has passed audition
MUP	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Prerequisite(s): graduate Music student
MUP	507	Group Piano Practicum	Curricula, materials, and teaching techniques for group teaching at the university and community college levels. Observation/supervised teaching in group piano.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	508	Studio Observation	Weekly observation of studio teaching by various piano faculty. Paper as final requirement.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	509	Jazz Keyboard Harmony	Emphasizes jazz chords and chord progressions, harmonization, voicing, and analysis of transcriptions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	510	Jazz Keyboard Harmony	Continuation of emphasis on jazz chords and chord progressions, harmonization, voicing, and analysis of transcriptions.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	511	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour plus studio class weekly. May not be taken for audit.	Y	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): Graduate Music major who has passed an audition
MUP	517	Advanced Improvisation	Improvisation techniques within the context of advanced jazz literature. Must be taken in sequence with MUP 518.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	521	Studio Instruction	Secondary or minor instrument instruction. Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1/2 hour per week. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	527	Studio Instruction	Bassoon, cello, clarinet, contrabass, cornet, euphonium, flute, guitar, harp, harpsichord, horn, oboe, organ, percussion, piano, saxophone, trombone, trumpet, tuba, viola, violin, voice. Minimum contact of 1 hour per week. May be repeated for credit. May not be taken for audit.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Prerequisite(s): Graduate Music major who has passed an audition
MUP	540	Principles of Integrated Conducting	Score preparation and conducting techniques for instrumental music. Concentration on study of historical styles. Required of DMA students in Instrumental Music.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: DMA Conducting major
MUP	541	The Art Song	Seminar on solo song from its beginning to the present day.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	3		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	542	Instrumental Ensembles	Students participate in numerous ensembles and artistic and educational projects that together, comprise a rich assortment of musical experiences. Graduate students especially need opportunities to hone their skills in a great variety of performance opportunities. During the academic year, each student participates in a variety of projects that present a wide range of musical experiences. The curriculum is designed to accommodate the distinctive needs of each student in that artistic-educational experiences are, to a large extent, tailor made to each individual's career aspirations. Consequently, learning outcomes are highly individualized and student driven, rather than institutionally convenient. Each artistic-educational project focuses on specific pedagogical and/or musical learning outcomes that, in various ways, promote the primary course objective: the enhancement of musical diversity and artistic depth in every student. Audition required during the first week of classes.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): graduate Music student
MUP	543	Choral Ensembles	Active, thoughtful participation in music ensembles can provide for development beyond the possibilities of individual study alone. The ensemble setting is, in part, a forum for the synthesis of component parts of a complete music education. Includes the study and performance of diverse musical expressions that represent a variety of historical and cultural perspectives. These ensembles provide the opportunity to prepare and present varied music composed for the mixed choir from the major stylistic periods with the intent of serving composers, performers and listeners by performing choral music of the highest possible quality.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	548	Classical Style: Performance and Analysis	Integrates historical and theoretical analysis with performance, examining classical period repertoire.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Graduate Music major who has passed audition; Credit is allowed for only MUP 548 or 598 (Classical Style: Perf. & Anlys)

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MUP	549	The Unaccompanied Music of JS Bach: Performance and Analysis	Integrates historical and theoretical analysis with performance, examining the unaccompanied works of J.S. Bach.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre-requisite: Graduate Music major who has passed audition; Credit is allowed for only MUP 549 or 598 (Unaccomp Bach Perf & Analysis)
MUP	550	Choral Union	Open to all students in the university and to interested singers in the community by audition. Preparation and performance of the larger choral works. 2 hours per week. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	551	Repertoire	Literature available for performance in all performing media.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	554	Major Repertoire, Score Study, and Performance Practice	Conducting course comprising a survey of significant repertoire (encompassing, over multiple semesters, literature from choral, musical theater/opera, orchestral, and wind band genres); an introduction to historical performance practice; and a range of score study techniques. Conducting majors are required to enroll each semester (or as advised) and, subsequently: display a comprehensive historical knowledge of the repertoire and development of ensembles over the past 500 years, demonstrate command of standard performance practices with respect to each historical era, and exhibit a clear understanding of varied methods of score study.	Y	SEM	Y	GNA	Herberger Inst Design & Arts	School of Music	3		Pre-requisite: DMA Conducting major
MUP	555	Men's Chorus	Rehearsal and performance of music for mixed voices. 3 hours per week. An audition is required to participate in the ensemble.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	557	Women's Chorus	Rehearsal and performance of music for mixed voices. 2 hours per week. An audition is required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-2		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	560	The Visiting Quartet Residency Program	Develops skills as a chamber musician and provides opportunities to work with members of the visiting string quartet in residence.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	1-2		Pre-requisite: Graduate Music major who has passed audition
MUP	561	Marching and Concert Bands	Staging of formations and drills for football games and other events (fall); masterpieces of symphonic band literature (spring). Meets MWF. An audition may be required to participate in the ensemble.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	565	Acting and Movement	Process class with exercises specifically developed to assist the student actor to learn the fundamental techniques of acting with an emphasis on the actor's approach to characterization.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): graduate Music major who has passed an audition; Credit is allowed for only MUP 565 or MUP 598 (Acting for Singers)
MUP	566	Broadway Dance	Designed for students in the collaborative performance areas of musical theatre (music, theater and dance). Examines the development of landmark styles and theories specifically in musical theater and Broadway dance.	N	STO	Y	GNA	Herberger Inst Design & Arts	School of Music	2		Prerequisite(s): graduate Music major who has passed an audition; Credit is allowed for only MUP 566 or MUP 598 (Musical Theatre: Dance)
MUP	570	Music Theatre: Techniques	Exercises and improvisations for the singing actor emphasizing body awareness, isolations, and freedom of the vocal and breath mechanisms.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	571	Music Theatre: Workshops	Develops specific skills for the musical-dramatic interpretation.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	573	Music Theatre: Performance	Participation in Lyric Opera Theatre productions. Section 1 (Principal Roles); Section 2 (Chorus).	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	574	Music Theatre Technical Production	Introduces technical music theatre. Classroom study of costumes, sets and lighting (Section 1, Topic: Tech) followed by practical experience on a technical running crew for a Lyric Opera Theatre production (Section 2 Topic: Problems). The two sections should be taken in consecutive semesters.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	576	New Music Ensemble	Rehearsal and performance of music written in the last 20 years.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	579	Chamber Music Ensembles	String, brass, woodwind, percussion, keyboard, vocal, and mixed ensembles. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	581	Performance Pedagogy and Materials	Principles and methods of performance techniques for each performance field.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	585	Percussion Ensemble	Rehearsal and performance of standard and original repertoire for the percussion ensemble and related instruments. 2 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student

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MUP	586	Jazz Band	Rehearsal and performance of new, traditional, and Latin literature for jazz bands. 4 hours per week.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	587	Ethnomusicology Ensembles	Performance learning experience for the music of various cultures of the world.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Prerequisite(s): degree- or nondegree-seeking graduate student
MUP	588	Collaborative Piano	Piano accompaniments found in vocal and instrumental literature; discussion of styles and performance practices; experience in public performance. 2 hours per week.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	596	Solo Performance	May be full recital, major operatic role, solo performance with orchestra, ensemble, or lecture recital.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	597	Solo Performance	See MUP 596.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Graduate Music major who has passed audition
MUP	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
MUP	727	Studio Instruction	Minimum contact of 1 hour per week. May be repeated for credit. Conducting students register for 2 semester hours; all other students register for 4 semester hours.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Music	2-4		Prerequisite(s): Doctoral Music major who has passed audition
MUP	751	Seminar in Piano Literature	In-depth study of selected topics related to the standard piano literature. Requires research paper, bibliography, class presentation.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Music	2		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Herberger Inst Design & Arts	School of Music	1		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	796	Solo Performance	May be full recital, major operatic role, solo performance with orchestra, ensemble, or lecture recital.	N	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUP	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		Pre- or corequisite(s): Doctoral Music major who has passed audition
MUS	100	Fundamentals of Music Notation	Provides nonmusic majors with sufficient symbol literacy to begin work in the field of musical learning. Credit not applicable toward any music degree.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3		
MUS	131	Bach to Bebop	Develops an understanding of the repertoire for the various musical instruments and ensembles throughout the five eras being studied and discernment through listening different genres of music. For the lectures regarding instruments, introduces students to the respective repertoire for the instrument from c. 1700-present with special emphasis on how the use of the instrument developed throughout history or during each era.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Music	3		Credit is allowed for only MUS 131 or 194 (Performance: Bach to Bebop)
MUS	145	Nonmajors Class Piano: Beginner	For students with little or no previous music experience. Students learn beginning piano skills.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Credit is allowed for only MUS 145 or MUS 194 (Non-Majors Beginning Class Piano I)
MUS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-3		
MUS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	210	The Arts Around Us	Develops the ability to think and create from an arts-rich perspective. In particular, focuses on the arts in the lives of children and youth, arts experiences for children and youth in the community, and one's personal experiences with the arts.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 210 or 294 (The Arts Around Us)
MUS	211	Dance, Music and Meaning	Explores the fundamental nature of human experience across time and culture through the medium of dance and music using a variety of dance and musical materials including folk dance and music, popular dance and music, and such theatrical forms as ballet and modern dance and the music connected with them.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 211 or 294 (Dance, Music, and Meaning)
MUS	212	Music, Meaning and Imagination	Explores how music provides ways to make meaning of the world around us and music as a medium for creative thinking and doing. Develops understanding by trying on roles ranging from critics to creators in both individual and group projects.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 212 or 294 (Music, Meaning and Imagination)
MUS	213	Critical Thinking in the Arts	Fosters critical thinking abilities in relationship to performing and visual arts. Students learn how to listen to music and view art analytically. Develops and applies knowledge of common elements (within and across art forms) such as form, texture, balance and contrast in order to enhance understanding both of arts processes and products.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	

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MUS	214	Art, Music and Learning	Offers an integrated introduction to, and examination of, the core structural and formal elements of visual art and music in the context of contemporary experiences and learning process.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	
MUS	215	Children, Creativity, Arts	Interdisciplinary exploration of children's creative processes through critical analysis, hands-on participation and personal reflection. Specifically focuses on creative processes in the arts.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	
MUS	231	Laughing to Music	Modern-day comedies like Spamalat, Avenue Q, and Glee are part of a comic tradition extending back to the Renaissance. Looks at funny in music from commedia dell'arte to the present. Studies works including the comedies of Mozart, Gilbert and Sullivan, the Marx Brothers, Monty Python, Mel Brooks and many others.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 231 or 294 (Laughing to Music)
MUS	240	Listening to Music	Surveys the historical periods of music making in western civilization, the study of which will hopefully create within the student a listener with an appreciation for art music of many periods and provide more enjoyment in the process. Through lectures, presentations, readings, listening examples and video/DVDs, studies music identified as strong examples of the major periods, composers and compositions in the history of music. Students learn and adopt a minimum new language to help express the elements of music they experience and listen to and develop strategies for writing and communicating about what they hear and put words to how they respond to it. Because experiencing music performed live is an integral part of the learning process, students are required to attend concerts outside of class and submit critical reviews of what they hear.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
MUS	245	Nonmajors Class Piano: Intermediate	For students who have completed 1-3 years of piano study.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): MUS 145 or MUS 194 (Non-Majors Beginning Class Piano I) with C or better; Credit is allowed for only MUS 245 or MUS 294 (Non-Majors Class Piano II)
MUS	254	Blues to Heavy Metal	Covers important musicians and trends from the 1930s through the 1970s. Topics include blues, rhythm and blues, rockabilly, doo wop, teen idols, girl groups, dance craze, surf, novelty, soul, Motown, British invasion, art rock, psychedelic rock, hard rock, heavy metal, and early '70s styles. Emphasizes musical instruments and stylistic traits with historical information provided as background. Features listening examples drawn from selected artists and bands including popular songs and rarities, and demonstrations using various musical instruments and techniques.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Credit is allowed for only MUS 254 or 354 (Blues to Heavy Metal)
MUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MUS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUS	340	Music for the Concert Hall, Stage, and Screen	In-depth study of examples from Western art music. Emphasizes aural analysis and synthesis of historical data with musical phenomena. Critiques the canon and its limits in specific instances.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU & H	Prerequisite(s): minimum 42 hours
MUS	345	Nonmajors Class Piano: Advanced	For students who have completed 4 or more years of piano experience.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3		Prerequisite(s): MUS 245 or MUS 294 (Non-Majors Class Piano II) with C or better; Credit is allowed for only MUS 345 or MUS 394 (Non-Majors Class Piano III)
MUS	347	Jazz in America	In-depth study, analysis and synthesis of examples from the jazz tradition. Includes the application of advanced aural analytic techniques to exemplary jazz musical works.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & C	Pre-requisite: ENG 102, ENG 105 or ENG 108 with C or better
MUS	349	Music in America	Current styles of American music including jazz, popular, and folk music.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	
MUS	354	Popular Music	In-depth study of a specific topic in the history of popular music. Emphasizes aural analysis and synthesis of historical data with musical phenomena to create new perspectives.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	3	HU	Prerequisite(s): minimum 42 hours
MUS	354	Popular Music	In-depth study of a specific topic in the history of popular music. Emphasizes aural analysis and synthesis of historical data with musical phenomena to create new perspectives.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 42 hours
MUS	355	American Music	In-depth study of current research topics in American music. Engages students in current scholarly debates. Charts the limits of current scholarly methodologies and historical research programs.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & C & H	Prerequisite(s): minimum 42 hours
MUS	356	Broadway and the American Musical	In-depth chronological study of American musical theatre on Broadway, including origin and development, historical references, global and cultural influences. By way of critical analysis, emphasizes comprehensive stylistic understanding of minstrelsy, operetta, revues, book musicals, film musicals, rock musicals, mega-musicals, and Broadway revivals. Engages students in current scholarly debates on American musical theatre.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better

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MUS	356	Broadway and the American Musical	In-depth chronological study of American musical theatre on Broadway, including origin and development, historical references, global and cultural influences. By way of critical analysis, emphasizes comprehensive stylistic understanding of minstrelsy, operetta, revues, book musicals, film musicals, rock musicals, mega-musicals, and Broadway revivals. Engages students in current scholarly debates on American musical theatre.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
MUS	362	Rap Music and Hip Hop Culture	Examines the history of rap music and hip hop culture from their origins to about 1995, including most, but not all, of the major artists from this period. Explores connections between rap music and other elements of hip hop culture, and challenges students to think critically about rap music and its place in society. Uses listening exercises, demonstrations, and conversations with artists to examine how rappers create meaning in their musical works. Drawing on secondary articles by rap critics and scholars, considers in detail such controversial subjects as censorship, sexism, obscenity, and race politics in America as they relate to rap music.	N	LEC	N	GNA	Herberger Inst Design & Arts	School of Music	3	HU & C	Pre-requisite: Minimum 42 hours; Credit is allowed for only MUS 354 (Hip Hop) or 362
MUS	371	World Music	Provides an introduction to world music, including traditional and popular styles. Examines specific music genres from Africa, Asia, Europe, and the Americas and explores their historical development, cultural contexts, communicative functions, forms, styles, instruments and musical philosophies. Throughout the semester, considers the interrelationships among musical genres and other art forms (dance, theater, visual arts, and literature) and analyzes how these musics have intersected with the issues of race, class, gender, religion, ritual, politics, social movements and cultural identity. Students learn to hear and discuss significant stylistic elements of selected genres through listening assignments.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & G	Pre-requisite: Minimum 45 hours; Credit is allowed for only MUS 371 or 394 (World Music)
MUS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MUS	410	History of Women in Music	Surveys musical achievements of women as well as the historical contexts that shaped and defined their artistic development.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Music	3	HU & C & H	
MUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
MUS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Music	1-6	L	Prerequisite(s): Barrett Honors student
MUS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MUS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-6		Prerequisite(s): Barrett Honors student
MUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-7	L	
MUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	
MUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-3		
MUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
MUS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		

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MUS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
MUS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
MUS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
MUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-4		
MUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
MUS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-12		
MUS	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-12		
MUS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Music	1-12		
MUS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Herberger Inst Design & Arts	School of Music	1-15		
MUS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Herberger Inst Design & Arts	School of Music	1-15		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NAN	505	Nanoscience and Society	Integrates nanoscience and nanotechnology with potential societal issues involved in the students' NAN 593 Applied Projects. Coordinated by the faculty and research staff at the Center for Nanotechnology in Society.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2		
NAN	506	Innovation and IP Management	Intellectual Property (IP) Management in the context of innovation (research, regulations, manufacture, access to markets, and trade) with emphasis on strategies, public-private interface, licensing, and technology transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	2		
NAN	511	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: Degree- or nondegree-seeking graduate; Credit is allowed for only MSE 526, NAN 511, PHY 511, or PHY 481
NAN	512	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 527, NAN 512, PHY 482 or PHY 512
NAN	542	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
NAN	544	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CHM 544, NAN 544, PHY 444 or PHY 544
NAN	546	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 546, NAN 546 or PHY 546
NAN	552	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 552, NAN 552, PHY552 or SEM 552
NAN	560	Nanomaterials in Energy Production and Storage	Emphasizes the relationship among fundamental materials properties, chemical and energy transformation, as well as energy storage. Applications include the role of materials for photovoltaics, nanocatalysts, batteries, and fuel cells. Stresses fundamental principles and charge transfer processes in nanostructured materials in addressing energy needs.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): graduate Chemistry, Engineering or Physics major. Credit is allowed for only MSE 460 or MSE 494 (Nanomaterials In Energy Production and Storage) or MSE 560 or MSE 598 (Nanomaterials In Energy Production and Storage) or NAN 560
NAN	564	Bionanotechnology	The use of biomolecules, bioelectronics, and biomedicine for applications in nanotechnology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
NAN	571	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples from physics, chemistry and nanoscience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 571, NAN 571 or PHY 571
NAN	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
NAN	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
NAV	101	Introduction to Naval Science	Introduces the customs, traditions, missions and regulations of the Department of Defense, United States Navy and United States Marine Corps. Introductory course for the Naval Reserve Officer Training Corps (NROTC) by laying the basic foundation of knowledge about the Navy and Marine Corps required to progress through the NROTC program. Also provides the requisite knowledge to allow follow-on shipboard summer training to be safely and effectively conducted.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		
NAV	102	Sea Power and Maritime Affairs	Inform the participants of the historical evolution of sea power for the U.S. Navy and world history. Also covers the evolution of international terrorism and the effects on U.S. strategies and policies regarding potential adversaries.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Credit is allowed for only NAV 102 or NAV 194 (Sea Power and Maritime Affairs)
NAV	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-3		
NAV	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-4		
NAV	202	Navigation	Basic principles, procedures and analytic processes of marine navigation.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Credit is allowed for only NAV 202 or NAV 294 (Navigation)
NAV	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-4		

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NAV	301	Naval Ship Systems I	Provides detailed knowledge of naval engineering systems and principles of ship construction. Topics covered include ship design, hydrodynamic forces, stability, conventional and nuclear propulsion, electrical theory and systems, hydraulics and ship control. Concepts of the theory and design of steam, gas turbine and diesel propulsion.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 301 or NAV 394 (Navy Ship Systems I - Engineering)
NAV	302	Naval Ship Systems: Weapons	Overview of the theory and concepts underlying modern weapon systems used aboard naval warships.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 302 or NAV 394 Naval Ship Systems II: Weapons
NAV	303	Evolution of Warfare	Provides marine option students with a basic understanding of the art, science and concepts of war from the beginning of recorded history to the present day. Addresses the interrelationships among technology, politics, culture and society to better understand warfare today and in the future.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 303 or NAV 394 Evolution of Warfare
NAV	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-4		
NAV	401	Naval Operations and Seamanship	In-depth study of numerous aspects relating to the efficient and professional manner of U.S. Navy ships' operations.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 401 or NAV 494 (Naval Operations and Seamanship)
NAV	402	Leadership and Ethics	Applies leadership and ethical theories discussed to an actual leadership or ethical dilemma or issue that Junior Officers in the Fleet or FMF are currently facing or have faced in the recent past.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 402 or NAV 494 (Leadership and Ethics)
NAV	403	Amphibious Warfare	Focuses on the historical aspect of amphibious operations. Emphasizes how the development of this war fighting discipline played a key role throughout much of the early history of the Marine Corps.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Naval Science	3		Prerequisite(s): minimum 30 hours; Credit is allowed for only NAV 394 (Amphibious Warfare) or NAV 403
NAV	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Naval Science	1-4		
NAV	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	Department of Naval Science	1-3		
NEU	555	Advanced Molecular and Cellular Sciences	Study of structural and functional organization of biomolecules and cells, based on current literature.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-6		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MCB 555 or NEU 555
NEU	556	Human Systems Neuroscience	Systems-level neuroscience course focusing on human diseases. Classes involve lectures and/or other activities such as observations of clinical procedures and tours of clinical facilities (e.g., the neurosurgical suite, imaging facilities).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Pre-requisite: Neuroscience PhD major. Credit is allowed for only BIO 598 (Human Sys Neuroscience), BME 556 or NEU 556
NEU	558	Neuroscience Journal Club	Small class emphasizing discussion, presentation by students, and written research papers.	N	SEM	Y	GNA	Liberal Arts and Sciences	School of Life Sciences	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
NEU	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		Pre-requisites: Interdisciplinary Graduate Program in Neuroscience PhD students
NEU	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	GRD	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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NEU	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
NEU	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NEW	101	The ASU New College Experience	Required, one-credit course for new incoming freshmen. Offered in small classes capped at 19, introduces students to the unique elements, culture, challenges and opportunities of their university. Covers several core topics, including how to be successful at ASU, what it means to be a New College student, understanding interdisciplinarity, the significance of academic integrity, academic skill building, advising, service learning, the freshman first-year reading and discovering your major and/or career.	N	LEC	N	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1		Credit is allowed only for ASU 101 or NEW 101
NEW	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-3		Prerequisite(s): freshman standing with 25 or fewer hours
NEW	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
NEW	200	Innovation Challenge, Service Learning and Leadership	Integrates academic coursework with lessons in leadership, community engagement and service learning in order to cultivate students' civic mindedness, knowledge and sensibility to issues of social justice and community engagement. Students develop solutions to real-life challenges and participate in implementing a community-based service learning project. Applying multicultural engagement and interdisciplinary knowledge and critical thinking skills to civic responsibility, course provides students with skills and knowledge applicable to the mission and goals of ASU and the New College.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Credit is allowed for only NEW 200 or IAS 294 (Innovation Challenge, Service Learning, Leadership)
NEW	210	From Passion to Practice: Charting Your Path	Part self discovery, part professional boot camp, this highly interactive course allows students to explore their strengths and passions and utilize them most effectively in their careers. Drawing upon the expertise of successful leaders, organizations and guest speakers from diverse professions, students learn skills and methodology that prepare them for entry into a fulfilling profession.	N	LEC	N	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Credit is allowed for only IAS 294 (Passion to Practice: Charting Your Path) or NEW 210
NEW	225	Building a Better You	Equips students to manage their lives effectively and integrate beliefs, values and skills into fulfilling careers. Students develop a focused career path based upon their learning profile, interests and self-knowledge. Develops critical thinking and reading skills needed for effective decision making and communication. Uses the Let Me Learn Advanced Learning System® to enhance self-awareness and growth.	N	LEC	N	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		
NEW	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		
NEW	300	International Cities	Expands the global awareness of students through intensive study of a major international city. Students study such areas as the history, political system, economy, geography, architecture, science, technology, arts and/or culture of the city before visiting it physically during a break. While abroad, students build on what they have learned in class by exploring the city and experiencing it firsthand.	N	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours
NEW	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): minimum 45 hours
NEW	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): minimum 45 hours
NEW	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-4		Prerequisite(s): minimum 45 hours

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NEW	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-3		
NLM	160	Voluntary Action and Community Leadership	Introduction to voluntary behavior in American society for students interested in volunteerism, community service, and civic engagement.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	SB	
NLM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
NLM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
NLM	220	Introduction to Nonprofit Organizations	Introduces the nonprofit sector and its role in developing the cultural, economic, and social impact in U.S. society.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
NLM	235	Leadership and Ethics	Examines ethical questions faced by emerging leaders. Focuses on helping students develop emotional intelligence, current professional issues, and the refinement of a professional philosophy and comprehensive set of competences that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only CRD 235 or NLM 235
NLM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
NLM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
NLM	300	Fund Raising and Resource Development	Theory and practice of philanthropy, resource acquisition methods through ethical fund raising, and earned income approaches for nonprofit organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
NLM	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301
NLM	302	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	C	Pre-requisites: ENG 102; MAT 142 or higher; NLM 160 (or PRM 120) with C or better; Minimum 2.50 GPA; Minimum 45 earned hours; Credit is allowed for only CRD, NLM, PRM or TDM 302
NLM	310	Volunteer Management	Studies volunteer administration practices integral to community organizations providing an introduction to management techniques including program organization, recruitment, interviewing, placement, supervision, recognition and evaluation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only NLM or PRM 310
NLM	320	Professional Development Seminar	Professional seminar featuring nonprofit executives; variable topics on leadership and management concerns. Forum for exchange between students and professionals.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Pre-requisites: Nonprofit Leadership Alliance (formerly American Humanics) certification program student
NLM	380	Financial Management for Nonprofit Organizations	Instructs students about nonprofit financial, management, and social accounting; accounting issues specific to nonprofits; budgeting; reporting; and nonprofit analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Nonprofit Leadership and Management major students or Nonprofit Administration minor students or American Humanics Certificate students; NLM 220 with a C or better
NLM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		

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NLM	402	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre- or corequisite(s): CSM 401, NLM 410, PRM 401, or TDM 401 with C or better if completed; Credit is allowed for only CSM 402 or NLM 402 or PRM 402 or TDM 402
NLM	403	Leadership and Professional Development	Examines leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: NLM, PRM or TDM 210 and NLM, PRM or TDM 301 with C or better; Senior standing; 2.50 GPA. Credit is allowed for only CRD, NLM, PRM or TDM 403
NLM	410	Social Entrepreneurship	In-depth study of social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or NLM 210; NLM 220
NLM	420	Nonprofit Leadership Alliance Institute	Nonprofit Leadership Alliance Institute for preparation of nonprofit professionals. Requires out-of-state conference.	Y	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-2		Pre-requisite: Nonprofit Leadership Alliance (formerly American Humanities) certification program students
NLM	430	Managing Nonprofit Organizations	Analyzes administrative structures, decision making, and program delivery within nonprofit organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	L	Prerequisite(s): NLM 220 and 300 with C or better; senior standing
NLM	435	Service Learning for Community Development	Applies youth and adult development theories through community service immersion in collaboration with local nonprofit partners.	N	REC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): Minimum 45 hours. Credit is allowed for only CRD 435 or NLM 435
NLM	451	Grant Writing	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only NLM 451, 565 or PRM 451
NLM	463	Senior Internship	Supervised guided experience in selected agencies.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	6-12		Prerequisite(s) with C or better: CRD 403 or PRM 413; CSM 402 or NLM 402 or PRM 402 or TDM 402. Credit is allowed for only CSM 463 or NLM 463 or PRM 463 or TDM 463
NLM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; Minimum 72 hours; Minimum 2.50 GPA; Non-SCRD majors
NLM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
NLM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6	L	Prerequisite(s): Barrett Honors student
NLM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
NLM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
NLM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-7	L	
NLM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
NLM	510	The Nonprofit Sector	Provides grounding in scope, function and philosophical foundations of the nonprofit sector in American society, including civic engagement, service delivery, reproduction of values and entrepreneurship.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	520	Financial and Resource Management	Baseline understanding of key and critical financial management issues and practices for nonprofit organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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NLM	525	Fundraising and Resource Development	Examines fundraising and resource development in philanthropy from the perspective of the nonprofit practitioner. Also examines issues confronting nonprofit organizations related to fundraising and philanthropic purposes in society. Increases students' knowledge and understanding of charitable giving and fundraising—who gives to what, why, and how to raise funds for a cause. Examines a wide range of fundraising methods and tools. Focuses on critical thinking, reflection on practice, collaboration, discussion and writing.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	530	Program Evaluation and Information Management	Develops skills in several areas, including evaluation, needs assessment, information and data collection, data management and analysis, computer applications, and report writing.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	540	Strategic Human Resources Management	Managing human resources in nonprofit organizations; practices and theories.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	545	Volunteer Resource Management	Core topics in effective management of volunteers in carrying out the mission of organizations and ensuring volunteers have good experience with community organizations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only NLM 545 or 598 (Volunteer Resource Management)
NLM	550	Philanthropy	Examines the role of philanthropy and charitable giving in contemporary American society from perspectives of the nonprofit practitioner, the philanthropist and the general public.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	560	Leadership and Ethics in the Nonprofit Sector	Examines leadership and ethical questions encountered by managers and leaders in the nonprofit organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	562	Social Entrepreneurship	Introduces social entrepreneurship, including how ideas are formulated, constructed, and implemented; experiential learning in developing a social enterprise plan.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only NLM 410 or 562
NLM	565	Grant Writing Nonprofit Organizations	Provides practical, experiential instruction identifying grant makers, writing proposals, developing budgets, and evaluating grant proposals for the nonprofit sector. Students develop proposals based on actual, identified needs of their partner nonprofit organization.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: Graduate (degree or non-degree) student; Credit is allowed for only NLM 451, 565 or PRM 451
NLM	570	International Non-Governmental Organizations	Increases knowledge and understanding of international non-governmental organizations by examining what these organizations do and how they operate in a cross-cultural context.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	572	Community and Social Innovations	Considers community innovation and development from the perspective of achieving balance among economic, environmental, social, physical and political realms as a framework of sustainability.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CRD, NLM 572 or NLM 598 (Community & Social Innovations)
NLM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		
NLM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NLM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	605	Nonprofits, Law and Society	Enhances the legal sensibilities of nonprofit leaders and engaged stakeholders. This necessitates critical in-depth understanding of: (1) legal needs common to all nonprofit organizations, regardless of mission or area of focus such as nonprofit corporation law, tax-exempt status, fiduciary duties and fundraising and lobbying ethics and parameters; (2) commonalities among nonprofit, for-profit and governmental enterprises operating within similar spheres of society, especially the importance of nonprofit organizations' compliance with laws generally applicable to specific subsectors such as contracts, labor and employment, volunteer and premises liability, and intellectual property; and (3) the overall importance and impact of legal structures on nonprofit organizations' abilities to successfully pursue their missions for the benefit of society.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	610	Executive Leadership and Governance	Examines the multiplicity of roles for executives and board of directors in providing strategic leadership for nonprofits.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NLM	620	Capstone: Integrative Seminar	Improves understanding of trends emerging within nonprofits such as leadership, resource development, and social responsibility.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite: Master of Nonprofit Studies major
NTR	100	Introductory Nutrition	Basic concepts of human nutrition. Recent controversies in nutrition and how food choices affect personal health.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 100 or 241
NTR	142	Applied Food Principles	Applied scientific principles of food preparation and production.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): Nutrition (Dietetics or Food and Nutrition Management or Food and Tourism Management or Human Nutrition or Nutrition Communication) major OR Food and Nutrition Management minor OR Child Nutrition certificate
NTR	150	Introduction to the Professions in Nutrition and Dietetics	Introduces the professions of nutrition and dietetics; their history, practice, and future; credentials, ethics, and standards of practice.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		
NTR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
NTR	241	Human Nutrition	Principles of human nutrition. Emphasizes nutrient metabolism and the relationships between diet and disease.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: CHM 101 or 113
NTR	290	Introduction to Evidence-Based Practice	Introduces best practices for gathering, interpreting, analyzing, synthesizing and evaluating research within the health and health care professions.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Prerequisite(s) with C or better: College of Health Solutions major; ECN 221, HCD 300, JUS 302, PBH 300, POS 401, PSY 230, SOC 390 or STP 226; ENG 101, 105, or 107; Credit allowed for KIN 290 or KIN 294 (Intro to Evidence Based Practice) or NTR 290
NTR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
NTR	300	Computer Applications in Nutrition	Introduces nutrition and food software, including dietary assessment and analysis, food inventory and control, and telecommunications.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 or 241
NTR	320	History of Human Nutrition	Origins of human nutrition; evolving theories of nutrition and disease; historical role of nutrition in social, military, cultural events.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 or 241
NTR	341	Medical Nutrition Therapy I	First in a three-course sequence in medical nutrition therapy. Introduces the study of nutritional therapy of disease and evidence-based practice in prevention and nutritional management of diseases. Nutrition care planning for chronic diseases is taught via a variety of methods including case studies.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 or 241
NTR	343	Food Service Purchasing	Introduces purchasing systems, bid processes, receiving and storage procedures, and regulatory agencies involved in the food service industry.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: NTR 100 or 241
NTR	344	Nutrition Management and Leadership	Organization, administration, management and leadership in the nutrition field within healthcare, food service and other institutions.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Prerequisite(s): NTR 100 or NTR 241
NTR	345	Development of Healthy Cuisines	Principles and applications of nutrition, food selection, food preparation and mindful eating in the development of healthy cuisine for wellness, prevention and disease states.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 or 241
NTR	348	Cultural Aspects of Food	Origins, development, and diversity of food preferences and dietary habits; food patterns and attitudes of global populations and U.S. immigrants.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB & C & G	Pre-requisites: NTR 100 or 241
NTR	350	Nutrition Counseling	Counseling techniques in nutrition; interpersonal and communication skills in clinical and community sites; nutrition education for individuals and populations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 341 with C or better or NTR 345

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NTR	351	Nutrition Communication	Approaches of nutrition and health communications; development of nutrition and health communication materials for selected target audiences.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Prerequisite(s): ENG 101, 105, or 107 with C or better; NTR 100 or 241
NTR	353	Perspectives on the Western Diet: Food, Health and Sustainability	Hybrid course covering political, ethical, social and cultural issues inherent in the U.S. food system. Topics include examination of U.S. food guidance; the food system and food environment; the history of food and farm policy; food security and aspects of sustainability in relation to food system impacts on the health of humans, society and the environment.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only NTR 353 or NTR 394 (The Western Diet: Food, Health, & Sustainability) or SOS 353
NTR	360	Entrepreneurship and Value Creation	Exploration of entrepreneurial opportunities in nutrition, food service, wellness and health communications.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only FSE 301 or MGT 360 or NTR 360 or NTR 494 (Nutrition Entrepreneurship)
NTR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
NTR	400	Preprofessional Preparation in Dietetics	Applies academic knowledge in field practicum; aspects of professional development.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1		Pre-requisites: Nutrition/Dietetics students; Senior status; NTR 341 with C or better; NTR 440, 441 or 444 with C or better
NTR	401	Field Experience in Food and Nutrition	Applies academic knowledge in food service management to field practicum; develops practical skills in planning, purchasing, production, management.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: Food and Nutrition management, Nutrition Communication, or Human Nutrition students; Senior standing; Pre/Co-requisites: NTR 351, 343 or 444
NTR	440	Advanced Human Nutrition I	Metabolic reactions and interrelationships of vitamins, minerals, and water.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): BIO 202 with C or better; NTR 241 with C or better; NTR 341 with C or better; Pre- or corequisite(s): BCH 361 with C or better if completed; Credit is allowed for only NTR 440 or NTR 540
NTR	441	Advanced Human Nutrition II	Metabolic reactions and interrelationships of carbohydrate, lipid, and protein.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BCH 361 with C or better; BIO 202; NTR 241; Credit is allowed for only NTR 441 or 541
NTR	442	Experimental Functional Foods	Food product development techniques, food evaluation and testing, and investigation of current research into food composition.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: CHM 101 or CHM 113; NTR 142; NTR 100 or NTR 241
NTR	444	Medical Nutrition Therapy II	Second in a three-course sequence in medical nutrition therapy. Covers the principles of medical nutrition therapy for prevention and treatment of disease and promotion of health.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): BIO 202; NTR 341 with C or better; Credit is allowed for only NTR 444 or NTR 544
NTR	445	Management of Food Service Systems	Standardized methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: NTR 100 or NTR 241; NTR 142; NTR 343; Credit is allowed for only NTR 445 or 545
NTR	446	Medical Nutrition Therapy III	Third in a three-course sequence in medical nutrition therapy. Content includes hands-on assessment techniques, evaluation and interpretation of laboratory data, and nutrition support with relation to disease process and progression. Nutrition assessment is taught via a variety of methods including case studies.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	4		Prerequisite(s): NTR 444 with C or better; Pre- or corequisite(s): BCH 361; Credit is allowed for only NTR 446 or NTR 546
NTR	448	Community Nutrition	Food-related behaviors; organization and delivery of nutrition services; program design, implementation, and evaluation strategies; nutrition assessment of populations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	L	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 448 or 548
NTR	450	Nutrition in the Life Cycle	Nutritional needs and problems in pregnancy and lactation, infancy, childhood, adolescence, adults and older adults. Analysis of cultural, environmental, behavioral, psychosocial, physical and socio-economic factors affecting nutritional status through the life span.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3	SB	Pre-requisite: NTR 100 or NTR 241; Credit is allowed for only NTR 450 or 550
NTR	453	Nutrition and the Media	Examines the promotion of nutrition ideas and concepts through media.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: Minimum 45 hours; Credit is allowed for only NTR 453 or 494 (Nutrition and the Media)
NTR	455	Retail Food Service Operations	Development, evaluation and management of retail food service operations; legal and ethical issues in food and beverage management. Capstone course for food management degrees.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: NTR 100 (or 241); Junior standing
NTR	457	Sports Nutrition	Nutritional needs of recreational and elite athletes; energy balance; nutrient metabolism during activity; fluid-electrolyte regulation; evaluation of ergogenic supplements.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: BIO 201; NTR 241

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NTR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6		Prerequisite(s): Barrett Honors student
NTR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-6	L	Prerequisite(s): Barrett Honors student
NTR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
NTR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-7	L	
NTR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-3		
NTR	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	501	Research Methods in Nutrition II	Reviews survey, focus group, and epidemiologic research; develops questionnaires; analyzes large data sets.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	503	Designing Health Behavior Change Interventions	Project-based course focuses on the process of health behavior change interventions using design process and behavioral science.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only NTR 503 or 598 (Designing Health Behavior Change Interventions)
NTR	523	Vegetarian Nutrition	Health benefits, nutritional characteristics, potential risks of vegetarian diets.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	525	Complementary Nutrition	Critical review of functional foods, phytochemicals, nutrient supplements in health promotion.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	527	Policies, Environment, and Obesity Prevention	Enhances students' understanding of the role policies and environments play in health promotion and disease prevention with a special focus on obesity prevention. Looks at a variety of examples to see how policies and environments related to food, nutrition and physical activity affect individual and community health. Also explores how "non-health" policies can be used as an effective tool to promote healthy behaviors.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	529	Pediatric Nutrition	Critical review of pediatric disease states and current nutritional therapies.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	530	Techniques of Health Coaching	Health coaching techniques and skills for medical, allied health and health promotion professionals. The content illustrates the theory, principles and practices of evidence-based coaching psychology. Aligns with the training programs affiliated with Wellcoaches® (endorsed by the American College of Sports Medicine). Designed in three parts: (1) building of core coaching skills; (2) establishing generative moments with clients; and (3) developing coaching presence and positive psychology.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HSC 440 or NTR 530
NTR	532	Endocrine Pathophysiology and Nutrition	Explores the etiology of various endocrine pathophysiological conditions. Throughout the course, students learn the etiology of common conditions and are responsible for finding and presenting evidence for nutrition-based treatments for these conditions. At the conclusion of the course, students gain an appreciation and understanding of current research in nutrition-based approaches to treat endocrine disorders.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	533	Ethics and Policy of American Diets	Political and ethical issues inherent in the U.S. food system. Topics include food and agricultural policy, government dietary recommendations and regulations, food environment, current issues in food politics, ethical questions of food choice, issues of obesity and food security, sustainability, and investigation of how and why Americans eat the way they do.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	535	Nutrigenomics	Provides a sound foundation for promoting personalized nutrition by integrating and applying molecular nutrition and nutritional biochemistry to clinical settings.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Pre-requisite: BCH 361; BCH 367; NTR 440 or 441
NTR	537	Evidenced-Based Nutrition	Reviews current evidence of the role of diet on disease prevention, development, and management.	N	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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NTR	539	Global nutrition	Provides an overview of global nutrition issues, including the epidemiology, etiology, sociocultural and economic context, and program and policy responses to nutrition-related topics. Areas to be covered include childhood malnutrition, growth stunting, micronutrient deficiencies, parasites and nutrition, sanitation, and obesity and chronic disease incidence in developing countries. Course is participatory; students engage in a series of class activities, discussions, and presentations.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		
NTR	540	Advanced Micronutrient Metabolism	Metabolism of vitamins and minerals, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 440 or 540
NTR	541	Advanced Macronutrient Metabolism	Metabolism of protein, fat, and carbohydrate, primarily as applied to humans, with research literature emphasized.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 441 or 541
NTR	544	Therapeutic Nutrition	Current theories of the nutritional prevention or treatment of various diseases.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 444 or 544
NTR	545	Management of Institutional Food Service Systems	Standardizes methods of quantity food preparation, operation of institutional equipment, institutional menu planning, quantity food experiences. May require field trips.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 445 or 545
NTR	546	Assessment Techniques in Nutrition	Clinical and biochemical evaluation of nutritional status.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	4		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only NTR 446 or NTR 546
NTR	548	Advanced Community Nutrition	Planning, development, implementation, and evaluation of community nutrition programs, including the process of grant applications.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only NTR 448 or 548
NTR	550	Advanced Nutrition in the Life Cycle	In-depth review of metabolic characteristics and nutritional needs during pregnancy and lactation, infancy, childhood, adolescence, adults and older adults. Analysis of cultural, environmental, behavioral, psychosocial, physical and socio-economic factors affecting nutritional status through the life span.	N	LEC	N	OPT	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking). Credit is allowed for only NTR 450 or NTR 550
NTR	551	Geriatric Nutrition	Explores the impact of nutrition on the aging process and how the aging process influences nutritional needs. Examines the physiology, demographics and economics of aging as well as issues such as end-of-life care. Addresses health promotion, disease prevention and disease management within the context of geriatric nutrition.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	553	Nutrition and Cardiovascular Disease	Reviews current evidence of the role of diet on cardiovascular disease prevention, development and management.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): NTR 541. Credit is allowed for only NTR 553 or NTR 598 (Nutrition and Cardiovascular Disease) or NTR 537 (Cardiovascular Nutrition)
NTR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		
NTR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		
NTR	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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NTR	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NTR	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NUR	300	Professional Nurse Concepts I	Introduces students to professional nursing attributes.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): enrollment into upper-division Nursing program; Pre- or corequisite(s): NUR 325; NUR 336; NUR 352
NUR	310	Nursing Concepts	Theoretical concepts related to health integrity focusing on the individual client across the life span.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: BSN Nursing major in clinical program
NUR	311	Pharmacology	Applications of pharmacologic interventions.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing major in clinical program OR postbaccalaureate Clinical Nursing Program major
NUR	312	Psychomotor Skills for Professional Nursing Practice	Theoretical foundation for application of psychomotor nursing skills to professional nursing practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): Nursing major in clinical program. Credit is allowed for only NUR 312 or NUR 394 (Psychomotor Skills For Professional Nursing Prac)
NUR	313	Nursing Concepts for Adult Health	Nursing concepts related to selected alterations in health with focus on adult populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 310 and NUR 311 and NUR 330 all with C or better if completed; NUR 320 with Y passing grade; Corequisite(s): NUR 323; Credit is allowed for only NUR 313 or NUR 394 (Nursing Concepts for Adult Health)
NUR	315	Nursing Research and Application to Practice	Provides scientific and clinical inquiry and research methodology along with concepts needed for integration of evidence into practice.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	L	Prerequisite(s): Traditional BSN or Post Baccalaureate BSN: NUR 330 with C or better. RN/BSN: TWC 361 with C or better; NUR 391 with C or better
NUR	316	Nursing Concepts for Psychiatric/Mental Health	Theoretical concepts related to select psychiatric/neurobiological disorders as they affect nursing practice, with focus on individuals, families, and groups.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 310 with C or better if completed; NUR 311 with C or better if completed; NUR 330 with C or better if completed
NUR	317	Nursing Concepts for Psychiatric/Mental Health Nursing	Theoretical concepts related to select and/or prevalent psychiatric/neurobiological disorders as they affect nursing practice, with focus on individuals, families and groups.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): NUR 311; NUR 330; NUR 356; NUR 366; Corequisite(s): NUR 367; Credit is allowed for only NUR 317 or NUR 494 (Nursing Theory for Psychiatric Mental Health)
NUR	320	Nursing Practice	Integrates knowledge and attitudes from theory into the nursing care of adults in a variety of health care settings.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): Nursing major in clinical program; Corequisite(s): NUR 310; NUR 311; NUR 312; NUR 330

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NUR	323	Nursing Practice Adult Health	Applies nursing process with selected alterations in health with focus on adult populations in the acute care setting.	N	LAB	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 310 and NUR 311 and NUR 330 all with C or better if completed; NUR 320 or NUR 484 (Nursing Practice) with Y passing grade if completed; Corequisite(s): NUR 313 or NUR 394 (Nursing Concepts Adult Health)
NUR	324	Nursing Practice: Psychiatric/Mental Health	Application of nursing process, critical thinking, clinical decision making with individuals, families, and groups experiencing acute/chronic alterations in mental health and/or psychiatric disorders.	N	SEM	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 310 and NUR 311 and NUR 330 all with C or better if completed; Corequisite(s): NUR 316; Credit is allowed for only NUR 324 or NUR 484 (Nursing Practice: Psychiatric/Mental Health)
NUR	325	Health and Illness Concepts I	Applies physiologic and psychosocial concepts in the client domain.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): enrollment into upper-division Nursing program; Pre- or corequisite(s): NUR 311; NUR 330; NUR 336; NUR 346; NUR 352
NUR	326	Health and Illness Concepts: Adults and Psychiatric/Mental Health	Applies concepts related to health and illness and evidence-based principles in the care of clients experiencing alterations in health. The physiologic and psychosocial concepts focus on the leading causes of morbidity and mortality with emphasis on safe, competent and compassionate nursing care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): NUR 311; NUR 325; NUR 330; NUR 336; NUR 352 all with a C or better if completed; NUR 346 with Y if completed
NUR	330	Professional Nurse Attributes	Professional nursing roles and responsibilities.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	HU	Prerequisite(s): Nursing major in clinical program OR postbaccalaureate Clinical Nursing Program major
NUR	336	Experiential Learning	Applies assessment and care concepts in the nursing domain.	N	LAB	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): enrollment into upper-division Nursing program; Pre- or corequisite(s): NUR 311; NUR 325; NUR 352
NUR	337	Experiential Learning: Intermediate	Practices professional nursing interventions including medication administration, bio-psycho-social care of the adult and childbearing family, and basic developmental assessment of the child.	N	LAB	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): NUR 311; NUR 325; NUR 330; NUR 336; NUR 352 all with a C or better if completed; NUR 346 with a Y if completed
NUR	346	Nursing Practice: Adults and Elders	Applies concepts in the nursing domain.	N	LAB	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): enrollment into upper-division Nursing program; Pre- or corequisite(s): NUR 311; NUR 325; NUR 336; NUR 352
NUR	347	Nursing Practice: Childbearing Family	Applies concepts learned in previous courses to assist with developing plans, providing care and implementing teaching strategies to obstetric and/or gynecological clients and their families.	N	LAB	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): NUR 311; NUR 325; NUR 330; NUR 336; NUR 352 all with a C or better if completed; NUR 346 with a Y if completed
NUR	348	Intermediate Nursing Practice: Adults	Practices skills for professional nursing focusing on providing care for adult clients experiencing acute and chronic physiologic and/or psychiatric alterations in health in multiple acute and community clinical settings. Emphasizes providing safe, competent, compassionate and evidence-based care to individuals and their families.	N	LAB	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): NUR 311; NUR 325; NUR 330; NUR 336; NUR 352 all with a C or better if completed; NUR 346 with a Y if completed
NUR	349	Nursing Practice: Psychiatric Mental Health--Prelicensure BSN	Applies concepts related to bio-psycho-social care of adults experiencing psychiatric alterations in the nursing domain.	N	LAB	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): NUR 311; NUR 325; NUR 330; NUR 336; NUR 352 all with a C or better if completed; NUR 346 with a Y if completed
NUR	352	Fundamental Concepts in Nursing	Applies care concepts in the client and nursing domain.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): enrollment into upper-division Nursing program; Pre- or corequisite(s): NUR 311; NUR 330; NUR 336

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NUR	353	Integration of Concepts Across the Lifespan: Conception to End of Life	Focuses on the physical, cognitive and socio-emotional development of individuals and families using a life cycle approach. Concepts reside in the client domain of health and wellness and include development, reproduction, family roles, spirituality and end-of-life/palliative care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 311; NUR 325; NUR 330; NUR 336; NUR 352 all with a C or better if completed; NUR 346 with a Y if completed
NUR	356	Nursing Theory I	Focuses on the knowledge and skills essential to maintaining the health and wellness of clients across the lifespan and the concepts related to selected alterations in health in the adult population.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	5		Prerequisite(s): Nursing major in clinical program or postbaccalaureate Clinical Nursing Program major; Pre- or corequisite(s): NUR 311
NUR	366	Nursing Practice I Post Baccalaureate	Applies knowledge and skills essential to maintaining health and wellness in clients across the lifespan.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	6		Pre-requisite:Nursing major in clinical program OR postbaccalaureate Clinical Nursing Program major. Pre- or corequisite(s): NUR 356
NUR	367	Nursing Practice: Psychiatric Mental Health-- Postbaccalaureate BSN	Applies nursing process, critical thinking, clinical decision-making with individuals, families, and groups experiencing acute and/or chronic alterations in mental health and/or psychiatric disorders.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 with Y passing grade if completed
NUR	384	Gerontological Nursing	Focuses on optimizing the health of older adults and the management geriatric syndromes and chronic conditions.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Pre- or corequisite(s): NUR 330 with C or better if completed
NUR	391	Professional Nursing Theory	Analyzes the multiple dimensions of contemporary professional nursing.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4	L	Prerequisite(s): ENG 101 with C or better; ENG 102 with C or better; Corequisite(s): TWC 361
NUR	392	Health Promotion Across the Life Span	Examines concepts and theories involved in health promotion across the lifespan and their application for nurses.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: NUR 315; NUR 391; TWC 361
NUR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students
NUR	404	Professional Nurse Concepts: Intermediate	Explores concepts related to quality of care, quality improvement, safety, innovation and communication within health care.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): minimum 45 hours
NUR	405	Professional Nurse Concepts: Advanced	Focuses on preparing to become active members of the nursing profession, including developing strategies for successful transition into professional practice.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 404; NUR 425; NUR 436; NUR 446; NUR 447; NUR 452; Pre- or corequisite(s): NUR 437; NUR 448; NUR 453; NUR 459
NUR	410	Nursing Concepts for Community and Public Health	Examines concepts related to health promotion, disease prevention, and health maintenance within the global community.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 313 and 315 and 316 all with C or better if completed; NUR 323 and 324 with Y grade if completed; Corequisite(s): NUR 420 or 484 (Nur Pract: Comm/Pub Hlth); Credit allowed for only NUR 410 or 494 (Nur Concepts Comm & Pub Hlth)
NUR	411	Nursing Concepts for Child bearing and Pediatric Clients	Concepts related to care of individuals and families within the childbearing and pediatric populations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 313 and 315 and 316 all with C or better if completed; NUR 323 and 324 with Y passing grade if completed; Corequisite(s): NUR 421; Credit is allowed for only NUR 411 or 494 (Nursing Concepts Childbearing Individ & Families)

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NUR	412	Nursing Concepts for Pediatric Patients and their Families	Examines essential concepts related to the nursing care of pediatric patients and their families. Provides a nursing care approach for the pediatric patient and family across the healthcare continuum.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 313 and NUR 315 and NUR 316 all with C or better if completed; NUR 323 and NUR 324 with Y passing grade if completed; Corequisite(s): NUR 422; Credit is allowed for only NUR 412 or NUR 394 (Nursing Concepts: Pediatrics)
NUR	413	Nursing for Complex Care	Advanced theoretical knowledge and interprofessional collaborative care required for the delivery of safe and competent care of the adult client experiencing acute and complex alterations in health.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre- or corequisite(s): NUR 410 and NUR 411 and NUR 412 all with C or better if completed; NUR 420 and NUR 421 and NUR 422 all with Y passing grade if completed; Corequisite(s): NUR 423
NUR	415	Nursing Concepts for Childbearing Family	Examines the care of childbearing clients and their families. Embedded content focuses on providing care to clients along the healthcare continuum.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 with Y passing grade if completed
NUR	416	Nursing Concepts: Community/Public Health	Examines selected concepts, theories, and applications of epidemiology, community assessment, and population-centered health education for community and public health nursing locally and globally.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 315 and NUR 415 and NUR 417 all with C or better if completed; NUR 475 and NUR 477 with Y grade if completed; Corequisite(s): NUR 476
NUR	417	Nursing Concepts: Pediatric Clients	Concepts related to care of individuals and families within pediatric populations.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 with Y passing grade if completed; Corequisite(s): NUR 477
NUR	418	Nursing Concepts: Complex Care	Advanced theoretical knowledge and interprofessional collaborative care required for the delivery of safe and competent care of the adult client experiencing acute and complex alterations in health.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 with Y passing grade if completed; Credit is allowed for only NUR 418 or NUR 478
NUR	419	Leading & Managing Nursing in Organizational Systems	Analyzes selected concepts and theories related to leading and managing nursing in organizational systems.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 315 and NUR 415 and NUR 417 all with C or better if completed; NUR 475 and NUR 477 with Y passing grade if completed; Corequisite(s): NUR 479
NUR	420	Nursing Practice: Community/Public Health	Applies community/public health nursing concepts in the delivery of primary, secondary, and tertiary care in a variety of community settings.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 313 and NUR 315 and NUR 316 all with C or better if completed; Corequisite(s): NUR 410; Credit is allowed for only NUR 420 or NUR 484 (Nursing Practice: Community and Public Health)
NUR	421	Nursing Practice: Child Bearing/Family Nursing	Applies nursing care concepts related to the child-bearing woman and family.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 313 and NUR 315 and NUR 316 all with C or better if completed; NUR 323 and NUR 324 with Y grade if completed; Corequisite(s): NUR 411; Credit is allowed for only NUR 421 or NUR 484 (Nursing Practice: Childbearing Clients)

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NUR	422	Nursing Practice: Pediatrics	Focuses on clinical care of the pediatric client and family.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 313 and NUR 315 and NUR 316 all with C or better if completed; NUR 323 and NUR 324 with Y passing grade if completed; Corequisite(s): NUR 412; Credit is allowed for only NUR 422 or NUR 484 (Nursing Practice: Pediatrics)
NUR	423	Nursing Practice: Complex Care & Clinical Immersion	Students perform nursing practice in a variety of clinical settings, laboratory and simulated patient care environments. Students provide nursing care to patients who are physiologically unstable in advanced medical-surgical, and critical care clinical environments. Students perform advanced psychomotor skills in the clinical, laboratory and simulation environments. Students also complete a clinical immersion experience in a selected clinical setting. During the clinical immersion experience, students have the opportunity to apply leadership and management principles, and work in interprofessional healthcare teams to provide nursing care to clients experiencing health alterations across the lifespan.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	5		Pre- or corequisite(s): NUR 410 and NUR 411 and NUR 412 all with C or better if completed; NUR 420 and NUR 421 and NUR 422 all with Y passing grade if completed; Corequisite(s): NUR 413
NUR	425	Health and Illness Concepts: Adults and Pediatrics	Applies and integrates interrelated concepts related to health and illness concepts. Integrates evidence-based principles into the care of clients experiencing acute alterations in health.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Prerequisite(s): NUR 315; NUR 326; NUR 337; NUR 347; NUR 348; NUR 353; Pre- or corequisite(s): NUR 404; NUR 436; NUR 446; NUR 447; NUR 452; NUR 458
NUR	430	Professional Nurse Attributes: Leadership and Management	Applications of theories and concepts of organizations, management, and leadership with focus on nursing management and leadership in healthcare organizations.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 410 and NUR 411 and NUR 412 all with C or better if completed; NUR 420 and NUR 421 and NUR 422 all with Y passing grade if completed; Corequisite(s): NUR 431
NUR	431	Professional Nurse Attributes Innovative Professional	Focuses on the process of transition to the professional nursing role, and the gathering, interpretation, and evaluation of evidence that serves as a basis for improving client outcomes and professional satisfaction.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3	L	Pre- or corequisite(s): NUR 315 with C or better if completed; NUR 330 with C or better if completed
NUR	436	Experiential Learning: Advanced	Students practice skills for professional nursing including advanced medication administration and bio-psycho-social care of the child and acutely ill adult.	N	LAB	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 315; NUR 326; NUR 337; NUR 347; NUR 348; NUR 353; Pre- or corequisite(s): NUR 404; NUR 425; NUR 446; NUR 447; NUR 452; NUR 458
NUR	437	Experiential Learning: Readiness to Practice	Students demonstrate readiness for interprofessional nursing practice including coordination of nursing care of multiple patients.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 404; NUR 425; NUR 436; NUR 446; NUR 447; NUR 452; NUR 458; Pre- or corequisite(s): NUR 405; NUR 453; NUR 459
NUR	440	Community and Public Health Nursing in the United States	Examines selected concepts, theories and applications of epidemiology, community assessment, and population-centered health education for <u>community and public health nursing in the United States.</u>	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: NUR 391; NUR 315; TWC 361 with C or better
NUR	444	Innovation in Nursing	Examines the role and behaviors of an innovator in the nursing profession.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: NUR 315; NUR 391; TWC 361 with C or better
NUR	445	Nursing Management in Health Care	Examines selected theories and concepts of organizational behavior and the management of people and resources. Focuses on the application of selected management theories and concepts to nursing practice and healthcare systems.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: NUR 315; NUR 391; TWC 361 with C or better
NUR	446	Complex Nursing Practice: Adults	Prepares learners in the application and demonstration of advanced theoretical knowledge, professional nursing practice, and interprofessional collaboration and referral in the management and delivery of safe, competent care of adult clients experiencing serious health alterations.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): NUR 315; NUR 326; NUR 337; NUR 347; NUR 348; NUR 353; Pre- or corequisite(s): NUR 404; NUR 425; NUR 436; NUR 447; NUR 452; NUR 458

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NUR	447	Nursing Practice: Pediatrics	Applies previous nursing knowledge to develop plans of care and implement teaching strategies to pediatric clients and their families.	N	LAB	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): NUR 315; NUR 326; NUR 337; NUR 347; NUR 348; NUR 353; Pre- or corequisite(s): NUR 404; NUR 425; NUR 436; NUR 446; NUR 452; NUR 458
NUR	448	Nursing Practice Readiness	Prepares the learner for the practice of professional nursing in diverse settings.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 404; NUR 425; NUR 436; NUR 437; NUR 446; NUR 447; NUR 452; NUR 458; Pre- or corequisite(s): NUR 405; NUR 453; NUR 459
NUR	452	Concepts in Population-Based Health	Assesses and examines the management of health and disease in the community. Focuses on health promotion, disease prevention and identification of barriers that prevent populations from maintaining optimal health. Discusses public health theories and models including epidemiology, health education and health behavior theory.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 315; NUR 326; NUR 337; NUR 347; NUR 348; NUR 353; Pre- or corequisite(s): NUR 404; NUR 425; NUR 436; NUR 446; NUR 447; NUR 458
NUR	453	Integration Concepts in the Health Care	Explores the impact of health care policy, systems, economics, law and informatics on the delivery of health care today and in the future.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3	L	Prerequisite(s): NUR 404; NUR 425; NUR 436; NUR 446; NUR 447; NUR 452; Pre- or corequisite(s): NUR 405; NUR 437; NUR 448; NUR 459
NUR	458	Interprofessional Education and Collaboration Seminar	Focuses on the assessment and analysis of health and disease in the community and population. Provides the data for the IPE Seminar in Senior 2 where an Interprofessional Team of students utilizes the information to plan and implement interventions to improve the health status of communities and populations.	N	SEM	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s): NUR 315; NUR 326; NUR 337; NUR 347; NUR 348; NUR 353; Pre- or corequisite(s): NUR 404; NUR 425; NUR 436; NUR 446; NUR 447; NUR 458
NUR	459	Interprofessional Education and Collaboration Seminar: Advanced	Focuses on the development, implementation and evaluation of a community action project.	N	SEM	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 404; NUR 425; NUR 436; NUR 446; NUR 447; NUR 452; NUR 458; Pre- or corequisite(s): NUR 405; NUR 437; NUR 448; NUR 453
NUR	460	The Art of Nursing	Explores the aesthetic, ethical, and personal patterns of knowing in nursing for the practicing RN.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4	HU	Pre-requisites: NUR 391; NUR315; TWC 361 with C or better
NUR	464	Capstone: The Synthesis of Professional Nursing	Synthesizes theories and concepts for professional nursing practice with a focus on role transition.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4		Pre-requisites: BIO 202; CHM 101; MAT 142; MIC 205; NUR 392; NUR 440; NUR 444; NUR 445; NUR 460; NUR 495; PGS 101 (or CDE 232) with C or better
NUR	475	Nursing Practicum: Care of the Childbearing Family	Applies nursing care concepts related to the childbearing woman and family.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 and NUR 367 with Y passing grade if completed; Corequisite(s): NUR 315; NUR 415
NUR	476	Nursing Practice: Community and Public Health	Applies community and public health nursing concepts in the delivery of primary, secondary, and tertiary prevention from a population-centered perspective.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 415 and NUR 417 with C or better if completed; NUR 475 and NUR 477 with Y grade if completed; Corequisite(s): NUR 416
NUR	477	Nursing Practice: Pediatrics	Focuses on clinical care of the pediatric client and family.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 311 and NUR 330 and NUR 356 all with C or better if completed; NUR 366 and NUR 367 with Y passing grade if completed; Corequisite(s): NUR 315; NUR 417

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
NUR	478	Nursing Practice: Complex Care	Applies advanced psychomotor and leadership skills, nursing care delivery management, and interprofessional referral and collaboration for clients experiencing health alterations across the lifespan in advanced care settings.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 415 and NUR 417 with C or better if completed; NUR 475 and NUR 477 with Y passing grade if completed; Corequisite(s): NUR 418
NUR	479	Nursing Practice: Clinical Immersion	Builds on the knowledge and skills obtained in the nursing curriculum and integrates the curriculum concepts in varied and diverse practice settings. Supports the student's transition into the role of the professional registered nurse.	N	PRA	N	YGB	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Pre- or corequisite(s): NUR 415 and NUR 417 with C or better if completed; NUR 475 and NUR 477 with Y passing grade if completed; Corequisite(s): NUR 419
NUR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Upper Division Nursing Program students
NUR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-6		Prerequisite(s): Barrett Honors student
NUR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-6	L	Prerequisite(s): Barrett Honors student
NUR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Pre-requisites: Upper Division Nursing Program students
NUR	495	Public and Global Health in Nursing	Analyzes public health concepts, theories, and practice with a focus on the health of all clients in a global environment. Includes core public health functions, domestic and international health care delivery systems, public health and health policy, conceptual and scientific frameworks for community/public health nursing practice, epidemiology, and global health issues.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	4	G	Pre-requisites: NUR 315, 391, and TWCC 361 with C or better
NUR	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-6		Prerequisite(s): Barrett Honors student
NUR	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-7	L	Pre-requisites: Upper Division Nursing Program students
NUR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-3		
NUR	501	Individual and Innovation Leadership in Advanced Nursing Practice	Examines the role and behaviors of an innovator in an advanced nursing practice role. Explores the skills required to create a compelling vision to influence others through innovation and ethical leadership. Examines and correlates different situational challenges utilizing principles of complexity and emotional intelligence to advance innovation in advanced nursing practice roles.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Nursing (Care Coordination) MS or Nursing Education MS or Nursing (Patient Safety and Health Care Quality) MS
NUR	502	Advanced Health Assessment, Pathophysiology and Pharmacotherapeutics for Health Promotion I	Uses a lifespan developmental framework to present, integrate and interrelate advanced concepts, practices and principles applied to the biological, cognitive and psychosocial domains of health assessment, pathophysiology, and pharmacotherapeutics for health promotion appropriate to master's level nursing practice and roles.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to a Nursing MS program
NUR	503	Advanced Health Assessment, Pathophysiology and Pharmacotherapeutics for Health Promotion II	Uses an at-risk population framework to present, integrate and interrelate advanced concepts, practices and principles applied to the biological, cognitive and psychosocial domains of pathophysiology, pharmacotherapeutics and health assessment for health promotion among vulnerable populations appropriate to master's level nursing practice and roles.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 502 with B- or higher
NUR	509	Clinical Prevention and Population Health Practicum	Preceptored practicum appropriate to master's level nursing practice and roles within the context of team-based interprofessional clinical prevention and population healthcare and/or services.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	2		Prerequisite(s) with B- or better: DNP 604; 605; 608; 633
NUR	510	Foundations of Care Coordination Practice	Focuses on the theoretical concepts of care coordination and case management, including current models, intervention components, evaluation methods and financing. Provides the foundation for understanding care coordination and the roles nurses have played in the evolution and implementation of the care coordination models.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Nursing (Care Coordination) MS degree or certificate program
NUR	511	Concepts of Care Coordination and the Nurse's Role	Focuses on how nurses make care coordination visible in nursing practice and make a difference in cost-efficiency, quality and safety outcomes. Prepares nurses to advance care coordination at the unit, organizational or systems levels.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre- or corequisite(s): NUR 510 with B- or better if completed

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NUR	512	Improving Quality and Safety Outcomes Through Effective Care Coordination	Focuses on the nurse's role in care coordination, and how care coordination programs are used to provide cost-effective and patient-centered care, improve quality and safety outcomes for patients and families, and use health information technology to advance the goals of care coordination.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): admission to Nursing (Care Coordination) MS degree or certificate program
NUR	513	Interprofessional Collaborative Practice and Transforming Health Care Policy	Examines the nurse's role in communicating, collaborating and leading interprofessional teams to advance innovative care coordination models. Prepares nurses to influencing health policy through care coordination research and leadership.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s) with B- or better: NUR 510; 511
NUR	519	Role-Focused Practicum: Care Coordination	This mentored practicum provides the learner with opportunities to apply care coordination (CC) concepts and principles in a practice environment at the unit, organization or systems levels. Tailored to the prior experiences and level of the learner and may include working in intra- and interprofessional teams to address care coordination initiatives at the unit, organizational or systems levels.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 510 with B- or better; NUR 511 with B- or better; NUR 512 with B- or better; NUR 513 with B- or better
NUR	520	Patient Safety and Health Care Quality Principles, Assessment and Methods	Focuses on the application of core principles of patient safety and health care quality to patients. Explores current and historical factors that contribute to quality health care outcomes. Examines the influence of financial, legal and regulatory factors on patient safety and health care quality. Applies various theories, concepts and tools to promote patient safety and health care quality. Describes the principles of just culture and the relationship to analyzing errors. Discusses the nurse's role in advancing patient safety and health care quality. Infuses the Quality Safety Education in Nursing (QSEN) competencies into course activities.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing (Patient Safety and Health Care Quality) MS major
NUR	521	Health Care Evidence, Informatics and Analysis	Focuses on applying information technology and research methodology to safety and quality initiatives. Students learn the role of technology related to select human factors engineering concepts and related clinical application (e.g., medication administration, clinical decision making). Focuses on determination of outcome measures related to evidence-based practice (EBP) and quality improvement (QI). Discusses survey methods including construction, data collection methods, and data analysis.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 520 with B- or better
NUR	522	Designing Systems for Patient Safety and Health Care Quality	Focuses on the design, implementation, evaluation and sustainability of patient safety and health care quality initiatives. Uses innovation and change theories, as well as high reliability and just culture principles, to support data collection, analysis and reporting within complex health care systems.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 520 with B- or better; NUR 521 with B- or better
NUR	523	Interprofessional Collaboration for Improving Patient Safety and Health Care Quality Outcomes	Focuses on developing skills and strategies for interprofessional collaboration, team leadership, communication, and project management to improve patient safety and health care quality outcomes in an interprofessional health-related setting. Theory and evidence-based strategy for team building, maintenance and conflict resolution for improved team-based practice and performance.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 520 with B- or better
NUR	529	Role-Focused Practicum: Patient Safety and Health Care Quality	Mentored practicum provides opportunities to apply patient safety and health care quality (PSHQ) concepts and principles in a practice environment at the unit, organization or systems levels. Tailored to the prior experiences and level of the learner.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 520 with B- or better; NUR 521 with B- or better; NUR 522 with B- or better; NUR 523 with B- or better
NUR	530	Foundational Concepts for Nursing Informatics	Focuses on the foundational concepts of nursing informatics. Analyzes the scope and standards of practice; ethical and privacy principles; relationships amongst biomedical, health and nursing informatics; and models, concepts and theories that support nursing informatics practice. Appraises accreditation and legal and regulatory requirements for health and nursing informatics practice.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
NUR	531	Advanced Concepts in Nursing Informatics	Focuses on advanced concepts in nursing and health informatics practice. Analyzes the health informatics metastructures, relationships between nursing and multidisciplinary standardized terminologies, trends in nursing and health informatics, ethical, privacy and legal issues, and the emerging role for the nurse informaticist.	N	LEC	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 530
NUR	539	Role-Focused Practicum: Nursing Informatics	Learners complete 135 hours of mentored clinical practice during this practicum applying nursing informatics (NI) concepts and principles in a practice environment at the unit, organization or systems levels. Tailored to the prior experiences and level of the learner and may include working in intra- and interprofessional teams to address informatics initiatives at the unit, organizational or systems levels.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 530 with B- or better; NUR 531 with B- or better
NUR	579	Role-Focused Practicum: Nurse Educator	Mentored teaching practicum includes application of teaching/learning principles in a specialized area of interest. Tailored to the teaching experience and level of the student. May include classroom, online or clinical teaching, attendance at approved conferences, relevant meetings or other activities that provide opportunity for the learner to gain expertise in the selected area of interest.	N	PRA	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 670; NUR 671; Credit is allowed for only NUR 579 or NUR 580 (Teaching Practicum)
NUR	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Nursing student

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NUR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
NUR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
NUR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Pre-requisites: Nursing Graduate student
NUR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-4		Pre-requisites: Nursing Graduate student
NUR	601	Scientific Role Development I: Engaging and Committing	First in a series that focuses on the development of a scientific role identity in nursing and health care innovation, including the areas of education, policy and research. Analyzes current trends in the development of innovative scientists and leadership characteristics needed for future roles.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): Nursing and Health Care Innovation PhD student
NUR	602	State of the Science in Nursing and Healthcare Innovation	Focuses on research synthesis and critiques of the scientific literature as a basis for knowledge generation related to a focal area of research interest.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing & Healthcare Innovation PhD student; Corequisite(s): NUR 605
NUR	603	Social and Contextual Issues in Nursing and Healthcare	Analyzes nursing practice and the healthcare system for an identified population using social-ecological approaches.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	604	Philosophy of Science Perspectives in Nursing and Healthcare Innovation	Analyzes the history and philosophy of science as a basis for knowledge and academic scholarship in nursing and healthcare innovation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	605	Theory Analysis	Examines theoretical perspectives and approaches guiding research in nursing and healthcare innovation across the lifespan. Includes the historical evaluation, social contextual factors, implicit assumptions, and bias that influence nursing and healthcare innovation knowledge generation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): PhD Nursing and Healthcare Innovation major
NUR	606	Scientific Role Development II: Validating and Demonstrating	Second in a series that focuses on the development of a scientific role identity in nursing and health care innovation, including the areas of education, policy and research. Posits the knowledge, skills and resources needed to expand one's career as an educator and scientist in a health-related leadership role in the context of a future health care environment. Explores strategies for progressive and creative approaches in preparing leaders for innovative change in education, research and health care policy affecting healthcare delivery.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): Nursing and Health Care Innovation PhD student
NUR	607	Scientific Role Development III: Bridging	Focuses on the development of a scientific role identity in nursing and health care innovation, including the areas of education, policy and research. Students study the career trajectories of key leaders in nursing and health care innovation as a basis for development of their own personal plans for success, including research trajectories and marketing.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	1		Prerequisite(s): NUR 606
NUR	608	Qualitative Research Design and Methods	Explores and critiques selected qualitative research approaches. Includes fieldwork exercises as an integral part of course expectations.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	609	Quantitative Research Design and Methods	Examines multiple research approaches in clinical and health policy research from a quantitative perspective.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	612	Advanced Analysis of Variance: Design and Analysis of Experiment	Introduces theory, methods, and practice of analysis of variance.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	613	Principles of Regression and Correlation	Introduces theory, methods, and practice of regression analysis.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	614	Design and Implementation of Theory-Based Interventions	Focuses on the knowledge related to advanced methods for intervention research. Examines methodological, ethical, and practical issues in the design and implementation of theory-based intervention studies.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	615	Qualitative Data Management Seminar	Qualitative research methods applied to thesis, dissertation or qualitative research reports, focusing on data reduction, analysis, interpretation, credibility, ethics and dissemination.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): COE 503 or CRJ 613 or EDP 503 or NUR 608 or PAF 610
NUR	616	Community-Based Participatory Research	Overview of Community-Based Participatory Research (CBPR). Familiarizes participants with key historical underpinnings of CBPR, principles of CBPR practice, as well as methodological CBPR considerations in building community partnerships, issue analysis, research planning, data gathering and data sharing.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only NUR 616 or NUR 691 (Community-Based Research)

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NUR	617	Foundational Concepts in Science and Statistics	Provides basic skills necessary for health-related research specifically geared toward (1) understanding concepts of widely used statistical methods with examples from health care; (2) ethical knowledge of human subjects research; and (3) processes of research including research design, interpretation and presentation of results and critiquing research articles.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): COE 502 or EDP 502 or EXW 501; Credit is allowed for only NUR 617 or NUR 691 (Foundational Concepts in Science and Statistics)
NUR	618	Advancing Research-Based Health Policy Through Leadership and Innovation Science	Integrative synthesis course in which students apply values and knowledge from previous PhD core courses in philosophy of science, theory analysis, state of the science, quantitative and qualitative methods, and the art and science of teaching. Examines the role of scholars and scientists in health policy reform. Using tools from leadership and innovation science, advances strategies to accelerate the use of interprofessional research in policy decisions and advances the national agenda for improving health and the quality and affordability of health care.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 602, 603, 604, 605, and 609
NUR	628	Research, Theory and Principles for Palliative Care in the Older Adult	Focuses on theory and research underlying end of life and palliative care for the older adult utilizing current practice guidelines and research.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): PhD Nursing and Healthcare Innovation major
NUR	629	Research for Geriatric Practice	Gaining knowledge and skills in critical appraisal and synthesis of evidence to guide best practice in gerontology.	N	LEC	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only DNP 629 or NUR 629
NUR	630	Mechanisms of Disparities	Analyzes and applies the complex issues underpinning culture and health disparities related to a specific health outcome to research with a selected cultural group.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Nursing and Healthcare Innovation PhD student; Credit is allowed for only NUR 598 (Mechanisms of Culture), 598 (Mechanisms of Disparities) or 630
NUR	631	Leveraging Culture in Intervention Development	Analyzes the complex issues underpinning the development of evidence-based interventions among various cultural groups. Also analyzes methods of leveraging culture to optimize the development, delivery, effect and evaluation of health interventions for various cultural groups.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: NUR 630 (or NUR 598 Mechanisms of Disparities); Nursing and Healthcare Innovation PhD student; Credit is allowed for only NUR 598 (Leveraging Culture in Intervention Development) or 631
NUR	640	Integrative Theories of Innovation in Healthcare	Analyzes cross-disciplinary theories of innovation for improving health and quality of healthcare.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: NUR 605; Credit is allowed for only NUR 691 (Integrative Theories of Innov) or NUR 640
NUR	641	Theories of Emergent Leadership in Healthcare Innovation	Analyzes cross-disciplinary theories of leadership. Emphasizes leadership frameworks that describe, explain and predict the relationships among leadership and healthcare innovation and outcomes.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): NUR 640. Credit is allowed for only NUR 641 or 691 (Theories of Emergent Leadership in Healthcare Innovation)
NUR	650	Human Lactation in the Post-Modern World	In-depth exploration of the complex and multifaceted social, cultural and environmental contexts that affect the public health goal of improving successful breastfeeding during the first years of life.	N	SEM	N	GNA	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only NUR 650 or 691 (Human Lactation in the Post Modern World)
NUR	670	Curriculum Development in Academic and Practice Settings	Includes analyses of historical, philosophical, societal, environmental, cultural, technological, and educational factors of curriculum development in academic and practice settings.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Prerequisite(s): Nursing (Nursing Education) MS or Graduate Certificate in Nursing Education; Pre- or corequisite(s): NUR 671 with B or better
NUR	671	Teaching in Academic and Practice Settings	Analyzes theories, issues, research related to teaching in nursing and educational leadership. Focuses on the process of teaching and learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Nursing Graduate student or Certificate program.
NUR	672	Design and Delivery of Mediated Instruction	Addresses instructional design issues, theory, and practices related to online and electronically mediated learning.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	673	Producing and Evaluating Programs for Academic and Practice Settings	Critical examination of standards, regulatory environment, administrative systems, leadership requirements, technological infrastructure, human factors, future trends regarding mediated education planning, production, and evaluation.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		Pre-requisites: Nursing Graduate student or Certificate program; NUR 670
NUR	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		

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NUR	688	Management of Complex Diseases and Syndromes in Geriatric Population	Focuses on diagnosis and management of complex diseases and syndromes in the geriatric population.	N	SEM	N	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	3		
NUR	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	IND	N	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
NUR	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		Pre-requisites: Nursing Graduate student
NUR	692	Research		N	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-12		
NUR	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Nursing & Health Innovation	College of Nursing and Health Innovation	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
NUR	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Nursing & Health Innovation	College of Nursing and Health Innovation	1-15		
OBS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	501	Obesity Prevention and Management: An Introduction	Helps students understand the complex etiology of obesity and enhances their ability to work with individuals and populations at risk of obesity to develop effective behavior change-based strategies for prevention and management of the condition across the lifespan.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): Obesity Prevention and Management MS major; Credit is allowed for only OBS 501 or OBS 598 (Obesity Prevention and Management)
OBS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		
OBS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	College of Health Solutions	School of Nutrition and Health Promotion	1		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	598	Special Topics	Typical courses not offered in regular course rotation (e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand).	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
OBS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Health Solutions	School of Nutrition and Health Promotion	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OGL	10	Leadership Development	Trains and manages the student team leads for the Jump Start Program. Students learn ways to effectively manage, facilitate and lead group discussions and activities.	N	LEC	Y	YGB	Integrative Sciences & Arts	College of Integrative Sciences and Arts	0		
OGL	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
OGL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
OGL	200	Introduction to Organizational Leadership	Presents a broad survey of leadership theory and research as currently practiced in formal organizations. Includes examination of leadership models, power and influence, team leadership, cross-cultural leadership, strategic styles of interaction, ethics, leadership skill development, decision-making techniques and effective goal implementation.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
OGL	220	Behavioral Dynamics in Organizations	Explores the different theories, strategies and skills that managers and subordinates need to develop to improve interpersonal relations. Primarily emphasizes skill areas in leadership, motivation, communication, group dynamics, organizational development, conflict resolution, political strategy, cross-cultural relations, ethical behavior, stress management and time management. Develops effective strategies for becoming effective managers, subordinates, peers and students.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
OGL	240	Introduction to Project Management	Offers insights into each step of the project management process through an examination of various theoretical approaches.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
OGL	260	Resource Allocation in Organizations	Introduces the decision-making framework of resource allocation within the broader context of basic business finance. Students learn that resource allocation decisions are regularly guided by fundamental principles in finance. Primarily focuses on business resources, resource management and allocation, accounting statements, profit and loss drivers, cash and profit statements, balance sheets, budgets and forecasts, management accounts and capital investment.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): MAT 117 or any course with General Studies MA designation
OGL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
OGL	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
OGL	300	Theory and Practice of Leadership	Presents an in-depth study of leadership theory and its practical application in formal organizations. Includes examination of the trait approach, situational approach, contingency theory, path-goal theory, leader-member exchange theory, transformational leadership, psychodynamic approach, and women and leadership. Emphasizes application of these theories in real-world case studies.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): OGL 200; minimum 56 hours
OGL	320	Foundations of Project Management	Covers project management terminology, tools, best practices, theoretical approaches, the phases of project management and how they are applied developing a project plan and schedule, and other competencies needed to effectively manage projects.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 56 hours; Credit is allowed for only OGL 240 or OGL 320
OGL	321	Project Leadership, Strategy and Scope	Explores how executive management is responsible for conceiving, designing, implementing and managing the organization's overall objectives, culture, environment and processes as part of the project management process. Within this context, primarily focuses on understanding project management, aligning project management with the organization, project management oversight, projects as capital investments, globalization and resources optimization.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): OGL 240 or OGL 320; minimum 56 hours
OGL	322	Project Time Management	Explores project scheduling and time management within the broader context of the planning effort. Students learn how important the determination of the timing and sequence of project activities is to the planning process--and ultimate project success. Primarily focuses on understanding bar charts, basic networks, the critical path network, precedence networks, resource allocation, schedule updating, schedule compression, scheduling and schedule risk management.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: OGL 240; Minimum 55 earned hours
OGL	323	Project Cost Management	Concepts and complex processes of effective project cost management. Primarily focuses on project needs assessment, cost estimation, project cost control, project budgeting, cash flow management, financial management, value management, configuration management and supply chain management. Students also learn to appreciate the importance of integrating cost and value management processes.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: OGL 240; Minimum 55 hours
OGL	324	Resources in Project Management	Major elements of project resource management as well as the broader context of this critical planning function. Students learn that sound resource management is an important part of developing a sustainable competitive advantage in the emerging global marketplace. Primarily focuses on operations and productivity, resources in project management, product design, process strategy, layout strategy, human resources and job design, supply chain, inventory management and scheduling.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: OGL 240; Minimum 55 hours
OGL	326	Project Procurement Management	Concepts and processes of procurement management. Primarily focuses on sourcing management, supplier selection, contracts and legal requirements, risk management, negotiation, project management, quality, supplier management and financial decisions. Effective procurement requires the use of good business practices capable of maximizing value to the organization through the acquisition of goods and services. Students learn that procurement professionals control the entire sourcing and acquisition process.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: OGL 240; Minimum 55 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
OGL	350	Diversity and Organizations	Critical interdisciplinary analysis of individual, cultural, and organizational diversity.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L & C	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 56 hours. Credit is allowed for only BIS 350 or OGL 350
OGL	355	Leading Organizational Innovation and Change	Process and theory of strategic management with primary emphasis on situation analysis, strategy formulation, strategy implementation and strategy evaluation. Covers the strategic management context, external analysis, internal analysis, functional and competitive strategies, international strategies, strategic entrepreneurship and nonprofit strategy. Students understand the process of analyzing situations, developing appropriate strategies, putting those strategies into action, and evaluating and changing those strategies as needed.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 56 hours
OGL	360	Assessment of Leadership Effectiveness	Empirical analysis of leadership, a conceptual model of effective leadership, and a practical guide for developing the competencies and attributes most likely to produce effective leaders. Primarily focuses on leadership competencies, organizational fit, leadership strengths, fatal flaws, leadership teams, leadership development, improvement measurement and leadership follow through. Students learn to distinguish between leadership success and leadership effectiveness.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): MAT 117 or any course with General Studies MA designation; minimum 56 hours
OGL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
OGL	421	Project Risk Management	Philosophy, principles, practices and techniques for managing risk in projects. Covers risk identification, qualitative risk management, risk treatment, monitoring and review, project processes, risk allocation, environmental risk and quantification of project risk. Students learn that risk management assists project managers in setting priorities, allocating resources and implementing actions and processes that reduce the risk of the project not achieving its objectives.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: OGL 321; Minimum 55 hours
OGL	422	Project Quality Management	Process and theory of total quality management with primary emphasis on the total quality approach, ethics and corporate responsibility, strategic alliances, quality culture, employee empowerment, leadership and change, team building, effective communication, and tools and techniques. Students understand how continual improvement of people, processes, products/services, and environments can enhance the process and outcomes of project management. Students have the opportunity to develop practical total quality management skills as they apply theory and practice to real-world cases.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: OGL 321; Minimum 55 hours
OGL	481	Organizational Leadership Pro-Seminar I	Students draw on their experiences in previous organizational leadership courses, employing key concepts, theories and skills learned throughout the program toward the strategic analysis of organizations. Using Bolman and Deal's organizational frames concept, students synthesize key learnings across their education and explore organizations through four unique perspectives.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): OGL 200; OGL 220; OGL 260; OGL 300; OGL 320; Credit is allowed for only OGL 481 or OGL 498 (Pro-Seminar I)
OGL	482	Organizational Leadership Pro-Seminar II	Students draw on their personal background, individual differences, knowledge and skills to assess career choices that maximize their strengths, values and passions. Students explore their own balance between work and the other important elements in life, and develop strategies for living a meaningful and fulfilling life, at least through work. Explores the notion of career management and work/life integration from a number of different perspectives, and centered on one's own unique personal characteristics, life circumstances and goals. Explores some of the most relevant career management literature/theory, taking into consideration the interdisciplinary nature of this topic. Also connects students with some of the ideas learned in previous organizational leadership core courses, conducts a qualitative, thematic self-analysis, develops short-term and long-term career/life plans, and collect artifacts to help along life's journey.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): OGL 481; Credit is allowed for only OGL 482 or OGL 498 (Pro-Seminar II)
OGL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
OGL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
OGL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
OGL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
OGL	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
OGL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7	L	Prerequisite(s): Organizational Leadership major; minimum 90 hours; BIS 343 and 345; ENG 102 or 105 or 108 with C or better; OGL 200, 220, 240, 260, 300, 321, and 350

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
OGL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
OMT	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
OMT	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
OMT	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
OMT	343	Occupational Safety and Ergonomics	Health and safety movement, accident theories and effects, OSHA standards and liability, safeguarding, hazards, workers' compensation, ergonomics, and safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		
OMT	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
OMT	402	Legal Issues for Technologists	American legal system and impact on technology management issues: contracts, torts, intellectual property, white collar crime, antitrust, environmental, and employment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 330; minimum junior standing
OMT	405	Forecasting and Evolution of Technology	History and evolutionary nature of selected technologies, issues in the management of emerging technologies, and methods of technological forecasting.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite: Minimum Junior standing
OMT	430	Ethical Issues in Technology	Topics in social responsibility for industrial technology and engineering.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 330; Fulton Polytechnic School undergraduate or graduate student
OMT	440	Introduction to International Business	International business principles and operations, including partnerships, trade agreements, currency issues, international sales, and cultural differences between countries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3	G	Prerequisite(s): Fulton Polytechnic School undergraduate or graduate student; MGT 301, TMC 330 (TMC 346)
OMT	445	Industrial Internship	Work experience assignment in industry commensurate with student's program. Specialized instruction by industry with university supervision. Pass/fail.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-10		Prerequisites: Fulton Polytechnic School undergraduate student; Minimum 2.25 GPA; minimum Junior standing
OMT	452	Industrial Human Resource Management	Concepts and practices of human resource management in a global industrial environment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): Fulton Polytechnic School student
OMT	480	Organizational Effectiveness	Human aspects of supervisory behavior in the industrial setting and how they influence efficiency, morale, and organizational practices.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): MGT 301 or TMC 330 (TMC 346)
OMT	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		
OMT	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		Pre-requisites: Minimum Junior standing; Minimum 2.25 GPA
OMT	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
OMT	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	502	Financial Management	Examines corporate financial and managerial accounting systems, budgeting, and financial policy, using microcomputers to analyze, forecast, and report information.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	503	Marketing Management	Modern methods and industrial case studies of planning, pricing, promoting, and distributing goods and services in the global marketplace.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	504	Ethical Issues in Technology	Analyzes legal and ethical framework for making managerial decisions in the corporate environment of engineering- and technology-related industries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only OMT 430 or OMT 504
OMT	520	Strategic Management of Technology	Analyzes entrepreneurial dynamics and technology development, methods of research and development management, new technology implementation, and start-up organization.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	540	International Management	Practices and procedures for effective management of multinational business organizations, including partnerships, joint ownerships, and global subsidiaries.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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OMT	548	Statistical Methods for Research	Multivariate statistical techniques to analyze research data. Uses statistical software and applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	549	Research Techniques and Applications	Selection of research problems, analysis of literature, individual investigations, preparing reports, and proposal writing.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	560	Managerial Decision Making	Analyzes common decision-making biases and techniques to overcome them. Uses both subjective quantitative decision tools and computerized decision aids.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	570	Advanced Project Management	Planning, organizing, coordinating, and controlling staff and project groups to accomplish the project objective.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only OMT 570 or TMC 470
OMT	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	592	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		
OMT	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
OMT	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	OP4	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
OPM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
OPM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
OPM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
PAF	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
PAF	200	Public Service and Policy in the 21st Century	Provides a broad introduction to the field of public service and leadership. Topics include an overview of management, policy, urban studies, and leadership in the public sector. Covers the history and development of the public sector, as well as how it serves contemporary society.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	201	Economics and Public Policy	Introduces the terminology and methods of analysis in microeconomics. In particular, examines the behavior of individual consumers and firms, with a focus on market failures and the role of government policy in correcting those failures. Applies microeconomic principles to the distribution of income, policies for eliminating poverty and discrimination, the problems of environmental pollution, and the impact of different market structures on economic activity.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	SB	
PAF	203	Cross-Sector Collaboration	Examines how public, private and nonprofit organizations seek to address social challenges and explores how the three sectors work together and in isolation to tackle social problems. The motivation of employees in the public, private and nonprofit sectors and the ways in which organizational structure, environment and legal contexts differently constrain or facilitate action within and across these organizations. Explores effective strategies for collaboration among the public, private and nonprofit sectors and identifies organizational similarities and points of contrast that could enhance or create barriers to such collaboration.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): enrollment in the second year of Next Generation Service Corps or Reserve Officer Training Corps (all branches) and completion of first year in Next Generation Service Corps
PAF	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
PAF	300	Public Management and Administration	Examines the context and role of the public manager and the development of the field of public administration.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		

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PAF	301	Applied Statistics	Focuses on statistical techniques used in social science research. Applies concepts such as measures of central tendency and dispersion as well as statistical techniques, including the following: one-sample z and t tests, two-sample t tests, chi-square, and correlation. Goals include helping students understand the mathematical and statistical concepts presented and assisting them in using these concepts in everyday life and in the study of social sciences.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	CS	Pre-requisites: MAT 142 or higher
PAF	302	Public Service Research Methods	The philosophy, scope, and methods of public sector research. Examines quantitative and qualitative research methods and research design.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 301 with C or better
PAF	311	Leadership and Change	The leader's role in bringing about significant organizational and societal change with special attention to group and organizational behavior dynamics, establishing a vision, mobilizing and empowering individuals and groups, and assessing outcomes of the change process in a variety of settings.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	SB	Pre-requisites: Minimum 30 hours
PAF	340	Contemporary Policy Challenges	Develops conceptual, critical, and practical understanding of public policy, the policy process, and policy analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: Minimum 30 hours
PAF	350	Introduction to Science & Technology Policy	Explores the variety of ways in which governments make policies, how the policies shape the development of science and technology and their applications, and how policy may be shaped to create better futures.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 30 hours
PAF	360	Introduction to Emergency Management	Emergency management theories. Comprehensive emergency management. Mitigation, preparedness, response, and recovery. Post-disasters and policy formation. Current FEMA all-hazards approach.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 45 hours
PAF	363	Computer Applications in Emergency Management	Explores specific computer programs that are currently in use for contingency planning, tracking chemical inventories, and response resources.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: MAT 142
PAF	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
PAF	400	Senior Capstone Project	Teaches students to solve problems related to the public sector by applying theory, knowledge, and methods from previous courses to a hands-on project in the community. Seminars include guest speakers and discussions on professional development. Students work as individuals and as a team to prepare research papers and a professional report that is presented to the community.	N	LEC	Y	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: PAF 200, 201, 301 (or 401), 302, 311 (or 411), 340, and 460 with C or better
PAF	410	Building Leadership Skills	Introduces understanding and developing leadership skills, including an examination of leadership theories and models from multidisciplinary and crosscultural points of view, an assessment of the student's leadership capabilities, and practical applications to improve individual leadership capabilities.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	SB	Pre-requisites: Minimum 30 hours; Credit is allowed for only PAF 410 or URB 410
PAF	420	Public Leadership	Examines key concepts, models, and strategies for leading public and nonprofit organizations, emphasizing self-knowledge, skills, and abilities for effective leadership.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	421	Leadership Capstone	Builds upon leadership courses in the Leadership and Ethics certificate program by applying concepts and examples from the readings as well as individual experiences.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 311 and 410; Credit is allowed for only PAF 421 or 494 (Leadership Capstone)
PAF	424	Comprehensive Emergency Management	Addresses theory and management techniques for emergency preparedness, including mitigation, preparedness, response, and recovery.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 45 hours
PAF	425	National Incident Management System (NIMS)	Covers concepts, terminology, players, compliance requirements, including doctrine of National Incident Management System per HSPD-5, Discussion of National Response Plan.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 45 hours
PAF	460	Public Service Ethics	Role, values, and issues of public management in democratic governance, citizen participation, power structures, and professional codes of conduct.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	461	Homeland Security	In-depth analysis of policies, procedures, and organizational structure for effective homeland security program. Covers all hazard/all risk philosophy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: minimum 45 hours. Credit is allowed for only PAF 461 or 561
PAF	468	Simulation and Exercising	Requirements, planning, conduct, and critique of exercises related to emergency planning. Emphasizes realism using moulage and props.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): minimum 45 hours
PAF	469	Terrorism Defense	Explores the background and evolution of terrorism. Presents specific tactics for preparation for and response to acts of terrorism.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ABS 598 (Terrorism Defense) or PAF 469
PAF	470	Topics in Public Economics and Financial Management	Provides an analysis of public economic practices and problems in a federal system. Presents detailed descriptions, where appropriate, of significant institutions and applies modern economic theory to the ways that these institutions finance and deliver services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: ECN 212 or PAF 201 with C or better
PAF	471	Public Policy Analysis	Provides further study in the concepts, models, and operational methods used in public policy decisions and analysis. Enables students to develop higher skills needed for defining policy issues, identifying alternative solutions, and predicting the potential impact of policy alternatives.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: PAF 301 and 340 with C or better
PAF	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		

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PAF	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-6		Prerequisite(s): Barrett Honors student
PAF	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-6	L	Prerequisite(s): Barrett Honors student
PAF	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
PAF	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-3		
PAF	501	Public Service Research I	Philosophy, scope, and methods; public service research design, values, and ethics.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite: must have earned B or better or currently enrolled in PAF 401, POS 401, PSY 230 QBA 221, or SOC 390 AND course must be completed within 4
PAF	502	Public Service Research II	Quantitative techniques including multivariate analysis, data analysis, decision making, and computer applications in public affairs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 501 with C or better
PAF	503	Public Affairs	Development and context of American public administration and policy, role of administration in governance, and values and ethics in administration.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	504	Microeconomics of Public Policy I	Provides key principles of microeconomics. Places particular emphasis on developing the analytic tools of economic reasoning and using these tools to examine policy interventions of interest to public managers.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	505	Public Policy Analysis	Institutional and formal analysis of policy processes, decision making, and problem solving; values, ethics, and the uses of policy analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 504 with C or better
PAF	506	Public Budgeting and Finance	Legal, social, economic, political, institutional, and ethical foundations of governmental finance, budgets, and budgeting.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 504 with C or better
PAF	507	Public Human Resource Management	Personnel systems, behavior and management of people in public organizations, collective behavior, unionism, conflict management, motivation, productivity, and ethics.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	508	Organization Behavior	Theory and application in the management of organizational behavior with emphasis on leadership and the public service.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	509	Public Affairs Capstone	Capstone application of core course knowledge, skills, and abilities required for public service.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: PAF 501, 502, 503, 504, 505, 506, 507 and 508 with C or better
PAF	520	Public Management	Management process in government and public agencies, with emphasis on the executive leadership within the public sector.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	521	Managing Public Money	Overview of public financial management, including budget planning and execution; capital budgeting, debt management and administration; funds management and investment; and financial control.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): Public Administration MPA student
PAF	522	Advanced Governmental Financial Management: Capital Budgeting and Infrastructure Financing	Focuses on capital budgeting and infrastructure financing. Covers information required to finance a capital improvement plan, specifically for infrastructure items such as streets, parks, public utilities, airports, highways, bridges and tunnels, and other public works. Combining strategy as well as process, examines financial management from different perspectives.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): Public Administration MPA student
PAF	523	The City and County Manager	Manager's role and resources in the differing forms of administrative, legislative, and community sectors.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	525	Public Entrepreneurship	Explores entrepreneurship in the public sector from various angles, including small and large communities and nonprofits.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	529	Organization Change and Development	Explores the nature and management of change and development as a tool to achieve organizational goals; effecting planned change.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	530	Management of Urban Government	Administrative practices and behavior within the urban political administrative environment. Functional areas such as citizen participation, urban planning, urban transportation, and the conflicts between urban politics and administrative efficiency.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	531	Community Conflict Resolution	Interdisciplinary approach to understanding the dynamics of community conflict. Strategic considerations in policy design and advocacy; potential reaction to conflict. Relevant models and research findings generated by both case studies and comparative methods.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	534	Urban Services Infrastructure	Provides an overview of the network of services being provided in the urban environment by a variety of governmental and nongovernmental agencies. Discusses coordination, cooperation and overlap of services by local, special district, county, regional and state levels, alternate delivery methods including nonprofits, and the evolving relationship of these services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	540	Adv Policy Analysis	Emphasizes the structure of policy problems, forecasting policy alternatives, optimizing resources, and reducing uncertainty in policy making.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 505 with C or better

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PAF	541	Program Evaluation	Various methodologies available for the evaluation of public policies and programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 501 with C or better
PAF	544	Urban Policy	Understands major theoretical frameworks, methodological approaches and substantive issues emphasized in urban policy research. Hones skills in policy analysis.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	545	Organizations, Sustainability & Public Policy	Sustainability concerns are fast becoming a strategic issue for organizations in all sectors. In the last ten years, numerous organizations have completely redefined their business strategies in line with principles of sustainability by balancing the requirements for economic development, environmental quality and social justice, and governments worldwide are developing programs and policies that encourage these activities. Explores the connections between organization strategy--especially within the private sector, sustainability and public policy. Through a combination of practical cases, readings and lectures, class sessions engage students in discussions aimed at developing sustainability assessment models. Additionally, students apply new strategy tools that incorporate principles of proactive environmental management and social responsibility designed to enhance the public good.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only PAF or SOS 545
PAF	546	Environmental Policy and Management	Analyzes environmental policy and planning issues and principles related to the analysis and management of natural and urban/regional resources.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	547	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 515 or GLG 547 or HSD 515 or PAF 547 or SOS 516
PAF	548	Women/Politics/Public Policy	Explores how political philosophy, politics, and public policy affect and are affected by women.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	549	Diversity Issues and Public Policy	Examines public policy issues concerning or affecting women, black, Latino, Asian, and American Indian communities, as well as those groups' impact on the policy process.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	550	Governing Emerging Technologies	Examines the governance of science and technology through a focus on emerging technologies whose potential consequences in society are apparent only in anticipation and whose manifestations are still being shaped by local, domestic, and international institutions. These emerging technologies include nanotechnologies, synthetic biology, and other technologies associated with genetic modification, and information and cognitive science and neuro-technologies.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PAF 550, HSD 503 or POS 573
PAF	552	Integrated Emergency Management	Theory and practice of comprehensive emergency management. Explores scope and function of Department of Homeland Security.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	555	Information Technology in Emergency Management	Provides theory and application of computer-based programs in emergency management and the use of various emergency modeling programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	560	Community Resilience	Examines community resilience from a systems perspective, embracing governments, private, nonprofit and civic roles. Presents research, case studies, and strategies for policy planning and implementation. Provides an understanding of how community members respond to the need to prepare for, endure and recover from disasters and the ability to utilize multiple communication methods to help community members before, during and after these emergencies.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	561	Interoperability for Emergency Managers	Enables understanding of the multiple technologies and skills utilized by emergency managers to enhance successful coordination and communication between all levels of emergency managers and responders during emergency mitigation, prevention, preparedness, response and recovery operations.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 554
PAF	564	Political Economy	Classical and contemporary literature and historical development of governmental and economic arrangements, with special emphasis on the role of the state.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	565	Theories and Practices of Democracy	Critically explores the wide range of ideas, issues, challenges, and promises related to democracy in theory and practice. Intended for all students interested in democratic leadership, public service, civic engagement, and participatory governance.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	566	Participatory Governance & Civic Engagement	Examines classic and current theoretical debates on participatory governance and civic engagement, discusses theoretical and practical implications, and analyzes different models of participatory governance.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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PAF	570	Microeconomics of Public Policy II	Provides the policy tools to solve economic problems such as market concentrations, market failures and externalities, and asymmetric information. Increasingly, government interventions are moving away from a command-and-control-style of direct provision of goods and services and toward a large menu of indirect approaches implemented through a complex system of third-party actors. Government intervention in private markets now entails loans and loan guarantees, grants-in-aid, contracts, vouchers, social and economic regulation, and many other policy tools. Each of these instruments involves vastly different behavioral distortions, policy technologies, political considerations and technical sophistication. Analyzes the economics of four policy interventions: grants, tax expenditures, social regulation and vouchers. Provides an overview of each tool (including its key design features) and combines economic theory with background information on how public policies actually operate.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 504 with C or better
PAF	571	Geographic Information Systems (GIS) and Analysis	Provides foundational information related to application of GIS technology to meet various needs within governmental operations, administration, and public policy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	573	Applied Econometrics	Applied treatment of the most important modern econometric methods used to evaluate public policies. Help students become savvy consumers of econometric methodology and develops the methodological skills necessary for implementing quantitative evaluations of public policies. Accordingly, course stresses critical thinking and creativity.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: PAF 502 with C or better
PAF	574	Diversity, Ethics, and Leading Public Change	Focuses on leadership, ethics, and benefits and tensions of the multicultural city to develop leadership and multicultural competence.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	579	Public Policy Capstone	Integrative, client-based project course.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	L	
PAF	582	E-Public Administration	Explores how new techniques and technologies for using, processing and managing information are changing how we interact, work and serve. As an example of this very concept, this course is offered online. During the semester, managers explore current trends, use a wide variety of information and communication tools, and have manager-created content consistent with new trends of online participation. By the end of the course, managers have experience with tools (including Wikis, Blogs, search engines, collaboration tools, reputation systems, social networks, virtual worlds); are familiar with current information issues (transparency, privacy, equal access, governance); and explore how they are relevant to a variety of contexts (local government, non-profits, public service).	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	585	Strategic Planning for Public Sector Leaders	In an age of diminishing resources, the tools of strategic planning have become crucial for every public sector and non-profit manager. How can a public sector agency (or non-governmental organization) achieve its goals and advance its mission? How can it motivate its people given the absence of the sorts of incentives often found in the private sector? How can these organizations respond to a rapidly changing political, economic and social environment? These are among the questions that are addressed.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	586	Data Analytics for the Public Good	Explores techniques used for data extraction, analysis and visualization. In particular, students engage with social media data, devise solutions to address data-poor scenarios, and explore the potential of sentiment analyses to elucidate opinion trends and predict future attitude shifts. Discusses data visualization techniques and engages students with Tableau software. Also explores the social, political and ethical considerations associated with building and managing data analytics programs in the public sphere. Explores issues-critical dilemmas when it comes to issues such as data privacy, data protection, predictive analytics, personalized service delivery and resource provision, algorithmic regulation, and large-scale data analytics for administrative efficiencies and resource management optimization, among others.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	587	Federal Budgeting and Tax Policy	Provides a broad understanding of federal budget and tax policy issues. The knowledge acquired in this class enable students to act as competent parties in the formulation of public policy within the federal budget and tax policy domains. Approximately one half of the class is devoted to federal budget processes and concepts including purposes, coverage, scoring, performance evaluation and proposed options for reform. The second half covers tax policy issues. Throughout the course, focuses on those budget and tax policy issues that are the current subject of political attention.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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PAF	588	Global Public Policy	The study of public policy has traditionally focused on the operations of government agencies within national borders. Increasingly, however, public officials at all levels of government must confront challenges and opportunities that exist across borders. Whether the issue is immigration, national security, trade and finance, or the environment, public managers must be aware of global pressures and, in many cases, respond to them. This course gives managers the analytical tools to understand how global issues are currently being managed and what they might do to make the most of global opportunities.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	589	Leadership in Public Organizations	Provides the foundation of theory and practice of administrative leadership. While students learn about all the major theoretical frameworks, focuses on an applied action research model that is useful in analyzing and developing oneself and others in organizational settings.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PAF	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Public Affairs	1		
PAF	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		Pre-requisite: Doctoral student
PAF	601	Seminar: Pol Analysis & Eval	Normative and conceptual issues of policy formulation, implementation, and evaluation; methods of policy analysis and evaluation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
PAF	602	Seminar: Foundations of Public Administration	Philosophy of science (including conduct of inquiry--epistemological and ontological foundations), historical development, and theoretical foundations of the field.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: Doctoral PAF student
PAF	603	Advanced Economics for Public Administration and Public Policy	Theory of utility and demand, theory of the producer, organization, operation of product and factor markets, market equilibrium, regulation, risk and uncertainty, general equilibrium and welfare policy, market failure, public goods and taxation, and game theory.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Prerequisite(s): PAF 504 with C or better; doctoral major
PAF	604	Foundations of Public Administration II	Philosophy of science (including research design issues and alternative approaches) and contemporary public administration, including political, social, technological, and economic institutions involved in governance, exposure to research being conducted within department.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: Doctoral PAF student; PAF 602
PAF	610	Advanced Qualitative Methods for Public Affairs Research	Explores a number of qualitative research approaches and methods, including ethnography, ethnomethodology, participant observation, interviews, focus groups, content analysis, discourse analysis, and some comparative/historical methods. Also exploreS the important theoretical and ethical issues that bear on these approaches.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: PhD student
PAF	620	Public Administration Professional Development Workshop	Prepares doctoral students to become productive and effective public administration scholars, teachers, and researchers.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisites: Doctoral PAF student
PAF	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
PAF	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-15		
PAF	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Public Affairs	1		
PAF	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-15		

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PAX	230	Introduction to Peace Studies	Intensive, one-semester introductory course. Explores multidisciplinary approaches to the study of peace, conflict and human rights as well as the historical background of peace studies (trans)disciplinary orientation. Knowledge gained in peace studies can be applied toward education, policy, law, cross-cultural communication, community-based organizations, nongovernmental organizations and ethics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
PAX	456	Studies in Forensic Linguistics	Focuses on the three main aspects of that branch of applied linguistics, namely language and the law, court cases where language is the central dispute, and linguistic evidence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 200 with C or better; one 200-level literature course with C or better; minimum 45 hours; Credit is allowed for only ENG 456 or FOR 456 or PAX 456 or ENG/FOR 494 (Studies in Forensic Linguistics)
PBH	100	Introduction to Public Health	Introduces public health in the United States. Familiarize students with the broad discipline of public health and how it influences community and individual health status. Discusses the role of various agencies in public health, methods of measurement and evaluation, major public health issues in the United States, and factors that contribute to individual and community health. Solidifies concepts through the use of in-class discussion, group work and individual analysis.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only HCD 101 or PBH 100
PBH	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
PBH	201	Economics for Health Majors	Introduces economics and demonstrates the relevance of economic principles to the study of health care delivery systems and public health. Combines elements of a traditional introductory economics curriculum with broad coverage of the history of economics, and specific application to current issues in health care delivery and public health policy. Prepares the student for further study of health economics.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Credit is allowed for only HCD 201 or PBH 201
PBH	202	Public Health Economics	Applies the basic economic tools students have acquired in previous coursework to the study of population health. Acquaints public health students and other undergraduate health majors with the ways economics contributes to both epidemiology (e.g., how people change their behavior in response to the possibility of illness) and health policy (e.g., how to evaluate the cost-effectiveness of public health programs). Particular focus on the ways in which economic concepts (e.g., marginal analysis, opportunity cost, negative externalities) can inform the debate on public health problems such as health disparities, obesity and population aging.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): PBH 201 with C or better
PBH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
PBH	300	Biostatistics	Biostatistics and its use in health and health services research. Familiarize students with statistical concepts and methods to analyze and interpret data and conceptually addresses statistical theory. Introduces SPSS software to analyze large data sets.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3	CS	Prerequisite(s): completion of General Studies MA requirement with C or better; minimum 45 hours. Credit is allowed for only HCD 300 or PBH 300
PBH	310	Epidemiology in Public Health	Essential principles and practices of public health epidemiology. Increases an undergraduate student's ability to analyze problems and make decisions based on application of epidemiologic concepts and methods in a variety of settings. Students gain experience communicating epidemiologic findings in both written and oral formats. Includes applied hands-on exercises in analysis of epidemiologic data, case studies and critical review of epidemiologic methods used in scientific literature.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): PBH 300; not open to Exercise and Wellness or Health Education and Health Promotion majors
PBH	355	Research Methods for Public Health	Society incurs high opportunity costs when public health interventions which yield a high health return on investment are not implemented, or when resources are expended on interventions with low health returns. Public health practitioners should, therefore, incorporate the best scientific evidence in planning, implementing and evaluating public health policies and programs. Covers concepts and tools of public health research where the research objective is to provide evidence that informs and improves decisions regarding the allocation of public health resources. Covers basic components that inform evidence-based decision making, namely: accessing the best available scientific evidence; developing research questions, collecting and analyzing qualitative and quantitative data; using data and information systems methodically; and adhering to standards of ethical research.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): PBH 310; not open to Exercise and Wellness or Health Education and Health Promotion majors
PBH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PBH	422	Health Disparities and Access to Health	Racial and ethnic health disparities in the United States. Explores disparities in healthcare seen at the provider and system level and their effects on health in the community. Also considers the historical context of racial and ethnic health disparities and the demographic and conceptual issues surrounding health disparities research. Reflects on the effects of behavior, socioeconomic status and group-specific disparities on community health status.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): HCD 101 (or PBH 100) or BS Medical Studies major. Credit is allowed for only HCD 422 or PBH 422
PBH	444	Public Health Field Experience	Provides opportunity to gain experience working in community and public health settings. Course meetings provide guidance during the field experience and an opportunity for students to share their projects.	N	RSC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	4		Prerequisite(s): EXW 450; HCD 101 or PBH 100
PBH	455	Public Health Program Evaluation	Federal, state and local policies shape the nature of the public health programs implemented in communities. Public health professionals are often responsible for evaluating, at multiple levels, the programs that result from such policies. Provides public health students with the analytical tools necessary to manage the implementation and evaluation of public health programs. Program evaluation serves many important functions. It supplies information to managers who are charged with implementing public health programs and to policymakers who face decisions about which programs to fund, scale back, expand, modify or eliminate. Evaluation is an accountability tool: when a public health agency decides to finance a program, they have a right to ask what their funds bought. Evaluation is also a vehicle for improving public health programs. By identifying what works and what does not--and how new programs fare relative to existing practice--policymakers and managers can improve program designs.	N	LEC	N	GNA	College of Health Solutions	School of Nutrition and Health Promotion	3		Prerequisite(s): PBH 355
PBH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	School of Nutrition and Health Promotion	1-12		
PBH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	School of Nutrition and Health Promotion	1-4		
PGM	100	PGA/PGM Introduction	Introduces the golf professional training program. Career enhancement, rules of golf, tournament operations, and playing professional development programs.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	110	Player Development I	Introductory instruction on golf game improvement to assist PGM students in preparation for Players Ability Test.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	111	Player Development II	Instruction to assist PGM students in preparation for Players Ability Test with emphasis on full swing mechanics and practice plan development.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		Pre-requisites: Pre-Agribus (Prof Golf Mngt) or an Agribusiness (Prof Golf Mngt) student
PGM	112	Player Development III	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	113	Player Development IV	Emphasizes classroom and hands-on applications of full swing analysis and short game strategies. Special focus on golf course management.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	114	Player Development V	Introductory instruction on golf game improvement to assist PGM students in preparation for Player Ability Test.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	120	Golf for Business and Life	Introduces nongolfing students to the game of golf. For beginners.	N	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	130	PGA/PGM Level 1	Focuses on golf professional training program and the completion of the PGA Level One experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		
PGM	150	Teaching Golf I	Introduces golf instruction. Focus on fundamentals of golf swing and teaching techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		
PGM	166	Turf Equipment Management	Introduces turf equipment used on golf courses. Instruction in maintenance, adjustment, and safety issues.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		
PGM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
PGM	200	PGA/PGM Level 2	Focuses on golf professional training program and the completion of the PGA Level Two experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		
PGM	250	Teaching Golf II	Communicating with student golfers, swing evaluation, key factors club fitting, developing a successful teaching practice.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
PGM	300	PGA/PGM Level 3	Business planning and operations, business communications related to business of golf. Completion of the PGA Level Three experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	350	Teaching Golf III	Teaching swing concepts. Developing a teaching philosophy, analyzing flawed swing mechanics through video and swing analysis software.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	367	Landscape Plants and Design	Identification, design, and use of plants in urban landscapes.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	4		Prerequisite(s): minimum 45 hours
PGM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
PGM	400	GPPT IV	Food and beverage control, supervision and delegation of golf facilities. Completion of the PGA Level Three experience kit.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1		
PGM	463	Golf and Sports Turf Management	Selection, establishment, and maintenance of turf grasses bred specifically for golf and sports facilities.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	3		

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PGM	466	Integrated Pest Control	Management of pests affecting golf turf and landscape plants. Structural Pest Control Board sprayer certification preparation offered during the semester.	N	LEC	N	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	2		
PGM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-12		
PGM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Morrison School of Agribusiness	1-4		
PHI	101	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	
PHI	101	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI	101	Introduction to Philosophy	Explores issues that philosophers have traditionally considered, including morality, reality, and knowledge.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	103	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Pre-requisites: ENG 101, 105 or 107 with C or better
PHI	103	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Pre-requisites: ENG 101, 105 or 107 with C or better
PHI	103	Principles of Sound Reasoning	Fallacies, validity, and soundness of arguments. May include syllogistic, elementary symbolic, inductive logic, and scientific method.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 101, 105 or 107 with C or better
PHI	105	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	
PHI	105	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI	105	Intro to Ethics	Philosophical examination of such questions as, How should we live? Is morality a social invention? Does anything matter?	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	120	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	
PHI	120	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI	120	Introduction to Medical and Bioethics	Philosophical examination of moral problems that arise in medicine and biology, e.g., end-of-life, reproduction, and patient's rights.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
PHI	300	Philosophical Argument and Exposition	Develops techniques of philosophical argument and exposition. Frequent written exercises. Course content may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Prerequisite(s): Philosophy majors; minimum 25 hours; ENG 102 with C or better
PHI	303	The Future of Religions	Critical theorists of modern religious and secular beliefs argued that both theism and atheism have had their martyrs and tyrants. Nietzsche proclaimed "God" of the West dead, Marx unmasked religion as opium for the oppressed masses, and Freud analyzed religious future as an unconscious illusion. The future of secular progress has become equally suspect in the wake of the Holocaust, Hiroshima, the gulags, the killing fields of Cambodia, Rwanda. Globally motivated terror revealed itself as capable of religious as much secular justifications. The future of faith and reason has become a doubly open theoretical and practical question in philosophy, religious studies, literary study, critical theory, cultural and gender studies, and all sciences. Applies theoretical and methodological tools to critically exam beliefs, practices, and communities and their role in both generating and transforming the ethical and spiritual discontents of the global age.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only HON 394 (The Future of Religions), PHI 303 or REL 300
PHI	304	Existentialism	Covers such topics as absurdity, authenticity, the meaning of life and death, responsibility, and subjectivity. May include readings in phenomenology.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI	304	Existentialism	Covers such topics as absurdity, authenticity, the meaning of life and death, responsibility, and subjectivity. May include readings in phenomenology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	306	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	
PHI	306	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI	306	Applied Ethics	Philosophical discussion of contemporary moral and political issues, such as abortion, euthanasia, animal rights, affirmative action, and sexual rights.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	

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PHI	307	Philosophy of Law	Nature and source of law and its relation to morality. Legal rights, legal enforcement of morals, civil disobedience, liability and responsibility, punishment, judicial reasoning, justice, property, and differences between theories of natural and positive law.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours
PHI	307	Philosophy of Law	Nature and source of law and its relation to morality. Legal rights, legal enforcement of morals, civil disobedience, liability and responsibility, punishment, judicial reasoning, justice, property, and differences between theories of natural and positive law.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 hours
PHI	310	Environmental Ethics	Examines a full range of philosophical positions pertaining to our moral relationship to the natural world; anthropocentrism, individualism, biocentrism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Credit is allowed for only BIO 324 or PHI 310
PHI	311	Philosophy and Literature	In-depth study of selected literary and philosophic texts. Addresses philosophical problems such as the nature of moral goodness and human relations; the purpose of life; or the relations among beauty, truth and justice. Also addresses whether literary aspects of philosophical texts such as myth, image, metaphor or rhetorical devices contribute to meaning or promote ethical insight as well as interdisciplinary tensions and bridges between rhetoric and philosophy.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Prerequisite(s): minimum 45 hours
PHI	311	Philosophy and Literature	In-depth study of selected literary and philosophic texts. Addresses philosophical problems such as the nature of moral goodness and human relations; the purpose of life; or the relations among beauty, truth and justice. Also addresses whether literary aspects of philosophical texts such as myth, image, metaphor or rhetorical devices contribute to meaning or promote ethical insight as well as interdisciplinary tensions and bridges between rhetoric and philosophy.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours
PHI	311	Philosophy and Literature	In-depth study of selected literary and philosophic texts. Addresses philosophical problems such as the nature of moral goodness and human relations; the purpose of life; or the relations among beauty, truth and justice. Also addresses whether literary aspects of philosophical texts such as myth, image, metaphor or rhetorical devices contribute to meaning or promote ethical insight as well as interdisciplinary tensions and bridges between rhetoric and philosophy.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 hours
PHI	313	Probability, Evidence, and Decision	Philosophical topics in epistemology and practical reasoning; probability and its use in representing and reasoning about belief, evidence, and rational choice.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: MAT 119 (or higher); Minimum 30 hours; Credit is allowed for only HPS 313 or PHI 313
PHI	314	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI	314	Philosophy of Science	Structure and justification of scientific theories, explanation, and theory change. Roles of observation and laws, theoretical concepts and entities, reduction, probability, confirmation, space and time, and causation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Credit is allowed for only HPS 314 or PHI 314.
PHI	318	Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
PHI	318	Philosophy of Religion	Classical arguments for the existence of God. Argument from evil against the existence of God. Justification of religious belief.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
PHI	319	Philosophy, Computing and Artificial Intelligence	Philosophical problems surrounding artificial intelligence (AI). Thinking as computation and AI; the ethics, epistemology and metaphysics of computing.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 25 hours
PHI	319	Philosophy, Computing and Artificial Intelligence	Philosophical problems surrounding artificial intelligence (AI). Thinking as computation and AI; the ethics, epistemology and metaphysics of computing.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	CS	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 25 hours
PHI	319	Philosophy, Computing and Artificial Intelligence	Philosophical problems surrounding artificial intelligence (AI). Thinking as computation and AI; the ethics, epistemology and metaphysics of computing.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	CS	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 25 hours
PHI	320	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only BIO 312 or IAS 340 or PHI 320
PHI	320	Bioethics	Critical examination of moral questions arising in biomedical contexts, particularly due to new technologies and scientific discoveries.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	322	History and Philosophy of Sustainability	Examines sustainability issues in a broadly interdisciplinary way, but with a special emphasis on humanities perspectives, focusing on human ideas, values and institutions as they have evolved over time.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours; Credit is allowed for only HST 308 or PHI 322 or SOS 309 or BIO/HST/PHI/SOS 394 (History & Philosophy of Sustainability)
PHI	324	Existential Ethics	Ethical aspects of theistic and atheistic accounts of existentialist philosophy. Freedom and responsibility and their significance in human experiences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	

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PHI	325	Philosophy of Social Science	Philosophical problems surrounding the aims, structure, and methods of the social sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU or SB	
PHI	326	Philosophy of Happiness	Examines ancient and contemporary philosophical models of happiness and consideration of criteria for living a life of human flourishing.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better
PHI	328	History of Ancient Philosophy	History of Western philosophy from its beginnings through the Hellenistic period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 25 hours
PHI	329	History of Modern Philosophy	History of Western philosophy from the Renaissance through Kant.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	330	Theory of Knowledge	Nature, sources, and limits of human knowledge. Topics may include truth, a priori knowledge, empirical knowledge, perception, induction, and skepticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	331	Philosophy of Language	Problems pertaining to the nature of language, including meaning, reference, truth, definition, analyticity, translatability, synonymy, and contributions of contemporary linguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	332	Metaphysics	Problems pertaining to the nature of reality. Topics may include nature of person, minds, substance, universals, space, time, causation, and modality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	333	Symbolic Logic	Studies symbolic techniques to represent knowledge, deductive arguments, refutation by counter-example, and model-theoretic representation. Covers propositional and first-order predicate logic and provides a deeper understanding of theories about the world and of reasoning in life generally. Students gain a valuable tool for any field or discipline in which rigorous thinking is necessary such as science, medicine, business and the legal profession.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102 or 105 or 108 with a C or better; Minimum 25 hours
PHI	334	Philosophy of Mind	Nature of consciousness. Common sense view of mind, behaviorism, materialism, dualism, functionalism, self-knowledge, and knowledge of other minds.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	335	History of Ethics	Major works of moral philosophy, both ancient and modern, such as those by Plato, Aristotle, Hobbes, Hume, Kant, and Mill.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	335	History of Ethics	Major works of moral philosophy, both ancient and modern, such as those by Plato, Aristotle, Hobbes, Hume, Kant, and Mill.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	336	Social and Political Philosophy	Alternative principles and methods relevant to problems of human association and conflict; discusses justice and power, freedom and equality, and autonomy and order.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	336	Social and Political Philosophy	Alternative principles and methods relevant to problems of human association and conflict; discusses justice and power, freedom and equality, and autonomy and order.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	337	Ethical Theory	Theories in normative ethics about the nature of what is right and wrong, good and bad, virtuous and vicious. May include issues in metaethics.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	338	Metaethics	Concerns questions about the nature of value, morality, and normativity in general, such as "Is morality objective, subjective, or relative?"	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 (or ENG 105 or 108) with C or better; minimum 25 hours. Credit is allowed for only PHI 338 or PHI 420 (Metaethics)
PHI	339	Philosophy of Art	Central problems in philosophy of art, e.g., the nature of a work of art, modern and traditional theories of art, aesthetic perception and experience, and objectivity and relativity in art criticism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours
PHI	339	Philosophy of Art	Central problems in philosophy of art, e.g., the nature of a work of art, modern and traditional theories of art, aesthetic perception and experience, and objectivity and relativity in art criticism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 hours
PHI	347	Philosophical Theories of Constitutional Law	In-depth study of the philosophical theories surrounding constitutional rights and interpretation.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours
PHI	360	Business and Professional Ethics	Examines moral theories applied to cases of corporate responsibility, property rights, environment, fairness, profit, employee rights, and responsibilities.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 hours
PHI	360	Business and Professional Ethics	Examines moral theories applied to cases of corporate responsibility, property rights, environment, fairness, profit, employee rights, and responsibilities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 hours
PHI	390	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHI	390	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
PHI	391	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357, PHI 391 or REL 391
PHI	391	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357, PHI 391 or REL 391
PHI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
PHI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
PHI	401	Rationalism	Examines classical philosophical rationalism, as in Descartes, Spinoza, Malebranche, or Leibniz. Contemporary rationalist thought may also be examined.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Undergraduate Philosophy major; minimum 56 hours
PHI	402	Empiricism	Examines representatives of either classical or contemporary philosophical empiricism, e.g., Bacon, Hobbes, Locke, Butler, Berkeley, Reid, Hume, Mill, Carnap, and Ayer.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Undergraduate Philosophy student; Minimum 56 hours
PHI	403	Contemporary Analytic Philosophy	Aims and methods of such 20th-century philosophers as Frege, Moore, Russell, Wittgenstein, Carnap, Ayer, Wisdom, Ryle, Austin, Strawson, Quine, and Sellars, with application to metaphysics and epistemology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Undergraduate Philosophy student; Minimum 56 hours
PHI	405	Moral Psychology	Advanced study of key, contemporary authors and issues in moral psychology as a subfield of philosophy.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy undergraduate major; minimum 56 hours; Credit is allowed for only PHI 405 or PHI 420 (Moral Psychology) or PHI 530
PHI	406	Moral Dilemmas	Philosophical analysis of moral dilemmas arising in professional and public settings. Ethical decision making in business, educational, human service, and scientific communities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 101 or 105 or 107 with C or better. Credit is allowed for only FOR 406 or IAS 406 or PHI 406
PHI	407	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHI	407	Environmental Philosophy and Policy	Ethical concepts and theories applied to environmental issues: biotic community, biodiversity, degradation, ecofeminism, ecology, economics, population, property rights, and wilderness. Not open to students with credit in PHI 310.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Pre-requisites: ENG 101 or 105 with C or better. Credit is allowed for only IAS 407 or PHI 407
PHI	408	Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): minimum 45 earned hours. Credit is allowed for only IAS 408 or PHI 408
PHI	408	Feminist Ethics	Philosophical exploration of the theoretical and practical aspects of ethical issues affecting women from diverse feminist viewpoints.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 45 earned hours. Credit is allowed for only IAS 408 or PHI 408
PHI	409	Eco-Community Ethics	Traces human interaction with the Earth from hunters and gatherers to the present day, examining groups who have lived within ecological constraints and limits.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Credit is allowed for only IAS 409 or PHI 409
PHI	411	Continental Philosophy	Contemporary European thought emerges out of a crisis of the Enlightenment that unfolds throughout the 19th and 20th centuries. Kant's critique of the theoretical, practical, aesthetic and religious foundations articulates this crisis in Western philosophy, society and culture. Explores Continental thinkers and schools of thought in light of Kant's understanding of this crisis. Figures might be Nietzsche, Marx, Freud, Kierkegaard, Husserl, Heidegger, Benjamin, Adorno, Marcuse, Sartre, de Beauvoir, Irigaray, Kristeva, Spivak, Habermas, Lévinas, Marion, Derrida and others. Schools of thought considered may include existentialism, phenomenology, hermeneutics, critical theory, poststructuralism, deconstruction, feminist theory, critical race theory, postcolonial theory, and comparative philosophy. Continental philosophy dovetails with other fields like communication, cultural studies, law, political science, religious studies, literature and various social sciences.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 30 hours. Credit is allowed for only PHI 411 or PHI 494 (Continental Philosophy & Religion) or PHI 494 (Studies in Continental Philosophy)

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PHI	412	Philosophy and Literary Criticism	Explores dynamic tensions between philosophical and literary critical approaches to texts. Aims to identify distinct ways that literature and critical practices "philosophize" about truth, moral dilemmas or existential struggles. Probes the challenges that each form of inquiry, philosophical and critical, poses for the other. Seeks to enhance understanding of the philosophical underpinnings of key literary works. May address poetry, novels and other media.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): ENG 101 or 105 or 107 with C or better; minimum 30 hours. Credit is allowed for only PHI 412 or PHI 494 (Philosophy and Literature) or ENG 401 (Philosophy and Literary Criticism)
PHI	413	Advanced Symbolic Logic	Properties of formal systems axiomatizing propositional and 1st-order predicate logic. May also include modal logic, number theory, and limits of logicism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): undergraduate Philosophy student; minimum 56 hours; Credit is allowed for only PHI 413 or PHI 556
PHI	415	Philosophy and Film	Introduces philosophical themes via the medium of film. Students read classical and contemporary literature in philosophy, view films that portray philosophical concepts, and demonstrate their understanding through writing assignments and class presentations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only PHI 415 or PHI 294 (Philosophy and Film)
PHI	420	Topics in Philosophy	Course descriptions on file in department.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): undergraduate Philosophy major; minimum 56 hours
PHI	421	Philosophical Topics	Focuses on important issues within the discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
PHI	428	Immunophilosophy	Integrates immunology and philosophy, including psychoneuroimmunology and the mind-body problem, and immunologic/psychologic perspectives on self and self-identity.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: MIC 420, PHI 317, HPS314, or PHI 428 with C or better. Credit is allowed for only MIC 428 or PHI 428
PHI	439	Philosophy of Love and Sex	Advanced introduction to historical and contemporary philosophical writings and sociological case studies on the philosophy of sex and love.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only PHI 439 or PHI 494 (Philosophy of Love and Sex)
PHI	448	Justice and Reparations	Advanced study of the moral basis of reparations and reparative justice.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy undergraduate major; minimum 56 hours; Credit is allowed for only PHI 420 (Jus/Reparations) or PHI 448 or PHI 527
PHI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
PHI	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
PHI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Prerequisite(s): Barrett Honors student
PHI	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
PHI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
PHI	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
PHI	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7	L	
PHI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
PHI	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		

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PHI	501	Foundations of Ethics I	Studies primary texts of classic ethical theories and their applications to various issues in daily life and the professions. Ethical traditions include some of these frameworks: virtue ethics and natural law ethics, consequentialism and contractualism, deontology and critical communitarianism. Pays attention to the shifting nature of the relation between ethics and religion. In the applied, activity-portion of the course, students investigate real-life ethical issues and examine them from several normative perspectives.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
PHI	520	Topics in Applied Philosophy	Selected topics in applied philosophy.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	521	Bioethics	Addresses current controversies and major topics in bioethics and biosciences.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Found-Bioethics) or PHI 521
PHI	522	Ethics of Sustainability	Explores the normative framework of sustainability.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Topics in the Ethics of Sustainability) or PHI 522
PHI	524	Disaster Ethics	Investigates moral and political questions connected to disasters and emergencies such as obligations of aid workers, responsibilities for preparedness and rebuilding, and related social justice questions.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Ethics and Disaster) or PHI 524
PHI	525	Rational Choice	Recent philosophical work on rational decision making.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Rational Choice) or PHI 525
PHI	526	Evolution and Strategic Interaction	Recent work on the philosophical significance of evolutionary models of social interactions and social structures.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	527	Justice and Reparations	Explores the moral, legal and political aspects of reparative justice after episodes of mass violence, massive human rights violations and intergenerational harms to specific groups (for example, African-Americans and Indigenous peoples). Explores what normative moral conceptions of reparative and restorative justice support obligations to repair historical injustice, as well as contemporary forms of systemic or structural injustice for affected groups.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Jus/Reparations) or PHI 448 or PHI 527
PHI	529	Feminist Philosophy	Examines contemporary feminist work in some of the subfields of philosophy, such as ethics, political philosophy, epistemology.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Feminist Philosophy) or PHI 529
PHI	530	Moral Psychology	Central issues and texts in moral psychology including the impact of psychological research on philosophical theorizing.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 405 or PHI 420 (Moral Psychology) or PHI 530
PHI	531	Philosophy of Emotion	Theories of what an emotion is and the relevance of emotion to work in various subfields of philosophy such as ethics and philosophy of fiction.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	532	Experimental Philosophy	Examines experimental work taken to directly bear on important philosophical theories.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Experimental Philosophy) or PHI 532
PHI	533	Philosophy and Art	Recent philosophical work in the philosophy of fiction, visual art and/or music. Also discusses the fittingness of art works to address philosophical topics, especially in ethics.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Philosophy of Art) or PHI 533
PHI	540	Topics in Value Theory	Selected topics in value theory.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	541	Normative Ethics	Explores one or more leading normative ethical theories that inform the contemporary discussions in ethics, applied ethics, issues of justice and human rights, and public policy.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Normative Ethics) or PHI 541
PHI	544	Studies in Meta-Ethics	Selected topics in meta-ethics.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student

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PHI	545	Studies in Philosophy of Law	Selected topics in the philosophy of law.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	546	Studies in Political Philosophy	Selected topics or figures in political philosophy.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	555	Topics in Formal Methods	Selected topics in formal methods.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	556	Advanced Symbolic Logic	Advanced topics in logic relevant to philosophical theorizing such as modal, deontic and temporal logic.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	557	Philosophy of Mathematics	Examines selected topics and theories in the philosophy of mathematics.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Philosophy of Mathematics) or PHI 557
PHI	560	Topics in Epistemology	Selected topics in epistemology	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	562	Perception	Recent work on the nature and content of perception.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Philosophy MA or PhD major; Credit is allowed for only PHI 420 (Perception) or PHI 562
PHI	565	Probabilism	Recent work on rational belief, evidence and belief change.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	566	Studies in Philosophy of Science	Selected topics in philosophy of science.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	570	Topics in Metaphysics	Selected topics in metaphysics	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	571	Studies in Philosophy of Mind	Selected recent philosophical work in philosophy of mind such as the nature of sensation and perception, theories of consciousness, and the unity of the self	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	572	Studies in Philosophy of Language	Selected recent philosophical work in philosophy of mind language as theories of meanings, direct reference and vagueness.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): MA or PhD Philosophy major. Credit is allowed for only PHI 420 (Philosophy of Language) or PHI 572
PHI	576	Realism	Recent work on realism and anti-realism, starting with Michael Dummett, and including philosophers such as Hilary Putnam, Donald Davidson, John McDowell and Kit Fine. Global realism and anti-realism and more specific realisms/antirealisms about the past, the mind, theoretical entities, mathematics and ethics.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	581	Studies in Ancient Greek Philosophy	Selected topics in ancient philosophy from 585 BC to 529 AD.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	582	Studies in Modern Philosophy	Selected topics and significant figures in the modern period.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	586	20th and 21st C. Philosophers	Examines the work of one or more philosophers prominent in the 20th or 21st century.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	587	Topics in the History of Philosophy	Selected topics in the history of philosophy.	Y	SEM	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Philosophy Masters or Doctoral student
PHI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PHI	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PHI	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisites: Masters or Doctoral Philosophy student.

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PHI	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		
PHI	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
PHI	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PHI	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PHI	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	PRA	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PHI	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHI	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		
PHI	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
PHL	385	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
PHL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
PHL	480	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
PHS	110	Fundamentals of Physical Science	One-semester survey of the principles of physics and chemistry. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	
PHS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	208	Patterns in Nature	Examines topics from optics to analytical techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	Credit is allowed for only MSE 208 or PHS 208
PHS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
PHS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Prerequisite(s): Barrett Honors student
PHS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		
PHS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		
PHS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	505	Energy and the Environment	Current problems in energy resources, production, consumption, and conservation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	530	Methods of Physics Teaching I	Inquiry approach to high school physics teaching.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	531	Methods of Physics Teaching II	Extension of modeling techniques introduced in PHY 580.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	534	Methods of Teaching Physical Science I, II, III	Design of curriculum and conduct of instruction for physical science courses.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	540	Integrated Physics and Chemistry	Collaborative inquiry methods for teaching and coordinating physics and chemistry.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CHM 540 or PHS 540
PHS	542	Integrated Mathematics and Physics	Mathematical models and modeling as an integrating theme for secondary mathematics and physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	556	Astrophysics	Structure and evolution of stars, galaxies, and the universe. For secondary school teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	560	Matter and Light	Interactions of light with matter. Lasers and spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CHM 560 or PHS 560
PHS	570	Spacetime Physics	Special and general theories of relativity with implications for space and time travel.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHS	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	581	Structure of Matter and its Properties	Models of matter and its properties.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only CHM 581 or PHS 581
PHS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1		
PHS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		

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PHS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1		
PHS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	101	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	
PHY	101	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	
PHY	101	Introduction to Physics	Emphasizes applications of physics to life in the modern world. Presumes understanding of elementary algebra.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	SQ	
PHY	111	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	Prerequisite(s): MAT 170 or higher with C or better, or minimum score of 56% on the Mathematics Placement Test, or Corequisite(s): MAT 210 or higher
PHY	111	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3	SQ	Prerequisite(s): MAT 170 or higher with C or better, or minimum score of 56% on the Mathematics Placement Test, or Corequisite(s): MAT 210 or higher
PHY	111	General Physics	Noncalculus treatment of the principles of physics for nonphysics majors. Students whose curricula require a lab course must also register for PHY 113. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	Prerequisite(s): MAT 170 or higher with C or better, or minimum score of 56% on the Mathematics Placement Test, or Corequisite(s): MAT 210 or higher
PHY	112	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	Pre-requisites: PHY 111 with C or better
PHY	112	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3	SQ	Pre-requisites: PHY 111 with C or better
PHY	112	General Physics	Continuation of PHY 111. Students whose curricula require a lab course must also register for PHY 114. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SQ	Pre-requisites: PHY 111 with C or better
PHY	113	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	113	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1	SQ	Pre/Co-requisite: PHY 111 with C or better if completed
PHY	113	General Physics Laboratory	Elementary experiments in physics. Requires outside preparation for experiments and report writing. May be taken concurrently with, or subsequent to PHY 111. Both PHY 111 and PHY 113 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre/Co-requisite: PHY 111 with C or better if completed

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PHY	114	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	114	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	114	General Physics Laboratory	See PHY 113. May be taken concurrently with, or subsequent to, PHY 112. Both PHY 112 and PHY 114 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1	SQ	Pre/Co-requisite: PHY 112 with C or better if completed
PHY	118	Explorations in Science Teaching	Examines the field of physical science education via in-class meetings and classroom settings. Discusses the theory, pedagogy and practice of teaching physical science. Reviews various curricula available for the teaching of physical science with a focus on state and national standards. Students work with course instructor(s) to design three lessons that work toward some of the objectives of each cooperating teachers' class. Students are aided in developing materials, guided in planning to teach the lesson, and given time to prepare and practice the lesson.	N	SEM	N	GNA	Liberal Arts and Sciences	Department of Physics	1		Pre-requisite: Mathematics or Physics or other science major
PHY	121	University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	Prerequisite(s): MAT 265 or MAT 270 with C or better; Pre/Corequisite(s): MAT 266 or MAT 271 with C or better if completed
PHY	121	University Physics I: Mechanics	Kinematics; Newton's laws; work, energy, momentum, conservation laws; dynamics of particles, solids, and fluids. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3	SQ	Prerequisite(s): MAT 265 or MAT 270 with C or better; Pre/Corequisite(s): MAT 266 or MAT 271 with C or better if completed
PHY	122	University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	Pre/Co-requisite: PHY 121 with C or better if completed
PHY	122	University Physics Laboratory I	Lab accompanying PHY 121. Both PHY 121 and PHY 122 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1	SQ	Pre/Co-requisite: PHY 121 with C or better if completed
PHY	131	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SQ	Pre-requisites: MAT 266 or MAT 271 with C or better; PHY 121 with C or better; Pre/Co-requisite: MAT 267 or MAT 272 with C or better if completed
PHY	131	University Physics II: Electricity and Magnetism	Electric charge and current, electric and magnetic fields in vacuum and in materials, and induction. AC circuits, displacement current, and electromagnetic waves. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3	SQ	Pre-requisites: MAT 266 or MAT 271 with C or better; PHY 121 with C or better; Pre/Co-requisite: MAT 267 or MAT 272 with C or better if completed
PHY	132	University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY	132	University Physics Laboratory II	Lab accompanying PHY 131. Both PHY 131 and PHY 132 must be taken to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	1	SQ	Pre/Co-requisite: PHY 131 with C or better if completed
PHY	150	Physics I	Introductory physics for majors. Kinematics, Newton's Laws, basic forces, energy, momentum.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	Prerequisite(s): MAT 265 or 270 with C or better; Pre- or corequisite(s): MAT 266 or 271 with C or better if completed
PHY	151	Physics II	Continuation of PHY 150. Electromagnetic fields; Ampere's and Faraday's Laws; Maxwell's equations; basic circuit elements.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	Pre-requisites: MAT 266 or MAT 271 with C or better; PHY 150 (or PHY 121 and PHY 122) with C or better; Pre/Co-requisite: MAT 267 or MAT 272 with C or better if completed
PHY	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		Pre-requisites: Freshman student; Maximum 25 hours
PHY	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	201	Mathematical Methods in Physics I	Differential equations, linear equations, vectors, matrices, Fourier series, and numerical methods.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Prerequisite(s): MAT 267 or 272 with C or better; PHY 151 or PHY 131 and 132 with C or better

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PHY	201	Mathematical Methods in Physics I	Differential equations, linear equations, vectors, matrices, Fourier series, and numerical methods.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Physics	3	CS	Prerequisite(s): MAT 267 or 272 with C or better; PHY 151 or PHY 131 and 132 with C or better
PHY	241	University Physics III	Thermodynamics, kinetic theory, physical and wave optics, relativity, photons, matter waves, atomic physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 131
PHY	252	Physics III	Wave physics, oscillations, harmonic systems, physical optics, thermodynamics, kinetic theory, special relativity.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	SQ	Prerequisite(s): MAT 267 or 272 with C or better; PHY 151 or PHY 131 and 132 with C or better
PHY	252	Physics III	Wave physics, oscillations, harmonic systems, physical optics, thermodynamics, kinetic theory, special relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	4	SQ	Prerequisite(s): MAT 267 or 272 with C or better; PHY 151 or PHY 131 and 132 with C or better
PHY	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHY	302	Mathematical Methods in Physics II	Vector calculus, complex variables, partial differential equations, special functions, numerical methods.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): PHY 201 with C or better
PHY	302	Mathematical Methods in Physics II	Vector calculus, complex variables, partial differential equations, special functions, numerical methods.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): PHY 201 with C or better
PHY	310	Classical Particles, Fields, and Matter I	Particle kinematics, mechanics, conservation laws, particle motion in force fields, dynamics of two-body systems, reference frames, rigid body motion, relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 201 with C or better; PHY 252 with C or better. Co-requisite: PHY 302
PHY	311	Classical Particles, Fields, and Matter II	Electrostatic and gravitational fields, Poisson and Laplace equations, dielectric materials, magnetic fields and materials, magnetic induction, Faraday's Law.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 302 with C or better; PHY 310 with C or better
PHY	312	Mechanics and Electromagnetism	Covers two major topics in physics, both dealing with forms of energy and momentum and how they are transmitted in space. Covers mechanics and dynamics, describing how bodies with mass move under various types of forces. Also covers electromagnetism, which describes how electric charges and magnets, and their motions, generate fields of force. Also describes how time-varying electric and magnetic fields are associated with electromagnetic waves, which include light.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 150, 151, and 252 (or PHY 121, 122, 131 and 132) with C or better
PHY	314	Quantum Physics I	Photons, models of the atom, wave properties of matter, introduction to wave mechanics, 1-D systems in quantum mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisites: PHY 201 with C or better; PHY 252 with C or better
PHY	315	Quantum Physics II	General principles of quantum mechanics, 3-D problems, approximation methods, spin, introduction to many-particle systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 302 with C or better; PHY 314 with C or better
PHY	321	Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
PHY	321	Vector Mechanics and Vibration	Vector-based formulation of Newtonian mechanics of particles and rigid bodies, including oscillatory systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	331	Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
PHY	331	Principles of Modern Electromagnetism	Studies the unified description of electromagnetic phenomena provided by Maxwell's equations in differential and integral form.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	333	Electronic Circuits and Measurements	Basic principles of electronic circuit analysis and measurement techniques using modern instrumentation and computer-aided analysis of data.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: MAT 272 or MAT 267 with C or better; PHY 151 (or PHY 131 and PHY 132) with C or better
PHY	334	Advanced Laboratory I	Selected experiments from contemporary physics. Emphasizes modern instrumentation, computer-assisted acquisition and analysis of data, and report form writing.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Physics	3	L	Prerequisite(s): MAT 267 or 272 with C or better; PHY 151 (or PHY 131 and 132) with C or better; Pre- or Corequisite(s): PHY 314, 361, CHM 345 or EEE 424
PHY	361	Introductory Modern Physics	Special relativity and introductory quantum theory with applications drawn from atomic, nuclear, and solid-state physics.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		PHY 131 or PHY 151 with C or better; MAT 272 or MAT 267 with C or better
PHY	361	Introductory Modern Physics	Special relativity and introductory quantum theory with applications drawn from atomic, nuclear, and solid-state physics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		PHY 131 or PHY 151 with C or better; MAT 272 or MAT 267 with C or better
PHY	371	Driving Forces in Biology	What are the stable states of biomolecules? How do molecules interact? What forces drive molecules to bond and associate, to adsorb, to permeate through membranes, to undergo chemical reactions, to undergo conformational changes? Why are some changes gradual, as in the weakening of a ligand interaction with temperature, and others sudden (cooperative) such as protein folding or the insolubility of oil in water? Addresses these questions by statistical thermodynamics, a collection of principles and models that when combined with thermodynamics, aim to explain molecular forces and flows.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: PHY 252

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
PHY	412	Classical Particles, Fields, and Matter III	Electromagnetic fields of moving charges, Maxwell's equations, harmonic phenomena, oscillations, waves, electromagnetic radiation, covariant electromagnetism, introduction to general relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: PHY 311 with C or better
PHY	416	Quantum Physics III	Introduces the quantum theory of atoms, molecules, solids and nuclei, Dirac's equation.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: PHY 315 with C or better
PHY	441	Statistical and Thermal Physics	Statistical and experimental basis of heat, temperature, and entropy. Mechanical and statistical basis of the laws of thermodynamics. Applies macroscopic thermodynamics. Phase equilibrium.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	444	Fundamentals of Nanoscience	For senior science majors and beginning graduate students teaching the cross-disciplinary subject of nanoscience. There is a strong emphasis on basics, so the course starts with a fairly rigorous introduction to quantum mechanics, statistical mechanics and chemical kinetics, though enough material is provided to allow nonphysics majors to come up to speed in these areas. This is followed by a survey of experimental techniques in nanoscience: microscopy, optical spectroscopy and scanning probe methods, and nanofabrication methods including "top down" and self assembly. Finally we survey applications: electrons in nanostructures, molecular electronics, nanomaterials and bio-nanoscience.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: Junior or Senior standing; Credit is allowed for only PHY 444 or 494 (Intro to Nanoscience)
PHY	452	Physical Optics	Principles of reflection, refraction, diffraction. Additional topics from contemporary optics may include Fourier transform spectroscopy, linear systems theory, holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 302 with C or better; PHY 311 with C or better
PHY	456	Laser Optics	Theoretical and experimental aspects of applied optics including basic concepts of lasers, properties of optical beams, resonators and interferometry. Course consists of two parts: preparatory labs and applied projects. Preparatory labs provide theoretical and technical background for understanding of general features of electromagnetic wave propagation and technical features of optical lasers including high-power laser systems. Applied projects give students the opportunity to use laser optical systems to solve real-world problems.	N	LEL	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Prerequisite(s): PHY 361; Credit is allowed for only ABS 494 (Advanced Laser Laboratory), ABS 494 (Laser Optics) or PHY 456
PHY	460	Numerical Methods in Modern Physics	Advanced numerical methods with an emphasis on electromagnetism, quantum mechanics and materials science with computer labs on a multiprocessor cluster.	N	LEL	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): PHY 315
PHY	462	Particle and Nuclear Physics	Nuclear properties, models, decays and reactions; fundamental forces, field theories, symmetry principles; hadrons, quarks, and leptons; the Standard Model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better
PHY	465	Advanced Laboratory II	Continuation of PHY 334. Students may substitute a short laboratory research project for one of the elective experiments of the course, in consultation with a faculty sponsor and the course instructor.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 334 with C or better
PHY	472	Advanced Biophysics Lab	Offers selected experiments from contemporary biophysics. Emphasizes modern instrumentation, computer-assisted acquisition and analysis of data, and report writing. Emphasizes the importance of good notebook keeping.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): PHY 371
PHY	473	From Molecules to Cells	Offers selected subjects from biological physics covering the length scales from biomolecules to cells. Builds on knowledge acquired from thermodynamics and statistical mechanics to formulate basic principles behind the working of life systems. Free energy, entropic forces, chemical potentials and electrostatic interactions rule the "nanometer soup" of a living cell. Proton gradients across cell membranes are behind all the energy consumed by life. Random walks, dissipative dynamics, and hydrodynamic fluxes rule time-dependent phenomena. Covers systems including biomolecules, membranes, cells and nerves.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: PHY 371 with C or better; Pre/Co-requisite: PHY 472 with C or better if completed
PHY	480	Methods of Teaching Physics	Evaluates various approaches to the teaching of high school physics. Preparation of demonstrations and experiments. Organization of a lab. Designed for secondary school physics teachers.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	481	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 311 with C or better; PHY 315 with C or better; Credit is allowed for only MSE 526, NAN 511, PHY 481 or 511
PHY	482	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 481 with C or better. Credit is allowed for only MSE 527, NAN 512, PHY 482 or 512
PHY	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHY	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Department of Physics	1-6	L	Prerequisite(s): Barrett Honors student
PHY	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Prerequisite(s): minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		Prerequisite(s): minimum 45 hours
PHY	495	Project Research	Supervised project in physics or astrophysics. May be repeated for credit.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-3		
PHY	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-6		Prerequisite(s): Barrett Honors student
PHY	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-7		
PHY	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		Prerequisite(s): minimum 45 hours
PHY	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-3		Prerequisite(s): minimum 45 hours
PHY	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	511	Materials Physics I	Fundamentals of materials physics: crystal structure, diffraction, elasticity, point defects, dislocations, lattice vibrations, thermal properties, periodic potential, band structure.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: Degree- or nondegree-seeking graduate; Credit is allowed for only MSE 526, NAN 511, PHY 511
PHY	512	Materials Physics II	Electronic behavior of materials: energy bands, electronic properties, metals, semiconductors, insulators, optical properties, magnetic properties, superconductivity, biophysics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisites: PHY 511; Credit is allowed for only MSE 527, NAN 512, PHY 482 or PHY 512
PHY	521	Classical and Continuum Mechanics	Variational principles, Lagrange's and Hamilton's equations, canonical transformations, Hamilton-Jacobi theory, introduction to chaos and nonlinear dynamics, fundamentals of elasticity theory and fluid mechanics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	523	General Relativity	Special and general theories of relativity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	531	Electrodynamics	Special theory of relativity, covariant formulation of electromagnetic interactions, Maxwell's equations, electrostatics and magnetostatics, dielectric media, inhomogeneous wave equations, Lienard-Wiechert potentials, interactions of charged particles and electromagnetic waves, scattering and diffraction.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	541	Statistical Physics	Postulates of statistical mechanics, equilibrium ensembles, Bose and Fermi statistics, density matrix, modern theory of phase transitions, fluctuations, and linear response theory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	542	Topics in Biophysics	Overview of modern biology, length scales: emphasizes molecular and cellular biology. Nonequilibrium systems: compare and contrast stochastic processes in biological and physical systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	544	Introduction to Nanoscience	Survey of nanoscience: quantum/ statistical mechanics/kinetics; measurement and fabrication methods; applications to materials, nano-electronics, molecular electronics and nano-biology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only CHM 544, NAN 544, PHY 444 or PHY 544
PHY	546	Surfaces and Thin Films	Thermodynamics and kinetics of surface structures and thin film processes. Ultra-high vacuum techniques for examining surfaces. Case studies of physics, chemistry and nanoscience applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 546, NAN 546 or PHY 546
PHY	552	Electron Microscopy I	Kinematical and dynamical electron diffraction and microscopy. Defect structure and composition using STEM imaging, x-ray and electron-energy-loss spectroscopy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 552, NAN 552, SEM 552, or PHY 552
PHY	553	Electron Microscopy Laboratory I	Lab support for PHY 552.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Corequisite(s): MSE 552 or PHY 552; Credit is allowed for only MSE 553 or PHY 553
PHY	554	Electron Microscopy II	Determination of structure and composition of materials using high-resolution imaging, convergent beam diffraction, and electron holography.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE or PHY 554
PHY	555	Electron Microscopy Laboratory II	Lab support for PHY 554.	N	LAB	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	571	Quantum Physics	Review modern physics, chemistry, math. Differential equation, operator, matrix formulations. Free particle, bound state problems. Examples from physics, chemistry and nanoscience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Credit is allowed for only MSE 571, NAN 571 or PHY 571

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PHY	576	Quantum Theory	Operator methods in quantum mechanics, time-independent perturbation theory, variational methods, angular momentum and group representation theory, identical particles; quantum dynamics, including time-ordered operators, time-dependent perturbation theory, and Fermi's golden rule.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	577	Introduction to Quantum Field Theory	Explains necessity of generalizing quantum mechanics to a field theory viewpoint. Studies properties of scalar, spinor, and gauge fields; incorporates interactions; and learns to compute amplitudes, cross sections, and decay rates using formalism of Feynman diagrams.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PHY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	581	Quantum Theory of Solids I	Band structure models: pseudopotentials, density functional theory; optical and magnetic response; elementary excitations; transport theory, electron-photon interactions and superconductivity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	582	Quantum Theory of Solids II	Continuation of PHY 581: broken symmetry; phase transitions; disorder, topological defects; nano-structures topics; soft condensed matter and current research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Physics	3		
PHY	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-4		
PHY	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Physics	1-12		
PHY	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Physics	1-15		
PHY	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Physics	1		
PHY	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	Department of Physics	1-15		
PLA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-3		
PLA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
PLA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
PLA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-6		Prerequisite(s): Barrett Honors student
PLA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	The Design School	1-6	L	Prerequisite(s): Barrett Honors student
PLA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
PLA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-7	L	
PLA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	The Design School	1-3		
PLA	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
PLA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-4		
PLA	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	The Design School	1-12		
PLA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		

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PLA	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	The Design School	1-12		
PLA	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
PLA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	The Design School	1		
PLB	300	Plant Diversity and Evolution	An examination of the major groups of land plants, emphasizing evolutionary history, comparative data, and phylogenetic methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4	L or SG	Prerequisite(s): BIO 181 (or BIO 188) with C or better and BIO 182 (or BIO 187 or PLB 200) with C or better OR BIO 281 with C or better and BIO 282 with C or better; Credit is allowed for only BIO 303 or LSC 307 or PLB 300
PLB	302	Plants and Civilization	Plants and plant products used by people throughout the world. Cultivation, processing, and uses in modern life (beverages, fibers, foods, medicinals, and perfumes).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) OR BIO 281 and 282; Credit is allowed for only BIO 304 or PLB 302
PLB	308	Plant Physiology	Concepts of plant function: carbon metabolism, energy acquisition, regulation of growth and development, stress responses, and water and nutrient uptake.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisite(s) with C or better: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) OR BIO 281 and 282; CHM 116; Credit is allowed for only BIO 308 or PLB 308
PLB	310	The Flora of Arizona	Overview of Arizona's flora and plant communities; emphasizes identification, classification, and natural history of the state's native vascular species.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	4		Prerequisite(s) with C or better: BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) OR BIO 281 and 282; Credit is allowed for only BIO 313 or PLB 310
PLB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): minimum 45 hours
PLB	407	Plant Fossils and Evolution	Broad survey of plant life of the past, including the structure of plant fossils, their geologic ranges, geographic distribution, and paleoenvironment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	4		Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	414	Plant Pathology	Identification and control of biotic and abiotic factors that cause common disease problems to plants.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): BIO 181 (or BIO 188) and BIO 182 (or BIO 187 or both PLB 200 and 201) with C or better OR BIO 281 and 282 with C or better
PLB	502	Perspectives in Plant Biology	Introduces major areas of research within the department with the goal of broadening knowledge to enable multidisciplinary research and communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
PLB	519	Physiological Plant Ecology	Physiological and morphological responses and adaptations of plants to their environment, emphasizing mechanisms that influence carbon and water balance, growth, and population distributions	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		Pre-requisites: Graduate student; Credit is allowed for only PLB 419, BIO 419, BIO 519 or PLB 519
PLB	525	Microclimate Methods	Techniques to measure and quantify microclimate and mass transfer. Supporting principles.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
PLB	558	Molecular Mechanisms of Photosynthesis	Structure and function of photosynthetic complexes; mechanism of energy conversion in plants, bacteria, and model systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Life Sciences	3		
PLB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		
PLB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-4		
PLB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Life Sciences	1-12		
PLB	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLB	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of Life Sciences	1		
PLB	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Life Sciences	1-15		
PLC	101	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
PLC	102	Elementary Polish	Structural grammar, basic vocabulary; introduction and reinforcement of aural/oral, reading, and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
PLC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
PLC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	201	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		
PLC	202	Intermediate Polish	Systematic review of grammar. Development of vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Pre-requisites: PLC 201 with D
PLC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	311	Advanced Polish I	Develops writing ability and oral expression.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: PLC 202 with C or better; Credit is allowed for only PLC 311 or 394, Polish Comp and Conversation
PLC	312	Advanced Polish II	Develops writing ability and oral expression.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: PLC 311 with C or better
PLC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	11-12		
PLC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PLC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
PLC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
PLC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	101	Elementary Portuguese	Basic grammar with intensive drills in class and lab directed toward conversational fluency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
POR	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
POR	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	201	Intermediate Portuguese	Continuation of POR 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites: POR 101 with C or better
POR	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	313	Portuguese Composition and Conversation	Develops skill in written Portuguese and corrected oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: POR 201 with C or better
POR	314	Portuguese Composition and Conversation	Continuation of POR 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: POR 313 with C or better
POR	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	472	Luso-Brazilian Civilization	Lectures, readings, and discussion of important aspects of Luso-Brazilian civilization. Topics from music, art, folklore, literature, history, and politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisites: POR 313 with C or better; Credit is allowed for only POR 472 or 598 (Luso-Brazilian Civilization)
POR	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12	G	Pre-requisite: Junior standing; Credit is allowed for only GCU 485, GPH 485, LAP 485, POR 485, PUP 485 or 585
POR	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
POR	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
POR	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
POR	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
POR	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
POR	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
POR	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	110	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	110	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	110	Government and Politics	Major institutions of modern government and processes of individual and group political activity, with emphasis on the American experience. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	112	Foundations of Democracy	Introduces an interdisciplinary study of democracy with special attention to its historical development as a form of government.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Credit is allowed for only HST 112 or POS 112 or HST 194 (Foundations of Democracy)
POS	112	Foundations of Democracy	Introduces an interdisciplinary study of democracy with special attention to its historical development as a form of government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Credit is allowed for only HST 112 or POS 112 or HST 194 (Foundations of Democracy)
POS	150	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
POS	150	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	150	Comparative Government	Political institutions and processes in selected foreign countries, including origins, strengths, and weaknesses of contemporary political systems and political development.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	160	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Credit is allowed for only POL 160 or POS 160 or POS 360 or POS 362
POS	160	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Credit is allowed for only POL 160 or POS 160 or POS 360 or POS 362
POS	160	Global Politics	Nature of contemporary world politics through the study of both general theoretical topics and specific geographical areas.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only POL 160 or POS 160 or POS 360 or POS 362
POS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		Pre-requisites: Freshman status; Maximum 25 hours
POS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		Prerequisite(s): maximum 25 hours
POS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		Prerequisite(s): maximum 25 hours
POS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): maximum 25 hours
POS	210	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
POS	210	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	210	Political Ideologies	Leading political ideas and belief systems, e.g., Marxism, liberalism, conservatism, theories of democracy, and alternative futures.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS	211	Arizona Constitution and Government	Constitution and government of the State of Arizona. Meets the Arizona constitution requirement for teacher certification. May not be counted for the major or a teaching major or minor in Political Science.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	2		Credit is allowed for only POS 211 or POS 216 or POS 417
POS	211	Arizona Constitution and Government	Constitution and government of the State of Arizona. Meets the Arizona constitution requirement for teacher certification. May not be counted for the major or a teaching major or minor in Political Science.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	2		Credit is allowed for only POS 211 or POS 216 or POS 417
POS	216	State and Local Government	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Credit is allowed for only POS 211 or POS 216 or POS 417
POS	216	State and Local Government	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only POS 211 or POS 216 or POS 417
POS	230	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or SB	
POS	230	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	L or SB	
POS	230	Current Issues in National Politics	Major issues facing national governments in the domestic field.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L or SB	
POS	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	245	Introduction to South Asia	Provides an introduction to the history and major contemporary political, economic, social, religious and cultural features of the South Asia region at large and of selected South Asian nations in particular.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HST 245 or POS 245 or REL 245 or SGS 245 or SLC 245
POS	247	Introduction to Latin American Politics	General introduction to the politics and socioeconomic structures of Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	260	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or SB) & G	
POS	260	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	(L or SB) & G	
POS	260	Current Issues in International Politics	Analyzes major current problems in world politics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(L or SB) & G	
POS	270	American Legal System	Concepts, institutions, classifications, and functions of law. Role of the courts and impact of judicial decision making on social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
POS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
POS	300	Contemporary Global Controversies	Explores key controversies in global politics including security, economic stability, poverty, gender, race, and the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	301	Empirical Political Inquiry	Logic of political inquiry, including research problems, concepts, hypotheses, theories, measurement, data collection, and analysis.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours; Credit is allowed for only POS 301 or SGS 305
POS	301	Empirical Political Inquiry	Logic of political inquiry, including research problems, concepts, hypotheses, theories, measurement, data collection, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours; Credit is allowed for only POS 301 or SGS 305
POS	305	Politics and Film	Examines portrayal of political events, ethnic groups, and sociopolitical situations in film, a major medium addressing questions of human values. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	310	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	310	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	310	American National Government	Powers, functions, and agents of American political institutions. Meets the federal government requirement for teacher certification.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only POL 110, 310, POS 110 or 310
POS	313	The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only POL 313 or POS 313
POS	313	The Congress	Lawmaking process in the U.S. Congress.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only POL 313 or POS 313
POS	314	The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	314	The American Presidency	Office, role, and power of the American presidency in the American political system.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS	315	The Supreme Court	Role of the Supreme Court in American society and politics; examines decision-making process and impact of decisions; restraint versus activism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	317	History of Postwar U.S. Conservatism	Traces the origins of U.S. conservatism as it developed in the work of U.S. and European thinkers, intellectuals and authors after WWII	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only HST 294 (American Conservatism), 317 or POS 317
POS	325	Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
POS	325	Public Policy Development	Examines one or more aspects of public policy development including agenda setting and policy formulation, implementation, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	331	Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	331	Public Opinion	Formation, expression, and influence of individual and organized opinion on political institutions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS	332	American Political Parties	Development of the American party system. Party organization and functions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	333	Interest Groups	Examines how minority, corporate, labor, farm, consumer, environmental, health, education and public interest groups, and single-issue movements influence government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	336	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
POS	336	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	336	Voters in America	Voting behavior and the attitudes, perceptions, and activities of the citizenry in the political process.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
POS	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
POS	340	History of Political Philosophy I	Western political philosophers and their theories to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H	
POS	341	History of Political Philosophy II	Western political philosophers and their theories from the 17th to the 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H	
POS	342	Political Theory	Surveys ancient, modern, and contemporary political theorists and ideas in European and American contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU or SB	
POS	346	Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	
POS	346	Problems of Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU	
POS	350	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
POS	350	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	350	Comparative Politics	Theoretical approaches and political institutions, such as parties, pressure groups, legislatures, and executives, from a cross-national perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	351	Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
POS	351	Democratization	Examines the consolidation of democracies in postauthoritarian and postcommunist settings (e.g., Latin America, Eastern Europe, Asia).	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	352	European Democracies	Addresses questions such as, How has the relationship between European citizens and the democratic process changed in the post-WWII period? How do domestic political institutions influence this process? Explores different approaches to some of the most important questions facing the study of comparative and European politics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: Minimum 25 hours. Credit is allowed for only POS 394 (European Pol Democracies), 498 (European Democracies), or POS 352
POS	353	Comparative Politics of the Middle East	Examines the historical, social, and economic context of contemporary Middle East politics; explores political dynamics of selected Middle Eastern regimes; and offers a comparative examination of key political trends and themes.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): junior standing or minimum 45 hours; Credit is allowed for only POS 353 or POS 360 (Politics of the Middle East)
POS	353	Comparative Politics of the Middle East	Examines the historical, social, and economic context of contemporary Middle East politics; explores political dynamics of selected Middle Eastern regimes; and offers a comparative examination of key political trends and themes.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): junior standing or minimum 45 hours; Credit is allowed for only POS 353 or POS 360 (Politics of the Middle East)
POS	354	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356
POS	356	European Union	History and workings of EU member states, including single market, Euro, legal system, ethnonationalism, immigration, expansion, trade wars, and defense.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	357	South Asia Politics	Political culture and systems of South Asia examined through study of political writings, novels, and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Prerequisite(s): minimum 45 hours
POS	357	South Asia Politics	Political culture and systems of South Asia examined through study of political writings, novels, and poetry.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours
POS	358	Southeast Asia	Political background, governmental institutions, political dynamics, and developmental problems of Southeast Asian nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	359	African Politics and Society	Comparative analysis of socioeconomic forces, political processes, government institutions, and political novels in Sub-Saharan Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	360	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras. Emphasis may vary with instructor, but cannot be repeated for credit.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Pre-requisites: Minimum 25 hours; Credit is allowed for only POS 160 or POS 360
POS	360	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras. Emphasis may vary with instructor, but cannot be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Pre-requisites: Minimum 25 hours; Credit is allowed for only POS 160 or POS 360
POS	360	World Politics	Theory and practice of statecraft as applied to selected issues, regions, or eras. Emphasis may vary with instructor, but cannot be repeated for credit.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Pre-requisites: Minimum 25 hours; Credit is allowed for only POS 160 or POS 360
POS	361	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Prerequisite(s): minimum 45 hours
POS	361	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Prerequisite(s): minimum 45 hours
POS	361	American Foreign Policy	United States in world affairs; foreign policy since World War I. Techniques in formulating American foreign policies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours
POS	362	World Politics Theory	Theoretical examination of one or more aspects of international politics, e.g., foreign policy, negotiations, alliances, crises, wars, and international systems.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only POL 160 or POS 160 or POS 362
POS	364	National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
POS	364	National Security, Intelligence, and Terrorism	Theoretical and empirical assessment of U.S. national security policy in the post-cold war era.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	367	World Politics and Global Inequalities	Examines the topic of global inequality and the numerous challenges that arise from it, including perspectives and theories pertaining to third world development, the historical background to the political and economic relations between the wealthy countries of the world and the poorer countries, and policies and strategies designed to promote development and alleviate poverty. Studies some contemporary issues that are related to global inequality including ethics and third-world development, sweatshop labor, corporate responsibility, and the tension between globalization and the movement of people across sovereign borders.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3	G	Pre-requisite: Minimum 25 hours; Credit is allowed for only POS 360 (Current Issues International Politics), (International Security), (Organizational Studies) or POS 367
POS	368	Ethics and Human Rights	Explores issues of ethics, morality, and human rights in the global community.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	370	Law and Society	Analyzes debates among social scientists and legal theorists concerning the relationship between law and society.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
POS	370	Law and Society	Analyzes debates among social scientists and legal theorists concerning the relationship between law and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	374	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only ASB 374, POS 374, SBS 374 or SOC 374
POS	377	Arizona, Immigration, Latinos and Politics	Contemporary immigration and its related issues have generated significant debates, reforms and responses by government officials, businesses and private citizens, to name but a few in this country. This course provides a much-needed framework for understanding some of the immigration issues in Arizona and the country generally. It also focuses on some of the political responses by Latinos and their significant mobilization at the local, state and federal levels.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only JUS 377 or POS 377 or SGS 377 or TCL 377 or HST/JUS/POS/SGS/TCL 394 (Arizona, Immigration, Latinos and Politics)
POS	378	Religion, War and Peace	In-depth study of the religious, political and ethical dimensions of violence and war. Compares perspectives of Christian, Jewish and Islamic traditions as well as secular viewpoints.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only POS 378, REL 378 or 394 (Religion, War and Peace)
POS	388	Religion, Ethics, and International Politics	Religious and ethical dimensions of international politics. Addresses historical and contemporary ideas, movements, issues and events.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only POS or REL 388
POS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
POS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
POS	401	Political Statistics	Basic concepts in statistics as they facilitate the description, explanation, and prediction of social and political phenomena.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Prerequisite(s): POS 301 or SGS 305 with C or better; Credit is allowed for only POS 401 or SGS 401

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POS	401	Political Statistics	Basic concepts in statistics as they facilitate the description, explanation, and prediction of social and political phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	CS	Prerequisite(s): POS 301 or SGS 305 with C or better; Credit is allowed for only POS 401 or SGS 401
POS	410	Governing American Cities	Reviews modern urban problems, their sources, and potential solutions, including structural and policy alternatives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	414	Political Thought and Leadership	Research seminar in political values and leadership. Combines lecture, readings and guest lectures by leaders in business, public affairs and the media. Culminates in a substantial written research effort.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; HST 112 with C or better; minimum 55 hours; Credit is allowed for only HST 414 or POS 414
POS	414	Political Thought and Leadership	Research seminar in political values and leadership. Combines lecture, readings and guest lectures by leaders in business, public affairs and the media. Culminates in a substantial written research effort.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; HST 112 with C or better; minimum 55 hours; Credit is allowed for only HST 414 or POS 414
POS	417	Arizona Politics	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisite: Minimum 25 hours; Credit is allowed for only POS 211, 216 or 417
POS	417	Arizona Politics	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Pre-requisite: Minimum 25 hours; Credit is allowed for only POS 211, 216 or 417
POS	417	Arizona Politics	Surveys the operations, problems, and policies of state and local governments in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: Minimum 25 hours; Credit is allowed for only POS 211, 216 or 417
POS	426	Elements of Public Policy	Each section may cover one of the following topics: consumer protection, natural resources, criminal justice, environmental protection, science and technology, or theories of public policy. May be repeated for credit when topics vary.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
POS	426	Elements of Public Policy	Each section may cover one of the following topics: consumer protection, natural resources, criminal justice, environmental protection, science and technology, or theories of public policy. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	431	Campaigns and Elections	Examines campaigns from a multitude of perspectives including the politician, reporter, campaign strategist, and voter.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
POS	431	Campaigns and Elections	Examines campaigns from a multitude of perspectives including the politician, reporter, campaign strategist, and voter.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	434	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
POS	434	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	
POS	434	Media and Politics	Studies mass media and politics in the United States, e.g., media and elections, media and government.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
POS	435	Women and Politics	Focuses on the uniqueness of women in modern political systems and political thought. Emphasis may vary with instructor.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & C	
POS	436	Gender, Sexuality, Nation-States	Issues and problems related to the interface of gender, sexualities, nationalisms, and states in various world contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
POS	437	Women, Power, and Politics	The roles and treatment of women within various political contexts. Specific focus may vary with instructor.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	
POS	438	Latino Politics	Examines contemporary political issues in the diverse Latino community.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	
POS	439	Minority Group Politics in America	Role of minority groups in American politics.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Prerequisite(s): minimum 45 hours
POS	439	Minority Group Politics in America	Role of minority groups in American politics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & C	Prerequisite(s): minimum 45 hours
POS	442	American Political Thought	Political theories and movements from the colonial period to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU	
POS	442	American Political Thought	Political theories and movements from the colonial period to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU	Prerequisite(s): minimum 45 hours
POS	443	Topics in Contemporary Political Theory	Major problems and theories in contemporary political thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU	
POS	446	Democracy	Issues and problems in democratic theory, e.g., the nature of democracy, majority rule, representation, equality, and the value of political participation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	HU	
POS	447	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB 447, POS 447, or SBS 447
POS	451	China, Japan, and the Koreans	Comparative analysis of the political modernization experiences of China, Japan, and the two Koreas, focusing on their differing reactions to the West.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	452	China	Background of the Communist revolution, political processes, and developmental problems in China from a comparative perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	

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POS	453	Latin America	Political institutions, process, and developmental problems of South American states examined through comparative analysis, novels and poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Prerequisite(s): minimum 25 hours
POS	454	Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	454	Mexico	Politics, economy, institutions, and cultures in Mexico in historical and contemporary perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	456	Latin American Cities	Urban studies of Latin American world cities, e.g., Mexico City, Santiago, emphasizing integration with U.S. cities, including Los Angeles, Phoenix.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	464	Border Cities: Action Research on Globalization	Examines the effects of globalization on U.S.-Mexico border cities and towns with particular emphasis on Mexican border cities.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	465	International Organization and Law	History, practical political significance, and future of international institutions, transnational regimes, and international law.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	467	International Security	Examines issues affecting the international security of states and peoples, e.g., military, economic, technological, environmental, and demographic.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Prerequisite(s): minimum 45 hours
POS	467	International Security	Examines issues affecting the international security of states and peoples, e.g., military, economic, technological, environmental, and demographic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Prerequisite(s): minimum 45 hours
POS	468	Comparative Asian foreign Policies	Foreign policies of the Asian states, emphasizing their security relations and movements toward regionalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	470	Law and the Political Order	Investigates concepts of justice, political rights, adjudication and legislation, legal ordering, constitutional law, law as an instrument of change.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours; Credit is allowed for only POS 470 or CMN 598 (Law and the Political Order) or JHR 598 (Law and the Political Order) or MAS 598 (Law and the Political Order)
POS	470	Law and the Political Order	Investigates concepts of justice, political rights, adjudication and legislation, legal ordering, constitutional law, law as an instrument of change.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours; Credit is allowed for only POS 470 or CMN 598 (Law and the Political Order) or JHR 598 (Law and the Political Order) or MAS 598 (Law and the Political Order)
POS	471	Constitutional Law I	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; jurisdiction and organization of the federal courts; judicial review; separation of powers; federalism; the commerce clause; national taxing and spending power; state police power.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
POS	471	Constitutional Law I	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; jurisdiction and organization of the federal courts; judicial review; separation of powers; federalism; the commerce clause; national taxing and spending power; state police power.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	472	Constitutional Law II	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; due process; equal protection of laws; individual rights; civil liberties.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
POS	472	Constitutional Law II	Development of the U.S. Constitution as reflected in decisions of the Supreme Court; due process; equal protection of laws; individual rights; civil liberties.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	473	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	GRD	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only REL 482, JUS 473 or POS 473
POS	475	Morality and Politics	Should morality play a role in politics? Machiavelli gives us one sort of answer, urging politicians to be dishonest, deceptive and even cruel. Kant disagrees, arguing instead that politicians should adhere to their personal morality over political calculations. Explores this question in two ways. First, looks more at the disagreement between great thinkers in the Western political tradition. Second, investigates contemporary political actors who bring moral concerns to the fore, including dirty politicians and extremist citizens (for example, radical animal rights activists, militant environmentalists or global poverty zealots). Seminar course that incorporates in-class discussion and writing, options-based grading and creative assignments.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only POS 394 (Morality and Politics) or POS 475

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	475	Morality and Politics	Should morality play a role in politics? Machiavelli gives us one sort of answer, urging politicians to be dishonest, deceptive and even cruel. Kant disagrees, arguing instead that politicians should adhere to their personal morality over political calculations. Explores this question in two ways. First, looks more at the disagreement between great thinkers in the Western political tradition. Second, investigates contemporary political actors who bring moral concerns to the fore, including dirty politicians and extremist citizens (for example, radical animal rights activists, militant environmentalists or global poverty zealots). Seminar course that incorporates in-class discussion and writing, options-based grading and creative assignments.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only POS 394 (Morality and Politics) or POS 475
POS	480	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	Credit is allowed for only POS 480, SBS 480, CMN 598 (Global Justice), JHR 598 (Global Justice) or MAS 598 (Global Justice)
POS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
POS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
POS	485	Political Economy	Problems, policies, and possibilities of various political-economic systems and the interrelationship of capitalism, socialism, and democracy.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
POS	485	Political Economy	Problems, policies, and possibilities of various political-economic systems and the interrelationship of capitalism, socialism, and democracy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours
POS	486	International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
POS	486	International Political Economy	Contending approaches to historical and contemporary issues of international political economy, including global welfare, equality, ecology, and peace.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
POS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Prerequisite(s): Barrett Honors student
POS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
POS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Prerequisite(s): Barrett Honors student
POS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
POS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
POS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
POS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Prerequisite(s): Barrett Honors student
POS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7	L	
POS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7	L	
POS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
POS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
POS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	503	Empirical Political Inquiry	Research methods and techniques of the discipline, emphasizing empirical foundations and analytic methods employed in subfields.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: Political Science student
POS	527	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
POS	530	American Politics	Examines major debates in the study of American political processes and institutions. Covers parties, media, elections, public opinion, interest groups, and the three branches of government.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	540	Ancient Political Theory	Surveys the historical and philosophical developments in political thinking from the ancient Greeks up to the Renaissance. The world studied predominantly is one of profound political conflict and change. Moves from the Greek cities to the edge of modern political developments. The movement encompasses the political transformation from city-states to empires to the establishment of an overarching Christian world order that balances secular and sacred power, only to be challenged if not foundationally shaken by Machiavelli and realism.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: Graduate Political Science major
POS	541	Modern Political Theory	Surveys the development of modern political thought from Machiavelli--through Hobbes, Locke, Hume, Rousseau, Burke, Kant, Montesquieu, Constant, Bentham, Mill, and Hegel--to Marx. Focuses on the primary writings of these thinkers as well as reading secondary literature. In addition to focusing on the distinctive contribution and relevance of individual thinkers, further explores certain recurring themes among which are the following: Are freedom and equality foes or friends? What allegiance do we owe the state and why? Do we have rights against the state? What is a just state? Is private property essential to individual liberty? Do laws enhance or threaten liberty? Is self-interest an adequate basis for political allegiance? Why should we pursue the common good, if at all? Are self-interest and the common good reconcilable?	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: MA or PhD major; Credit is allowed for only POS 541 or 591 (Modern Political Thought)
POS	545	Themes in Political Thought	Examines a particular theme or problem in political thought from both a historical and contemporary perspective. May be repeated with approval of the director of graduate studies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	550	Comparative Politics	Surveys major approaches across topical areas such as revolutions, authoritarianism, policy processes, interest groups, and electoral politics. Focus varies with instructor.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	552	Women and Politics	Serve as an introduction to the comparative study of women and politics. Not a course on feminist theory; instead focuses on questions such as: Does the descriptive representation of women guarantee their substantive representation? Which electoral rules favor the election of women? Do the negative effects of gender quotas outweigh their impressive ability to increase the number of women in office? Have the news media helped or harmed female candidacies? Once in power do women govern differently than men? Focuses on the obstacles that women face in obtaining positions of power.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only POS 552 or 598 (Women and Politics)
POS	560	International Relations	Surveys major theoretical approaches and debates in international relations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	563	Comparative Asian Security Policies	Analyzes domestic and international constraints, belief systems, and economic components in security decisions by major powers and Asian nations.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	570	The Politics of Public Policy	Examines the political dimensions of public policymaking. Emphasizes major theoretical explanations of the policy process--particularly elements such as agenda setting, implementation, and policy change--rather than on the substance of particular policies. Focuses primarily on U.S. domestic policy, with some comparative reference to other developed democracies.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only POS 570 or 598 (Politics of Public Policy)
POS	571	Science and Technology Policy	Provides an in-depth introduction to theoretical perspectives on the role and place of science in democratic societies and democratic governance. Emphasizes how the ideas, ideologies, and practices of science are integrated into the design and implementation of government decision making, as well as how science both shapes and is shaped by the political organization and ordering of society. Pursues such questions in the context of U.S. politics, comparatively between the U.S. and Europe, and in emerging regimes of international governance.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HSD 501 or POS 571

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
POS	572	Advanced Science and Technology Policy	Focuses on the role of knowledge and expertise in political and policy decision making. Particular emphasis is placed on the analysis of knowledge systems (formalized institutional approaches to the production, validation, and use of knowledge and expertise in policy decision making), their modes of failure, and the design of approaches that may be able to prevent, avoid, or reduce the frequency of such failures.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: HSD 501 or POS 571 with B or better. Credit is allowed for only HSD 502 or POS 572
POS	573	Governing Emerging Technologies	Examines the governance of science and technology through a focus on emerging technologies whose potential consequences in society are apparent only in anticipation and whose manifestations are still being shaped by local, domestic, and international institutions. These emerging technologies include nanotechnologies, synthetic biology, and other technologies associated with genetic modification, and information and cognitive science and neuro-technologies.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PAF 550, HSD 503 or POS 573
POS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	586	International Political Economy	International political economy (IPE) focuses on the relationship between the pursuit of wealth and power during the development and evolution of the global political economy. Assigned readings take an analytical approach to the subject, drawing on methods and theories developed in political science, economics, history and sociology. In addition to an overview of the methods and theories employed in the study of IPE, also examines a variety of current empirical research programs in the subfield. This seminar should enable students to read the academic literature, conduct independent research in the subfield, and understand contemporary problems in the global political economy.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
POS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1		
POS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
POS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	601	Advanced Experimental Research	Introduces experimental and quasi-experimental research designs in political research, including lab techniques and topics in the analysis of variance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	603	Polimetrics I	Introduces theory and practice of linear regression analysis. Provides skills to read, understand, and evaluate professional literature using regression analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	604	Polimetrics II	Applies quantitative techniques to research topics producing publishable papers through exposure to time-series, logit and probit, and simultaneous equations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	606	Qualitative and Textual Analysis	Method and theory for the analysis of qualitative materials, systematic approaches for case studies, content analysis, critical analysis of texts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	636	Electoral Behavior	Introduces fundamental concepts of electoral behavior. Emphasizes presidential elections and examines why people vote and how their votes are determined.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	638	Law and Politics	Emphasizes research into such topics as constitutional law, women and the law, American legal system, judicial process, and judicial selection.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		

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POS	652	Religion and Politics	Analyzes the complicated and often conflictual relationship among major religious faiths, religious activists, and the state in the 20th and 21st centuries. Cover topics: secularization theory and its problems; religion as a cultural or attitudinal variable in politics; the rationality of religion, organized religions and their activists; the bases for conflicts between religion and the state; religion's role in conflict; the terms of reconciliation and collaboration; the conditions under which religion is politicized and becomes the basis of a political movement or party; and the means by which organized religions and/or their adherents seek to maintain an influence in 20th- and 21st-century politics and society. Does not provide a survey of religion and politics for all major world religions, or other religions.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: MA or PhD student; Credit is allowed for only POS 652 or 598 (Religion and Politics)
POS	664	War, Peace, and Conflict Processes	Systematic analysis of the causes of war, the preconditions for peace, and approaches to the resolution of conflict.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
POS	671	HSD I: Human Dimensions of Science and Technology	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HSD 601 or POS 671
POS	672	HSD II: Science, Power and Politics	Interdisciplinary synthesis, theoretical foundations, and methods for humanistic and social science research on science and technology.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	4		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only HSD 602 or POS 672
POS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1		
POS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
POS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		
POS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Politics and Global Studies	1		
POS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Politics and Global Studies	1-15		
PPE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
PPE	210	Teaching Fitness Activities for K-12 Students	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
PPE	215	Teaching Team Sports	Practical application of biomechanical, physiological, psychological, and learning principles in the analysis of skill acquisition and performance.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
PPE	220	Teaching Lifetime Activity K-12	Participating in and teaching sequenced activities K-12.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
PPE	225	Teaching Cooperative and Initiative Games	Participating in and teaching sequenced adventure-based activities.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		
PPE	230	Teaching Group Exercise	Introduces instructional strategies appropriate for the teaching of group exercise classes in secondary school settings.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Credit is allowed for only PPE 230 or 294 (Teaching Group Exercise)
PPE	235	Teaching Strength and Conditioning for Health	Fundamental principles, strategies and assessments of strength training and conditioning methodologies that are necessary to effectively operate in a school-based setting. Most secondary schools offer some form of strength training in a physical education setting, either as a stand-alone course or as part of a traditional class structure. Therefore, new physical education teachers should be well informed on the scientific rationale for the use of strength and conditioning programs in schools, and be able to design and implement these programs safely. Provides prospective physical education teachers with the knowledge and skills needed to safely and effectively operate in a school-based strength training setting, whether it is for physical education or sport performance.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Credit is allowed for only PPE 235 or PPE 294 (Teaching Strength Conditioning for Health)

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PPE	240	Physical Activity	Recognizing individual interests and abilities, the program provides courses covering a wide variety of physical activities. We make an effort to address contemporary trends and student, faculty and staff interests. Offerings may include but are not limited to classes in the areas of: aquatics, artistic and social dance, fitness development, martial arts, mind/body, outdoor recreation, resistance training, sports and games.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		
PPE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
PPE	300	Introduction to Physical Education, Fitness and Sport	Introduces the fields of physical education, exercise science, sports medicine, and related fields. Discusses the history and trends of physical education as well as key concepts, programs, problems, and issues related to teaching physical education. Teaches essential background knowledge, better preparing for career success. The online (blackboard) component of this class provides practical experiential learning and assesses knowledge and comprehension of the key concepts presented in the course.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: Minimum 60 hours; Junior or senior standing; Credit is allowed for only PPE 300 or 394 (Intro to Physical Education, Fitness & Sport)
PPE	310	Health Literacy: Creating Healthy and Active Schools	Signature course for elementary educators and special education educators in order to prepare future teachers with the knowledge, skills, and dispositions to teach healthy and active content knowledge and to create healthy and active school environments.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only HSC 310 or PPE 310
PPE	315	Pediatric Movement Sciences for Physical Educators	Provides a general overview of the functional anatomy of the human body as it relates to movement and the biomechanical principles underlying the execution of a given motor skill. Also examines the influence of physical growth and maturation on the development of motor skills.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: BIO 201; BIO 202; Credit is allowed for only PPE 315 or 394 (Apld Pediatric Functional Anat)
PPE	320	Exercise Physiology Concepts for Physical Educators	Provides an introductory-level understanding of how the body responds prior to, during, and after participation in dynamic and static exercise. Examines the physiological basis of human movement, with emphasis on reviewing what exercise physiologists have learned about the diversity of physical activity, specifically in children. Although many physiological responses to activity are predictable, the magnitude and pattern of responses are unique depending on the age, gender, and previous experience of the individual. Also examines the role an active lifestyle plays in the overall health and well-being of school-aged children and adolescents.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: BIO 201; BIO 202; Credit is allowed for only PPE 320 or 394 (Pediatric Exercise Physical)
PPE	335	Movement and Physiology Principles of Children and Youth in Physical Activity Environments	Provides an introductory-level understanding of mechanical principles underlying human movement, the developmental patterns reflected in human movement birth through childhood and adolescence, basic principles of motor learning and the physiological basis of human movement. Covers how these principles directly affect the development of physical activity opportunities in in community-based sport and recreation settings with a specific eye toward the role an active lifestyle plays in the overall health and well-being of children and youth between the ages of 6 and 18.	N	LEL	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
PPE	340	Understanding Children in Physical Activity Environments	Teaches students an understanding of elementary-aged children and how to implement a curriculum in a physical activity environment. Students learn effective teaching techniques, how to effectively manage students, and ways to improve the physical skill and activity level of students. Prospective facilitators use authentic assessment techniques to assess and prescribe activities for improving motor skills in kindergarten through 6th grade youngsters. Prospective facilitators leave with requisite knowledge to implement a comprehensive physical activity program and the physical skills necessary for successful instruction.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
PPE	345	Adolescents in Physical Activity Environments: Understanding and Practices	Gives an understanding of the changing scope of physical education in an era of education reform. Students learn about and teach a variety of curricular models and styles. Uses technology and assessments in authentic settings. Focuses on increasing the physical activity levels of secondary students during physical education and also promotes physical activity outside of the school setting. Covers strategies for advocating the importance of quality physical education to school and district personnel during a time when local administrators are pressured to allocate more time to core subject areas.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
PPE	351	Coaching of Children and Adolescents in Physical Activity Environments	Provide introductory-level understanding of the skills and knowledge needed to deliver positive sport experiences in various nonschool settings that lead to positive youth development. Effective use of these skills enhances the chance that children and youth come to programs that are fun, engaging, safe and positive challenges; while having clear rules, requiring personal responsibility and demanding respect for self and others.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): junior or senior standing
PPE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
PPE	396	Clinical Experience: Physical Education Elementary (Grades 1-8)	Applies course content in elementary physical education classrooms grades 1-8: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Prerequisite(s): admission to the Professional Program

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PPE	397	Clinical Experience: Physical Education Secondary (Grades 6-12)	Applies course content in secondary physical education classrooms grades 6-12; emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Prerequisite(s): admission to the Professional Program
PPE	430	Analysis of Skill and Game Performance	Develops analytic skills for informal and formal assessment of student learning in physical activity settings.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Junior or senior standing; Credit is allowed for only PPE 494, 598 (Analysis of Skill and Game Play Performance) or PPE 430
PPE	450	Physical Education for the Elementary School	Scope and values of physical education in elementary schools. Methods, materials, and practices in teaching for primary through upper grades.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only PPE 450 or PPE 550
PPE	451	Innovative Programming in Elementary Physical Education	Provides students with an understanding of current trends and issues in elementary school physical education curriculum and how to implement the curriculum in a school environment. Students also become familiar with a variety of best practices in curriculum and instruction specific to elementary children in physical activity settings. Emphasizes incorporating methods of effective teaching and activity organization, enhancing student learning, and effectively managing student behavior and the learning environment.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisites: Junior or senior standing; Credit is allowed for only PPE 451 or 551
PPE	455	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only PPE 455 or PPE 555
PPE	460	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only PPE 460 or PPE 560
PPE	465	Teaching Physical Activity Concepts	Focuses on teaching physical activity concepts in physical education settings and other settings such as fitness clubs or community health organizations. Analyzes and critiques state physical activity standards and national guidelines for promoting physical activity.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Prerequisite(s): minimum 45 hours. Credit is allowed for only PPE 465 or PPE 565
PPE	477	Student Teaching: Physical Education Elementary (Grades 1-8)	Student teaching in elementary physical education setting grades 1-8: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	6		Prerequisite(s): admission to the Professional Program
PPE	478	Student Teaching: Physical Education Secondary (Grades 6-12)	Student teaching in middle/secondary physical education setting grades 6-12: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	6		Prerequisite(s): admission to the Professional Program
PPE	480	Professional Seminar for Physical Education	Methods of instruction, organization, and presentation of appropriate content in elementary and secondary physical education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
PPE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): admission to the Professional Program
PPE	485	Physical Activity Leadership in Schools	Explores the development of school leadership skills for physical educators specific to promoting physical activity throughout the school day for all K-12 students.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to Teacher Preparation program; Credit is allowed for only PPE 485 or PPE 586
PPE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
PPE	495	Research on Teaching in Physical Education	Contemporary research and theory on teaching across fields with an emphasis on physical education pedagogy; provides a practical research experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
PPE	501	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
PPE	535	Introduction to Sport Education	Introduces a grade 5-12 school physical education curriculum that focuses on providing more complete and more authentic sport experiences.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate (Degree or non-degree) students; Credit is allowed for only PPE 494, 598 (Sport Education) or PPE 535
PPE	550	Physical Education for the Elementary School	Scope and values of physical education in elementary schools. Methods, materials, and practices in teaching for primary through upper grades.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Students who have credit for PPE 450 may not enroll in PPE 550

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PPE	551	Innovative Programming in Elementary Physical Education	Provides an understanding of current trends and issues in elementary school physical education curriculum and how to implement the curriculum in a school environment. Students become familiar with a variety of best practices in curriculum and instruction specific to elementary children in physical activity settings. Emphasizes incorporating methods of effective teaching and activity organization, enhancing student learning, and effectively managing student behavior and the learning environment.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate (degree or non-degree) students; Credit is allowed for only PPE 451 or 551
PPE	555	Physical Education in the Secondary School	Current trends and theories such as elective programs, coed classes, legal issues, contract teaching, curriculum, and administration.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate students (Degree and non-degree); Credit is allowed for only PPE 455 or PPE 555
PPE	560	Adapted and Inclusive Physical Education	Teaching individuals with disabilities physical skills and activities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate students (Degree and Non-degree); Credit is allowed for only PPE 460 or PPE 560
PPE	565	Teaching Physical Activity Concepts	Teaching physical activity concepts in PE settings. Analyzes and critiques state and national physical education standards.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate (degree or non-degree) student; Credit is allowed for only PPE 465 or 565
PPE	567	Clinical Experience: Physical Education Elementary (Grades 1-8)	Applies course content in elementary physical education classrooms grades 1-8; emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-2		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	568	Clinical Experience: Physical Education Secondary (Grades 6-12)	Applies course content in secondary physical education classrooms grades 6-12; emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-2		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	570	Research on Teacher Education in Physical Education	Discusses current research on teacher education across fields, with an emphasis on physical education pedagogy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Graduate (degree or non-degree) student; Credit is allowed for only PPE 370 or 570
PPE	576	Research on Curriculum in Physical Education	Discusses and applies research findings on curricular models for physical education and physical activity in school settings and beyond.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	586	Physical Activity Leadership in Schools	Explores the development of school leadership skills for physical educators specific to promoting physical activity throughout the school day for all K-12 students.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only PPE 485 or PPE 586
PPE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	593	Applied Project		Y	LEC	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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PPE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PPE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
PRM	120	Leisure and the Quality of Life	Conceptual foundations for understanding the role of leisure in the quality of life. Social, historical, psychological, cultural, economic, and political foundations of play, recreation, and leisure.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	SB	
PRM	150	Outdoor Pursuits	Theories and practical applications related to outdoor recreation pursuits. Interdisciplinary approach to wilderness issues and philosophies, culminating in an outdoor experience.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
PRM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		Pre-requisite: Maximum 25 hours; Credit is allowed for only CRD, PRM or TDM 191
PRM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
PRM	201	Introduction to Community Sports	Examines the role of community sports at the local, national and international levels.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only CSM 201 or PRM 201
PRM	210	Leisure Delivery Systems	Introduces development, management and organization of the public, nonprofit and private sectors for the leisure services professions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre- or corequisite(s): NLM 160 or PRM 120 with C or better if completed
PRM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
PRM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
PRM	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301
PRM	302	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	C	Pre-requisites: ENG 102; MAT 142; NLM 160 (or PRM 120) with C or better; minimum 2.50 GPA; minimum 45 hours. Credit is allowed for only CRD, NLM, PRM or TDM 302
PRM	303	Program Planning	Effective program planning in varied leisure delivery systems.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only CSM or PRM 303

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PRM	304	Recreation Planning and Facility Development	Surveys development and management of public, private, and commercial recreation areas and facilities with a focus on meeting program needs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	L	Prerequisite(s): CRD 210(or NLM 210,PRM 210 or TDM 210) with C or better; MAT 142, C or better; Nonprofit Leadership & Management (or Parks & Recreation Management or Recreation & Tourism Management) major; minimum 2.50 cumulative GPA; minimum 45 hours
PRM	310	Volunteer Management	Studies volunteer administration practices integral to community organizations providing an introduction to management techniques including program organization, recruitment, interviewing, placement, supervision, recognition and evaluation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only NLM or PRM 310
PRM	315	Community Recreation Systems	Explores and assesses community recreation delivery systems in the United States.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: PRM120 (REC120) with C or better
PRM	335	Sports and Recreation for Youth Development	Provides an overview of definitions, statistics, theories and models, and types of programs surrounding youth development in relation to sports, recreation and leisure services. Addresses current trends related to youth development and collaborative partnerships in sports, recreation and leisure services at various levels within local, state, national and/or international systems.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 45 hours. Credit is allowed for only CSM 335 or PRM 335
PRM	340	Outdoor Survival	Interdisciplinary approach to outdoor survival, including attitudes, psychological stress, physiological stress, preparation, hypothermia, navigation, flora, and wildlife.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
PRM	350	Tourism, Recreation and Sports Marketing	Critical examination of marketing principles in leisure and related industries in diverse settings, including local, national, and international.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or CSM 201 or TDM 205; ENG 102 with C or better; MAT 142 or higher with C or better; minimum 45 hours; Credit is allowed for only CSM 350 or PRM 350 or TDM 350
PRM	364	Foundations of Recreation Therapy	Overview of therapeutic recreation and its concepts, practices, service models, and settings. Explores the provision of recreation and treatment services for individuals with disabilities.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	SB	Prerequisite(s): minimum 45 hours
PRM	370	Public Lands Management	Introduces outdoor recreation resource delivery systems; history of wilderness and outdoor recreation resources; the role of outdoor recreation in society; outdoor recreation agencies; related environmental issues.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): minimum 45 hours
PRM	380	Wilderness and Parks in America	Examines the American Conservation Movement and the relationships between the environment and recreation behavior.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	SB & H	
PRM	384	Child Life Practicum	Combines clinical field exposure with classroom instruction to maximize understanding and skill mastery.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3-12		Pre-requisite: PRM 364 with C or better; Admission to Child Life Certificate program
PRM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
PRM	400	Intervention Techniques in Recreation Therapy	In-depth analysis of theoretical and philosophical approaches to therapeutic recreation practice with emphasis on various facilitation techniques used in therapy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 364
PRM	401	Managing Leisure Enterprises	Analyzes administrative function, structure, and policies. Successful application in administrative situations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or PRM 210; TDM 372 or CSM 303 or PRM 303; minimum 2.50 cumulative GPA; Credit is allowed for only CSM 401 or PRM 401
PRM	402	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre- or corequisite(s): CSM 401, NLM 410, PRM 401, or TDM 401 with C or better if completed; Credit is allowed for only CSM 402 or NLM 402 or PRM 402 or TDM 402
PRM	403	Leadership and Professional Development	Examines leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: NLM, PRM or TDM 210 and NLM, PRM or TDM 301 with C or better; Senior standing ; 2.50 GPA. Credit is allowed for only CRD, NLM, PRM or TDM 403

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PRM	406	Program Design & Administration in Recreation Therapy	In-depth analysis of assessment, treatment planning, program implementation, documentation, and evaluation strategies employed in therapeutic recreation practice.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s) with C or better: PRM 364, 400 (or PRM 455)
PRM	413	Leadership and Professional Development in Recreation Therapy	Examines therapeutic recreation leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 301, NLM 301, PRM 301, or TDM 301 with C or better; Pre- or corequisite(s): PRM 303 with C or better if completed
PRM	422	Entertainment, Protocol, and Programming for Special Events	In-depth analysis of the theoretical and philosophical aspects of special event management relative to talent and entertainment, protocol, etiquette, ethics, and programming. Requires some field work in event management.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: PRM 486 with C or better
PRM	423	Special Event On-Site Operations	Expands on the concepts of event programming with in-depth examination of the theoretical and philosophical aspects of event operations, festival site design, and working with subcontractors and vendors.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: PRM 486 with C or better
PRM	427	Revenue Generation for Special Event Management	Examines theoretical and philosophical aspects of revenue generation relative to special events through in-depth exploration of budgeting, accounting, and sponsorship opportunities. Requires field work at an event.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: PRM 486 with C or better
PRM	450	Leisure and Aging	Examines the factors influencing leisure among older adults, including policy issues and program service implications. Involves fieldwork.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
PRM	451	Grant Writing	How to increase grant funding: creating fundable ideas, identifying sponsors, following guidelines, writing effectively, constructing budgets, responding to reviewers.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Credit is allowed for only NLM 451, 565 or PRM 451
PRM	454	Human Services for At-Risk Youth	Overview of policy and programs affecting at-risk youth; examines risk factors and programmatic solutions to them.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
PRM	455	Play in Child Life	In depth study of the techniques, principles and theories of play applied in clinical practice to enhance healing, growth and development with children and families.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CDE 232 with C or better. Pre- or corequisite(s): PRM 364 with C or better if completed
PRM	460	Assessment & Documentation in Recreation Therapy	In-depth study of the therapeutic recreation assessment process, including examination of interview techniques, assessment instruments, treatment planning, outcomes, evaluation, research, and documentation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: PRM 364 with C or better
PRM	463	Senior Internship	Supervised guided experience in selected agencies.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	6-12		Prerequisite(s) with C or better: CRD 403 or PRM 413; CSM 402 or NLM 402 or PRM 402 or TDM 402. Credit is allowed for only CSM 463 or NLM 463 or PRM 463 or TDM 463
PRM	470	Environmental Communication	Park interpretation and environmental education that includes theories, principles and techniques.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): minimum 60 hours
PRM	475	Entrepreneurial Recreation and Tourism	Explores basic business principles and innovative processes involved in starting a small business in the commercial recreation and tourism industry.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 60 hours; Credit is allowed for only PRM or TDM 475
PRM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; Minimum 72 hours; Minimum 2.50 GPA; Non-SCRD majors
PRM	485	Sports Events	Expands the basic concepts of recreation, leisure or tourism program planning and leadership as they are specifically related to sport events management.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: minimum 45 hours. Credit is allowed for only CSM 485 or PRM 485
PRM	486	Special Events Management	Principles of programming and managing special events for diverse populations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
PRM	487	Advanced Special Events Management	Advanced principles of special event sponsorship, public relations, marketing, contracting, risk management, and financial management.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: PRM 486 with C or better. Credit is allowed for only PRM 487 or RTM 487
PRM	488	Event Marketing and Promotion	In-depth look at the influence and role of print and social media in special event management. Studies theory, strategies, and planning relative to experience marketing, including the use of promotions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: PRM 486 with C or better
PRM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
PRM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6	L	Prerequisite(s): Barrett Honors student

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PRM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
PRM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
PRM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-7	L	
PRM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
PSB	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSB	501	Basic Principles of Applied Behavior Analysis	Fundamental principles of behavior including the history, theory, definitions, processes, concepts and characteristics of applied behavior analysis.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		
PSB	510	Basic Principles of Experimental Analysis of Behavior	Practical applications of research methodology to examine the effects and evaluate the efficacy of behavioral interventions. Provides an empirical science approach to designing, conducting and critically evaluating research involving applications of the experimental analysis of behavior in the use of graphic displays, single-case, ABAB, multiple baselines, changing criterion and alternating treatment designs.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	2		
PSB	511	Advanced Research Methods	Focuses on research techniques such as time-series methods for single-case assessment, behavior measurement and the effectiveness of treatment interventions on behavior. Topics include conducting component and parametric analyses and use of experimental designs such as withdrawal, reversal, criterion and multiple baselines.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	2		Pre-requisite: PSB 501; PSB 510
PSB	520	Ethical Issues and Professional Standards in Applied Behavior Analysis	Ethical standards and legal responsibilities including regulatory requirements and Arizona licensing statutes for ABA professionals who provide services to individuals with special needs and their families.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		
PSB	530	Behavioral Observation and Functional Assessment	Focuses on how to conduct behavioral observations and functional analyses using various methods for assessment and for data collection, organization and interpretation.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Pre-requisite: PSB 501; PSB 510
PSB	540	Development of Applied Behavioral Intervention Programs	Techniques for conducting task analyses; developing target intervention outcomes; determining alternative behaviors and environmental changes; use of behavior change procedures such as reinforcement, extinction, punishment, shaping, modeling, training and teaching.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSB 501, 510. Corequisite(s): PSB 530
PSB	563	Basic Principles of Organizational Behavior Management	Overview and the use of Behavioral Systems Analysis (BSA) and Performance Management (PM) as they relate to the identification and modification of environmental variables that can affect and improve individual and organizational performance as a system. Basic techniques include analysis of antecedents, behavior and consequences and development of interventions to support the desired performance improvements and increase system productivity.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	2		
PSB	573	Advanced Principles of Learning and Analysis of Behavior	Provides an in-depth review of the philosophy and theory of behaviorism and its scientific application. Includes Skinner's conceptual framework plus fundamental elements of behavior change and procedures.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		
PSB	578	Applied Behavior Analysis in Developmental Disorders	Provides an overview of the major theories and research related to the development of psychological disorders of childhood and adolescence including autism, attention deficit disorder, behavior disorders and intellectual disabilities.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): MS Applied Behavior Analysis major
PSB	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1		
PSB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSB	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSB	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSB	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSB	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1		
PSY	101	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
PSY	101	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	
PSY	101	Introduction to Psychology	Major areas of theory and research in psychology. Requires participation in department-sponsored research or an educationally equivalent alternative activity.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
PSY	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-3		Prerequisite(s): Freshman; maximum 25 earned hours
PSY	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-3		Prerequisite(s): Freshman; maximum 25 earned hours
PSY	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	222	Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	222	Human Sexual Behavior	Patterns of sexual behavior, including variations and deviations; theories of sexual attraction, sex differences, and sexual dysfunction and treatment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	230	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Prerequisite(s): PSY 101 (PGS 101) with C or better; MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	230	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	CS	Prerequisite(s): PSY 101 (PGS 101) with C or better; MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291 with C or better
PSY	230	Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	CS	Prerequisite(s): PSY 101 (PGS 101) with C or better; MAT 119, 170, 242, 243, 251, 260, 261, 262, 270, 271, 272, 274, 290 or 291 with C or better
PSY	231	Honors Introduction to Statistics	Basic concepts in descriptive and inferential statistics, emphasizing applications to psychology for honors students. Lab includes learning to use statistical software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4	CS	Prerequisite(s): Barrett Honors student; MAT 119, 170, 242, 251 or higher with C or better; PSY 101 (PGS 101) with C or better
PSY	244	Introduction to Directed Child Study	Developmental theories and methods of social interaction with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		
PSY	290	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	L or SG	Prerequisite(s): ENG 102, 105 or 108 with C or better; PSY 101 (PGS 101) with C or better; ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390 or STP 226 with C or better
PSY	290	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	4	L or SG	Prerequisite(s): ENG 102, 105 or 108 with C or better; PSY 101 (PGS 101) with C or better; ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390 or STP 226 with C or better
PSY	290	Research Methods	Planning, execution, analysis, and reporting of experiments. Literature, procedures, and instruments in representative areas of psychological research.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	4	L or SG	Prerequisite(s): ENG 102, 105 or 108 with C or better; PSY 101 (PGS 101) with C or better; ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390 or STP 226 with C or better
PSY	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
PSY	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
PSY	304	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): MAT 119, 170 or higher or PSY 230 with C or better
PSY	304	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	L	Prerequisite(s): MAT 119, 170 or higher or PSY 230 with C or better
PSY	304	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): MAT 119, 170 or higher or PSY 230 with C or better
PSY	304	Effective Thinking	Understanding and improving intellectual and behavioral skills; information analysis, inference, logic, problem solving, and decision making.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Prerequisite(s): MAT 119, 170 or higher or PSY 230 with C or better
PSY	306	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	306	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	306	Environmental Psychology	Concepts and research strategies in the study of behavior in interaction with physical environment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	315	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	315	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	315	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	315	Personality Theory and Research	Definition and description of personality in terms of theoretical and methodological approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	320	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): PSY 290 with C or better
PSY	320	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 290 with C or better
PSY	320	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY	320	Learning and Motivation	Principles of conditioning and motivation; approaches to learning, including acquisition of verbal materials, concepts, and motor skills; memory and transfer.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	323	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Integrates theory, research, and application.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): PSY 290 with C or better
PSY	323	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Integrates theory, research, and application.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 290 with C or better
PSY	323	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Integrates theory, research, and application.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY	323	Sensation and Perception	Underlying processes of vision, audition, and the other senses. Integrates theory, research, and application.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	324	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 290 with C or better
PSY	324	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY	324	Memory and Cognition	Processes underlying information storage and retrieval, including different kinds of memory, forgetting, depth of processing, and control processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	325	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	325	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	325	Physiological Psychology	Relationships of physiological processes to behavior. Emphasizes nervous system functioning.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better or two of the following courses with C or better: BIO 181 (or 188), 182 (or 187), 201, 202
PSY	330	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	CS	Prerequisite(s): ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390, 395 or STP 226 with C or better
PSY	330	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	CS	Prerequisite(s): ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390, 395 or STP 226 with C or better
PSY	330	Statistical Methods	Advanced application of statistics to psychology. Highly recommended for students interested in attending graduate school.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	CS	Prerequisite(s): ECN 221, JUS 302, POS 401, PSY 230, 231, QBA 221, SOC 390, 395 or STP 226 with C or better
PSY	341	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	341	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	341	Developmental Psychology	Analyzes behavior development in terms of psychological principles. Current research in human development.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	344	Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): CDE 232, ECD 211 or PSY 341 (PGS 341) with C or better
PSY	344	Directed Child Study	Theories and methods of intervention with preschool children and supervised practicum in the Child Study Laboratory.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): CDE 232, ECD 211 or PSY 341 (PGS 341) with C or better
PSY	350	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Credit is allowed for only PSY 351 (PGS 351) or PSY 350 (PGS 350)
PSY	350	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Credit is allowed for only PSY 351 (PGS 351) or PSY 350 (PGS 350)
PSY	350	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Credit is allowed for only PSY 351 (PGS 351) or PSY 350 (PGS 350)
PSY	350	Social Psychology	Human social behavior, including such concepts as aggression, attraction, attribution, conformity, groups, helping, person perception, and persuasion.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Credit is allowed for only PSY 351 (PGS 351) or PSY 350 (PGS 350)
PSY	351	Honors Social Psychology	Critical analysis of human social behavior for honors students; topics include stereotyping, social influence, attraction, aggression, helping, groups, and attitudes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): Barrett Honors College student; PSY 101 (PGS 101); Credit is allowed for only PSY 350 (PGS 350) or PSY 351 (PGS 351)
PSY	360	Cognitive Science	Examines cognition from the varied perspectives of philosophy, linguistics, psychology, computer science (artificial intelligence), and neuroscience.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	360	Cognitive Science	Examines cognition from the varied perspectives of philosophy, linguistics, psychology, computer science (artificial intelligence), and neuroscience.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	360	Cognitive Science	Examines cognition from the varied perspectives of philosophy, linguistics, psychology, computer science (artificial intelligence), and neuroscience.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	365	Community Psychology	Mental health and psychological well-being in the community, emphasizing current issues and related research.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 315 (PGS 315), PSY 350 (PGS 350) or PSY 351 (PGS 351) with C or better; PSY 290 with C or better
PSY	365	Community Psychology	Mental health and psychological well-being in the community, emphasizing current issues and related research.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 315 (PGS 315), PSY 350 (PGS 350) or PSY 351 (PGS 351) with C or better; PSY 290 with C or better
PSY	366	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	366	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	366	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	366	Abnormal Psychology	Historical and current definitions, theory, and research concerning abnormal behavior. Major categories of psychopathology, including related treatment approaches.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 45 hours or PSY 290 with C or better
PSY	368	Forensic Psychology	Clinical practice of forensic psychology: the assessment and treatment of people who interact with the legal system. Focuses on the ways in which psychologists do clinical work (assessment and treatment) to help courts make informed decisions about cases.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 101; PSY 290 or minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	369	Biology of Human Sexuality	Biology of Human Sexuality	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 101 (PGS 101) with C or better; completed one semester of Biology
PSY	370	Interpersonal Relationships	Development of personal skills for competent functioning in interpersonal relationships across multiple social contexts. Principles of mental health adjustment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	385	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
PSY	390	Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	L	Prerequisite(s): PSY 290 with C or better
PSY	390	Experimental Psychology	Continuation of concepts in PSY 290, with emphasis on multifactor designs and programmatic sequence of experiments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 290 with C or better
PSY	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-4		Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 30 hours
PSY	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 30 hours
PSY	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): PSY 101 (PGS 101) with C or better; Minimum 30 hours
PSY	395	Religion and Psychology	Examines religious experience from various psychological viewpoints and explores the relationship between religion and psychology in theory and practice.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; PSY 101 (or PGS 101) with C or better
PSY	399	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	Y	RSC	Y	YGB	Ira A. Fulton Engineering	Human Systems Engineering	1-3		
PSY	399	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	Y	RSC	Y	YGB	Liberal Arts and Sciences	Department of Psychology	1-3		
PSY	399	Supervised Research	Experience within the context of current faculty research projects. Student is assigned responsibility depending on qualifications.	Y	RSC	Y	YGB	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
PSY	414	History of Psychology	Historical development of psychology from its philosophical beginnings to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): PSY 290 with C or better
PSY	420	Analysis of Behavior	Research, applications, and philosophy of the analysis and control of human behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 290 and 320 with C or better
PSY	424	Genetic Psychology	Introduces the concepts, methodologies, and findings of behavioral genetics for Psychology majors.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 290 with C or better
PSY	425	Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 325 with C or better
PSY	425	Biological Bases of Behavior	Critical study of physiological psychology, e.g., brain mechanisms underlying motivation, learning.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Prerequisite(s): PSY 325 with C or better
PSY	426	Neuroanatomy	Structure and function of mammalian brain, including sheep brain dissection.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Psychology	4		Prerequisite(s): PSY 325 with C or better; Credit is allowed for only PSY 426 or 526
PSY	427	Immunoneuropsychology: Research Foundation	Mind and the immune system's mutual influence (including neuroimmunologic diseases), with an emphasis on the molecular and cellular mechanisms involved.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): BIO 353, 462, 467, MIC 420, or PSY 325, 425 with C or better. Credit is allowed for only MIC 427 or PSY 427
PSY	430	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): MGT 301 or PSY 101 (PGS 101) with C or better
PSY	430	Industrial Psychology	Organizations and management systems: motivation and work performance; human factors in systems design and evaluation; personnel selection and testing.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): MGT 301 or PSY 101 (PGS 101) with C or better
PSY	432	Embodied Cognition	Do left-handers think differently from right-handers? Do paraplegics perceive the world differently from those who can walk? If you say about a potential date, "He leaves me cold," do you literally feel cold? And does a Botox treatment to alleviate frown lines makes it difficult to understand sentences about sadness? The surprising answer to all of these questions is YES! Embodied cognition proposes that thinking is based on neural and bodily systems of perception, action and emotion. Explores this claim through readings, discussions, debates and embodied interactions, and considers implications of embodied cognition across areas of psychology and applications in education.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better; Credit is allowed for only PSY 432 or PSY 498 (Embodied Cognition) or PSY 529
PSY	434	Cognitive Psychology	Human organism as a processor of information, from perception to cognition. Abstract concepts, semantic memory, attention, and mental imagery.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 323 or 324 with C or better
PSY	434	Cognitive Psychology	Human organism as a processor of information, from perception to cognition. Abstract concepts, semantic memory, attention, and mental imagery.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L	Prerequisite(s): PSY 323 or 324 with C or better
PSY	437	Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	L	Prerequisite(s): PSY 290 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	437	Human Factors	Emphasizes human factors in high-technology systems. Specific topics include systems development, systems analysis techniques, displays, and controls.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 290 with C or better
PSY	440	Industrial/Organizational Psychology	Examines personnel selection, performance assessment, job and workplace design, job satisfaction, organizational behavior, management systems, and industrial safety.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): PSY 101 (PGS 101) with C or better
PSY	441	Cognitive Development	Experimental and theoretical literature in child development and behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY	443	Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): PSY 315 (PGS 315), 341, or PSY 366 (PGS 466) with C or better; PSY 290 with C or better
PSY	443	Abnormal Child Psychology	Covers the major disorders of childhood and adolescence (e.g., autism, hyperactivity, phobias, and delinquency), including cause, diagnosis, treatment, and prevention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L or SB	Prerequisite(s): PSY 315 (PGS 315), 341, or PSY 366 (PGS 466) with C or better; PSY 290 with C or better
PSY	444	Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY	444	Adolescent Psychology and Psychopathology	Advanced-level survey of normal adolescent psychological development and psychological disorders of this age period.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY	446	Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L or SB	Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY	446	Social Development	Discusses theory, research, and issues regarding social development. Topics may include formation of attachments, prosocial development, and gender-role development.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L or SB	Prerequisite(s): PSY 341 (PGS 341) with C or better; PSY 290 with C or better
PSY	447	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 290 with C or better
PSY	447	Psychology of Aging	Analyzes loss, maintenance, and gain associated with cognitive and affective aging. Individual differences in coping with normative life transitions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 290 with C or better
PSY	451	Stereotyping, Prejudice, and Discrimination	Critical investigation of the processes underlying, and the factors contributing to, stereotyping, prejudice, and discrimination.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	L	Prerequisite(s): PSY 350 (PGS 350) or PSY 351 (PGS 351) with C or better; PSY 290 with C or better
PSY	453	Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3	SB	Prerequisite(s): PSY 350 (PGS 350) with C or better; Credit is allowed for only PSY 453 or 598 (Organizational Behavior)
PSY	453	Organizational Behavior	Surveys psychological theory and research as applied to the behavior of individuals in organizational settings.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 350 (PGS 350) with C or better; Credit is allowed for only PSY 453 or 598 (Organizational Behavior)
PSY	458	Group Dynamics	Theories and methods of group leadership, group effectiveness, communication within groups, and relations between groups and individual members.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 350 (PGS 350) or PSY 351 (PGS 351) with C or better; PSY 290 with C or better
PSY	461	Interpersonal Influence	Principles and procedures that affect the process of social influence; consideration of attitudinal, compliance-inducing, and perceptual influences.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3	SB	Prerequisite(s): PSY 290 with C or better; PSY 350 (PGS 350) or 351 with C or better
PSY	462	Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY	462	Health Psychology	Contributions of psychology to health promotion and illness prevention, adaptation to acute and chronic illness, and to the healthcare system.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	465	Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 315 (PGS 315), 350 or 351 with C or better; PSY 290 with C or better
PSY	465	Psychology of Stress and Coping	Readings in theory and research in the area of stress and coping. Lecture, discussion, class presentations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 315 (PGS 315), 350 or 351 with C or better; PSY 290 with C or better
PSY	468	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY	468	Psychology and Law	Theories, research, and practice in psychology as related to law, including criminal, civil, domestic relations, and professional issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better

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PSY	470	Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 325 or one of the following: BIO 181 (or 188), 182 (or 187), 201, 202; Credit is allowed for only PSY 470 or PSY 570
PSY	470	Psychopharmacology	Basis of drug action at physiological and behavioral levels. Psychological and medical applications and limitations of drugs used in the treatment of mental illness.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 325 or one of the following: BIO 181, 202; Credit is allowed for only PSY 470 or PSY 570
PSY	471	Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better
PSY	471	Psychological Testing	Methods and theory of psychological testing; various types of psychological tests; consideration of ethical, social, and legal aspects of testing.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better
PSY	472	Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 290 with C or better; PSY 366 (PGS 466) or 443 with C or better
PSY	472	Clinical Psychology	Clinical psychology as a science and profession. Historical development, methods of interviewing, assessment, and therapeutic intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 290 with C or better; PSY 366 (PGS 466) or 443 with C or better
PSY	473	Psychology and Politics of Child Maltreatment	Examines psychological literature on child maltreatment in the context of development. Explores interactions between professionals responding to maltreatment.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 101 (PGS 101) with C or better; PSY 230 (PGS 341) with C or better; PSY 290 with C or better
PSY	474	Correctional Psychology	Covers the basic principles of correctional psychology, including psychologists' roles in prisons and jails, the unique challenges of working in these settings, establishing successful relationships with correctional staff and inmates, and the various career opportunities in correctional psychology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 366
PSY	475	Multicultural Issues in Clinical Psychology	Discussion-based course that focuses on cross-cultural conceptions of mental illness, diagnosis and treatment approaches, and beliefs and practices of specific ethnocultural groups in the United States. Encourage students to critically think about diversity issues in clinical psychology, one's own attitudes, and culture and psychology more broadly. Students achieve these objectives through reading empirical articles and chapters; taking quizzes and exams; completing hands-on exercises, essays and other writing assignments; and actively participating in and facilitating class discussions.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): Minimum 45 hours; Credit is allowed for only PSY 475 or 498 (Clinical Psychology: Multicultural Issues)
PSY	482	Social Influence and Consumer Behavior	Discusses social influence principles, emphasizing strategies employed by professionals that affect consumer behavior. Analyzes consumer defenses against manipulations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): PSY 350 (PGS 350) with C or better
PSY	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
PSY	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		
PSY	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
PSY	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-6		Prerequisite(s): Barrett Honors student
PSY	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-6		Prerequisite(s): Barrett Honors student
PSY	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
PSY	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-6	L	Prerequisite(s): Barrett Honors student
PSY	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	Department of Psychology	1-6	L	Prerequisite(s): Barrett Honors student
PSY	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
PSY	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-4		Prerequisite(s): PSY 290 with C or better
PSY	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Prerequisite(s): PSY 290 with C or better
PSY	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): PSY 290 with C or better
PSY	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-6		Prerequisite(s): Barrett Honors student

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PSY	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-7		Prerequisite(s): PSY 290 with C or better
PSY	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-7		Prerequisite(s): PSY 290 with C or better
PSY	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-3		Prerequisite(s): PSY 399
PSY	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-3		Prerequisite(s): PSY 399
PSY	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		Prerequisite(s): PSY 399(PGS 399) with C or better
PSY	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	501	Supervised Teaching	Experience in and examination of perspectives on teaching undergraduate psychology.	N	PRA	N	OPT	Liberal Arts and Sciences	Department of Psychology	4		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	512	Advanced Learning	Principles and theories of learning, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	515	Quantitative Research Methodology and Statistics I	Introduces advanced experimental and quasi-experimental research design and analysis. Focuses on group-based design and univariate analysis of variance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): Psychology MS student
PSY	516	Quantitative Research Methodology and Statistics II	Advanced experimental and quasi-experimental research design and analysis. Focuses on principles underlying linear regression and related statistical techniques.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): PSY 515 with B or better; Credit is allowed for only PSY 516 or 598 (Psychological Methods II)
PSY	526	Neuroanatomy	Covers the structure and function of the mammalian brain, including sheep brain dissection.	N	LEL	N	OPT	Liberal Arts and Sciences	Department of Psychology	4		Prerequisite(s): graduate; Credit is allowed for only PSY 426 or PSY 526
PSY	528	Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	528	Sensation and Perception	Principles of sensory and perceptual processes, emphasizing research literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	529	Embodied Cognition	Do left-handers think differently from right-handers? Do paraplegics perceive the world differently from those who can walk? If you say about a potential date, "He leaves me cold," do you literally feel cold? And does a Botox treatment to alleviate frown lines make it difficult to understand sentences about sadness? The surprising answer to all of these questions is YES! Embodied cognition proposes that thinking is based on neural and bodily systems of perception, action and emotion. Explores this claim through readings, discussions, debates and embodied interactions, and considers implications of embodied cognition across areas of psychology and applications in education.	N	SEM	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): graduate standing in Psychology; Credit is allowed for only PSY 432 or PSY 529 or PSY 591 (Embodied Cognition)
PSY	530	Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	530	Intermed Statistics	One-way and factorial designs, contrasts, post-hoc tests, probing of interactions, mixed designs, power, computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	531	Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		
PSY	531	Multiple Regression in Psychological Research	Multiple regression and correlation, hierarchical regression, interactions, curvilinear relationships, categorical predictors, ANOVA in regression, regression diagnostics, regression graphics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	532	Analysis of Multivariate Data	Matrix algebra for multivariate procedures, component and factor analysis, canonical and discriminant analysis, classification, MANOVA, logistic regression, hierarchical linear model.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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PSY	533	Structural Equation Modeling	Path analysis; exploratory and confirmatory factor analysis; recursive and nonrecursive latent variable models; mean and covariance structures; latent growth models.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	534	Psychometric Methods	Theory and practice of psychological measurement using classical and modern test theories. Reliability assessment, test validation, test construction, test usage.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	535	Cognitive Processes	Theoretical/empirical treatment of the human organism as a processor of information, including abstraction, memory structure, problem solving, and thinking.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	536	Statistical Methods in Prevention Research	Statistical methods used in prevention research including epidemiological methods, logistic regression, program effect estimation, estimation, and mediation analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	537	Longitudinal Growth Modeling	Growth modeling methodology to describe individual variation in development over time. Employs multilevel and structural equation modeling frameworks.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	538	Advanced Structural Equation Modeling	Mean and covariance structure analysis. Includes multiple-group modeling, two-level hierarchical modeling, longitudinal growth modeling, analysis with categorical outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	539	Multilevel Models for Psychological Research	Multilevel (i.e., hierarchical linear) modeling, as described by Raudenbush and Bryk (2002) and others. Covers analytic strategies for analyzing a variety of different nested data structures (e.g., couples data, clients nested within group therapy settings, children nested within classrooms, longitudinal data). Covers two- and three-level models for cross-sectional and longitudinal data and also addresses related topics such as centering and estimation. Students perform and interpret the results of these models using a variety of statistical software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Pre-requisite: PSY 531; Credit is allowed for only PSY 539 or 591 (Multilevel Modeling)
PSY	540	Missing Data Analysis	Covers analytic strategies for analyzing data with missing values, with a special emphasis on modern approaches for dealing with missing data, in particular maximum likelihood missing data handling and multiple imputation, maximum likelihood estimation and multiple imputation. Familiarizes students with missing data theory, traditional analysis methods (e.g., deleting incomplete cases, single imputation methods), maximum likelihood estimation, multiple imputation, planned missing data research designs, and the inclusion of auxiliary variables. Students learn how to perform and interpret the results of these models using a variety of statistical software packages.	N	LEC	N	GNA	Liberal Arts and Sciences	Department of Psychology	3		Pre-requisite: PSY 532; Credit is allowed for only PSY 540 or 591 (Missing Data)
PSY	541	Research in Cognitive Development	Theoretical and empirical issues in the study of children's knowledge and cognitive processes. Comparison of research in Piagetian and other traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	542	Social Development	Reviews and critiques major issues in the area of social development. Covers theory, research, and content.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	543	Statistical Mediation Analysis	Specifically covers the substantive motivations for mediating variables and third-variable effects (interaction, confounder, covariate and mediator) in general. Mediation represents a chain such that one variable causes a mediating variable and the mediating variable causes a dependent variable. Describes the single mediator model in detail including assumptions, estimators and geometric interpretations. Once the details of the single mediator model are understood, analysis is extended to multiple mediator models, path analysis, and models with moderators and mediators. Discusses modern causal inference approaches for mediation along with latent variable models, multilevel models and special models for longitudinal data. Also describes research designs for investigating mediating variables. Students learn how to perform and interpret the results of analysis using a variety of statistical software packages.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 530; PSY 531; Credit is allowed for only PSY 543 or PSY 591 (Mediation) or PSY 591 (Statistical Mediation Analysis)
PSY	550	Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	550	Advanced Social Psychology	Theory and research concerning interpersonal perception, decision making, attitude formation and change, group processes, social motivation, and interaction processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	551	Advanced Social Psychology	Continuation of PSY 550.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	554	Item Response Theory	A collection of measurement models based on item response theory (IRT). The models express the probabilities of responses to test or questionnaire items as a function of latent respondent characteristics and item properties. IRT models form the basis for measurement in standardized educational testing, but generally are also now used in clinical, social and personality measurement in psychology, medicine and the social sciences. Assumptions underlying IRT models, methods of parameter estimation and fit evaluation. Also covers important applications of the models in computerized adaptive testing, the detection of measurement bias and multidimensional IRT. Uses several software tools useful in IRT modeling.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): PSY 534; Credit is allowed for only PSY 554 or 591 (Item Response Theory)

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PSY	555	Experimental and Quasi-Experimental Designs for Research	Reviews research techniques. Analyzes lab and field research; applications to specific topics.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	560	Advances in Theoretical Psychology	Covers new empirical and theoretical work in psychology with emphasis on its applicability.	N	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	561	Methods in Applied Psychology	Methods of particular value in applied settings, including usability testing, prototyping, and use of computers in data collection and analysis. May be repeated for credit up to 9 hours.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	562	Advanced Human Factors	In-depth study of the issues, methods, and findings in industrial and organizational psychology.	N	LEC	N	OPT	Ira A. Fulton Engineering	Human Systems Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	568	Stress and the Brain	Covers the fundamentals of stress and brain interactions. Presents a foundation from a historical perspective, then the basics of an organism's stress response, including the activation of the sympathetic nervous system and the hypothalamic-pituitary-adrenal axis. The stress response is highly conserved and allows organisms to respond and adapt to their environment. A highly effective and robust stress response facilitates adaptation and behavioral flexibility. However, a maladaptive stress response can produce detrimental outcomes. The ultimate goal is to understand the dynamic and reciprocal processes by which the stress response and brain interact to produce behavioral flexibility and resilience or detrimental outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	570	Psychopharmacology	Provides a broad overview of numerous classes of both psychotherapeutic and addictive drugs (which are sometimes overlapping). Focuses on the classification, mechanism of action, pharmacokinetics/pharmacodynamics, and clinical efficacy of medications that are currently used for the treatment of various psychiatric disorders including mood disorders, anxiety, schizophrenia, ADHD and other conditions. The latter portion of the class focuses on therapeutic drugs that also have abuse potential, including some psychostimulants, opiates, sedative/hypnotics, cannabinoids, steroids and hallucinogens.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only PSY 470 or PSY 570 or PSY 591 (Psychopharmacology)
PSY	572	Psychological Assessment	Theory and research on assessment of personality, psychopathology, and intelligence; construction of psychological assessment instruments.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	573	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	573	Psychopathology	Theory and research relating to the contribution of psychological, social, physiological, and genetic factors to the development and persistence of abnormal behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	Dean, New Interdisciplinary Arts and Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	574	Psychotherapy	Detailed survey of the theoretical and empirical literature relating to verbal psychotherapy.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	576	Dynamical Systems in Psychology	Analyzes patterns of behavior change in psychological systems.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	578	Developmental Psychopathology	Covers major theories and research related to the development of psychological disorders of childhood and adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	582	Community Psychology	Community systems, intervention techniques, consultation models, history and current status of community mental health movement, and conceptualization of the roles of community psychologists in social system intervention.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of Psychology	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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PSY	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate
PSY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate
PSY	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
PSY	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
PSY	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
PSY	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-12		
PSY	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Human Systems Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Human Systems Engineering	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Human Systems Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
PSY	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OP3	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OP3	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Department of Psychology	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	Department of Psychology	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PSY	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Department of Psychology	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
PTX	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
PTX	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
PTX	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
PTX	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): minimum 45 hours
PTX	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		Prerequisite(s): minimum 45 hours
PTX	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student; minimum 45 hours
PTX	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student; minimum 45 hours
PTX	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): minimum 45 hours
PTX	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student; minimum 45 hours
PTX	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7		Prerequisite(s): minimum 45 hours
PTX	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		Prerequisite(s): minimum 45 hours

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PUB	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman; maximum 25 hours
PUB	501	Introduction to Scholarly Publishing	Introduces the purpose, organization, and operation of scholarly publishing, including its history, societal role, and current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
PUB	502	Scholarly Editing	Publishing procedures, proofreading, and manuscript editing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	503	Advanced Scholarly Editing	Advanced manuscript editing, acquisitions, developmental editing, and indexing of scholarly books, textbooks, and scholarly journals.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	510	Research in Scholarly Publishing	Individual or group research projects on issues in scholarly publishing, including legal, economic, design, technological, and related topics.	N	REC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	580	Practicum		Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	592	Research		Y	LEC	Y	CNV	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUB	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	N	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
PUP	190	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	(HU or SB) & G	Credit is allowed for only PUP 190 or SOS 111
PUP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
PUP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	200	Cities in Cinema	Environmental, aesthetic, social, economic, political cultural, and other factors influencing global cities seen through films from around the world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	HU & H & G	
PUP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	301	Introduction to Urban Planning	Theoretical and practical aspects of city planning. Interrelationships among physical planning, environment, government, and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	
PUP	361	Planning Workshop I	Basic site planning and design techniques. Collection and analysis of information and basic planning research. Report writing and public presentation skills.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisites: PUP 301 with C or better; Minimum 45 hours
PUP	363	History of Planning	Historical overview of western urban and regional planning and planning theory, focusing on the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: PUP 301 with C or better
PUP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	410	Public Participation in Planning	Theory and practice of public participation in planning. Examines and critiques participation techniques and roles of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better
PUP	412	History of the City	The city from its ancient origins to the present day. Emphasizes European and American cities during the last five centuries. Requires advanced critical thinking and evaluative skills appropriate to students at the junior or senior level as analytical essays and an in-depth research paper are required in addition to regular tests and quizzes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	(L or HU) & H	Prerequisite(s): minimum 45 hours; Credit is allowed for only MUD 598 (Great Cities) or PUP 412
PUP	420	Theory of Urban Design	Analyzes the visual and cultural aspects of urban design. Theories and techniques applied to selected study models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	HU	Pre-requisite: PUP 301 with C or better
PUP	424	Planning Methods	Methods for urban planning research. Emphasizes research design, quantitative and qualitative methods, survey research, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisite: PUP 301 with C or better
PUP	425	Urban Housing Issues	Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: PUP 301; Minimum 45 hours; Credit is allowed for only PUP 525 or 425

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PUP	430	Transportation Planning and the Environment	Overview of transportation planning from the perspective of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
PUP	432	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better
PUP	433	Zoning Ordinances, Subdivision Regulations, and Building Codes	Analyzes zoning ordinances, subdivision regulations, building codes, and other planning implementation techniques relative to local development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Senior student; PUP 301 with C or better
PUP	434	Economic Development Planning	Provides a broad overview of urban economic development planning in the U.S. This overview includes the role and goals of economic development planning in today's global information economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L or SB	Pre-requisite: PUP 301 with C or better
PUP	436	City Structure and Planning	Political structure and organization of government as it relates to planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better
PUP	441	Economics of Environmental Planning	Overview of environmental and ecological economics and how their concepts and tools are used in dealing with environmental planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better; Credit is allowed for only PUP 541 or PUP 441
PUP	442	Environmental Planning	Environmental planning problems, including floodplains, water quality and quantity, solid and hazardous waste, air quality, landslides, and noise.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: PUP 301 with C or better
PUP	444	Preservation Planning	History, theory, and principles of historic preservation. Emphasizes legal framework and methods practiced.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students. Credit is allowed for only PUP 527 or PUP 444
PUP	445	Women and Environments	Examines the role women play in shaping the built environment; ways built/natural forms affect women's lives. Focuses on contemporary U.S. examples.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	C	Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	452	Ethics and Theory in Planning	Ethics and theory of professional planning practice in urban and regional communities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3	L	Pre-requisite: PUP 301 with C or better
PUP	462	Planning Workshop II	Comprehensive planning. Synthesis of complex data- and community-based analyses. Advanced report writing and public presentation skills.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	4		Pre-requisites: PUP 301 and PUP 361 with C or better
PUP	465	Sustainable Urbanism	Examines the history, theory and practice of "sustainable urbanism," now defined by reform movements such as new urbanism, ecological urbanism, smart growth, and livable cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s) with C or better: Sustainability major in a sustainability concentration: SOS 110, 111 (or PUP 190); minimum 45 hours. All other majors: PUP 301. Credit is allowed for only PUP 465 or PUP 565 or SOS 465
PUP	481	Optimization Fundamentals for Spatial Analysis	Covers the fundamentals of optimization for spatial analysis. Reviews elements of calculus, matrices, and basic linear algebra. Introduces linear programming, integer programming and branch and bound, and heuristics. Provides the basics for use and application of GIScience and spatial analysis methods. Objectives include: reviewing basics of math, calculus and linear algebra; introducing optimization approaches, including linear programming, integer programming and heuristics; and applying these methods to structured problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: MAT 270 (or 271 or 272) with C or better; Credit is allowed for only GIS 461, 561, PUP 481, 581, GCU 494 (Optimization Fundamentals) or 598 (Optimization Fundamentals)
PUP	482	Location Analysis and Modeling	Provides a technical overview of location theory in the context of GIScience, focusing on analysis and modeling issues. Relies upon applications associated with emergency service planning, natural resource management, retail site selection, among others, to make connections among models, spatial information, and interpretation of findings. Explores utilization and implementation considerations using GIS. Objectives include: exposing a range of location analysis and modeling approaches; applying approaches in combination with GIS and optimization software; and carrying out an application-oriented study relying on acquired skills.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): GIS 211 with C or better; GIS 461 with C or better; Credit is allowed for only GIS 462 or PUP 582 or PUP 598 (Location Modeling)
PUP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban Planning undergraduate student

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PUP	485	International Field Studies	Organized field study, culture and language in specified international locations.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12	G	Pre-requisite: Junior standing; Credit is allowed for only GCU 485 or GPH 485 or LAP 485 or POR 485 or PUP 485 or 585
PUP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6		Prerequisite(s): Barrett Honors student
PUP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-6	L	Prerequisite(s): Barrett Honors student
PUP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		Pre-requisites: Junior, Senior, Post-Bacc Undergrad, Graduate or Post-Bacc Graduate including non-degree students
PUP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-7		
PUP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-3		
PUP	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	501	Planning History and Theory	Comprehensive review of planning profession within a political, governmental, multicultural, and gender framework.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	505	GeoDesign Principles	Systematic exploration and evaluation of alternative complex human-environmental systems using spatially and temporally explicit theories, data and methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): GIS 601 and 602, or PUP 576; Credit is allowed for only GIS 505 or PUP 505
PUP	515	International Planning and Development	Introduces globalization, international development, international planning practices and policies, urbanization and urban and regional planning in developing nations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	520	Planning Practice, Ethics and Processes	Reviews past and current theoretical developments related to social change perspectives, the role and ethics of planners.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking)
PUP	525	Urban Housing Issues	Nature, dimensions, and problems of urban housing, government policy environment, and underlying economics of the housing market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 425 or 525
PUP	526	Historic Preservation Planning Practice	In-depth study of practical applications of historic preservation theory and methods. Overview of the professional work of the preservation field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	527	Preservation Planning	Explores the field of historic preservation. Overview of its historic development and the principles that guide its professional practice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student. Credit is allowed for only PUP 444 or 527
PUP	531	Planning and Development Control Law	Case studies on police power, eminent domain, zoning, subdivision controls, exclusion, preservation, urban redevelopment, and aesthetic and design regulation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	535	Water Law and Planning	In-depth study of legal materials providing substantive knowledge of water law, water management issues, and land use planning options.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 535 or GPH 535
PUP	541	Economics of Environmental Planning	Application and limitations of economics in environmental planning and policy making in the United States and internationally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 441 or 541
PUP	542	Environmental Planning	Environmental policies and their relationship to environmental planning practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only PUP 442 or PUP 542
PUP	544	Urban Land Use Planning	Theory and methods of urban land use planning, including the rational planning process, comprehensive, functional, and neighborhood plans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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PUP	547	Gender, Activism, and the Built Environment	Explores issues of gender in the built environment. Includes traditional attitudes toward gender underlying the physical form and continuing impacts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only WST 547 or PUP 547
PUP	548	Planning for Sustainable Communities	Theory and applications connecting sustainability sciences and practice to urban environmental planning. Sustainable urban development, restoration, and preservation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	550	Transportation and the Environment	Examines transportation planning from the perspectives of land use planning, economic development, environmental planning, and social needs.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	553	Urban Infrastructure Anatomy and Sustainable Development	Understanding how built environment infrastructure systems interact with ecosystem services is critical for policies and decisions directing urban sustainability. Brings together students from several disciplines to develop a semester-long research project focused on a particular urban sustainability problem in Phoenix. During the semester, students are given background on how infrastructure systems work and are interdependent, and explore tools and methods for urban sustainability assessment with peers from several disciplines. As a class, students evaluate a particular urban sustainability problem for Phoenix, interact with local policy and decision makers in developing solutions, and present their findings at the end of the semester to the ASU community.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit for only CEE 507 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or PUP553 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or SOS547 or SOS598 (Urban Infrastr Anatomy & Sustain Dev)
PUP	561	Urban Design Workshop	Workshop course focuses on applying knowledge and skills in a "real world" setting, developing meaningful planning and design proposals for existing urban areas.	N	STO	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	562	Tribal Community Planning	Study of tribal planning and best practice including underlying social, political and environmental issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	563	Urban and Regional Security	Advanced course that critically examines the security of urban and regional form, space and places.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): GIS 601 and 602 (or PUP 576)
PUP	565	Sustainable Urbanism	Examines the history, theory and practice of "sustainable urbanism," now defined by reform movements such as new urbanism, ecological urbanism, smart growth, and livable cities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only PUP 465 or 565
PUP	571	Socio-Economic Planning	Theory, methods, and techniques of demographic and economic analysis utilized in urban planning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	573	Survey Research and Multivariate Statistics	Methods of survey research design and primary data analysis for urban planning applications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Pre-requisites: PUP 570 and PUP 571 with C or better; Graduate student (degree seeking or nondegree seeking)
PUP	575	Environmental Impact Assessment	Criteria and methods for compliance with environmental laws; develops skills and techniques needed to prepare environmental impact statements/assessments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	576	GIS Workshop	GIS as a tool to address large, multifaceted problems.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GIS 515 or PUP 576
PUP	577	Communication and Visualization Tools in Planning	Covers graphic and verbal skills required to effectively communicate planning information and ideas. Emphasizes digital graphics and other computer-based tools and presentation formats, focusing on applying visual strategies and tools most often used by planners to make a persuasive argument.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Pre-requisites: PUP 570 and 571 with C or better; Graduate student (degree seeking or nondegree seeking)
PUP	579	Qualitative Research	Covers key qualitative skills and techniques that planners require, including research design and the understanding of validity and reliability issues, case study research approaches, qualitative data collection strategies, and strategies for analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2		Prerequisites: PUP 570 and 571 with C or better; Graduate student (degree seeking or nondegree seeking)
PUP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	581	Optimization Fundamentals for Spatial Analysis	Covers the fundamentals of optimization for spatial analysis. Reviews elements of calculus, matrices and basic linear algebra. Introduces linear programming, integer programming and branch and bound, and heuristics. Provides the basics for use and application of GIScience and spatial analysis methods. Objectives include: (1) review basics of math, calculus and linear algebra; (2) introduce optimization approaches, including linear programming, integer programming and heuristics; and (3) apply these methods to structured problems.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only GIS 461, 561, PUP 481, 581, GCU 494 (Optimization Fundamentals) or 598 (Optimization Fundamentals)

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PUP	582	Location Analysis and Modeling	Provides a technical overview of location theory in the context of GIScience, focusing on analysis and modeling issues. Relies upon applications associated with emergency service planning, natural resource management, retail site selection, among others to make connections among models, spatial information and interpretation of findings. Explores utilization and implementation considerations using GIS. Objectives include: (1) exposure to a range of location analysis and modeling approaches; (2) ability to apply approaches in combination with GIS and optimization software; and (3) capability of carrying out an application-oriented study relying on acquired skills.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisites: GPH 581; Credit is allowed for only GPH 482, 582, PUP 482, 582, or 598 (Location Modeling)
PUP	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Urban/Environmntl Planning MUEP student
PUP	585	International Field Studies	Organized field study in specified international locations.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only GCU 485, GCU 586, GPH 485, GPH 585, LAP 485, LAP 585, POR 485, PUP 485 or PUP 585
PUP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisite: Graduate student
PUP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Pre-requisites: Urban and Environmental Planning graduate student
PUP	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-4		
PUP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Pre-requisites: Urban and Environmental Planning graduate student
PUP	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	642	Urban and Regional Economic Analysis	Land use and locational impact of economic activity and the urban real property market.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	644	Public Sector Planning	Urban fiscal problems and public goods provision in state and local governments.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		
PUP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		

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PUP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		
PUP	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		
PUP	701	Urban Planning Colloquium	Presents and discusses new research findings and methods in urban planning.	N	SEM	Y	YGB	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	710	Current Planning Theory and Practice	Explores and critically evaluates planning theories and approaches with the objective of articulating new ideas for planning research.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	718	Econ Dev in Indian Country	Focuses on the unique legal, economic, and political issues confronting tribal governments in developing diversified reservation economies.	N	LEC	N	OP6	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	2-3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)Credit is allowed for only LAW 718 or PUP 718
PUP	724	Planning Methods for Doctoral Students	Tools useful for urban planning research; emphasis on research design and survey methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
PUP	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1		Prerequisite(s): degree- or nondegree-seeking graduate student
PUP	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Geographical Sciences and Urban Planning	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
QBA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-3		
QBA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-6		Prerequisite(s): Barrett Honors student
QBA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Economics	1-6	L	Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
QBA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-6		Prerequisite(s): Barrett Honors student
QBA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-7		
QBA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-3		
QBA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Students only (degree and non-degree seeking)
QBA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: Graduate Degree Seeking Students only
QBA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		
QBA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-4		
QBA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-12		
QBA	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-12		
QBA	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		
QBA	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		
QBA	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Economics	1-12		Pre-requisites: W.P. Carey Graduate Degree Seeking Students only
QBA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Economics	1-15		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
QBA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. <u>Credit is not awarded, and no grade is assigned.</u>	Y	LEC	Y	Z3	W.P. Carey School of Business	Department of Economics	1		
QBA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Economics	1-15		
RDG	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
RDG	291	Children's Literature	Focuses on selecting and using children's literature and related nonprint media to support the elementary school curriculum. Covers the elements, genres and applications of children's literature as well as the resources available for elementary classroom teachers. Constructs criteria for the selection of trade books for educational and personal use. <u>Also explores the role of digital media in children's literature.</u>	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	HU	
RDG	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
RDG	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
RDG	322	Language Literacy 1 in Elementary Schools	Theoretical knowledge and pedagogical skills for implementing a high-quality reading program. Course objectives and topics are aligned to standards for reading and research from the International Reading Association (IRA), Arizona College and Career Ready Standards (ACCRS), Interstate Teacher Assessment and Support Consortium (InTASC) standards, and the National Reading Panel Report (2000). Focuses on emergent literacy, phonemic awareness, phonics, fluency, vocabulary and comprehension. Presents strategies and assessments to support students of a variety of ability levels and cultural backgrounds with a specific focus on the struggling readers and English language learners. <u>For education majors only.</u>	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only RDG 322 or SPE 325
RDG	323	Literacy Processes in Content Areas	Principles and practices for planning subject matter units of instruction that explicitly address learning with texts across academic disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
RDG	413	Language Literacy 2 in Elementary Schools	Applies effective practices for literacy instruction in authentic classroom settings. Prepares teacher candidates to plan and deliver balanced literacy approaches with diagnostic assessment strategies and adaptations to support second language learners and struggling readers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
RDG	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): admission to the Professional Program
RDG	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
RDG	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
RDG	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
RDG	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
RDG	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
RDG	505	Developmental Reading	For classroom and special reading teachers. Specific professional skills in decoding, comprehension, and evaluation. Required for Special Reading Endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	507	Content Area Literacy	Theory, teaching strategies, and practical application concerning learning from text across subject matter disciplines.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	508	Essential Elements of Elementary Content Area Literacy (K-8)	Presents theory, rationale, and teaching strategies concerning learning from oral, print, and electronic texts across subject-matter disciplines. Emphasizes practical application of content area literacy principles. Familiarizes participants with the literate lives of today's youth, facilitate participants' inquiry into strategies to motivate students in content learning, and provide strategies to improve students' comprehension and application of content material. Readings, online inquiries, and assignments focus on application of course content. Emphasizes implications of recent research and theory in content literacy and adolescent literacy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	509	Essential Elements of Secondary Content Area Literacy (6-12)	Presents theory, rationale, and teaching strategies concerning learning from oral, print, and electronic texts across subject-matter disciplines. Emphasizes practical application of content area literacy principles. Familiarizes participants with the literate lives of today's youth, facilitate participants' inquiry into strategies to motivate students in content learning, and provide strategies to improve students' comprehension and application of content material. Readings, online inquiries, and assignments focus on application of course content. Emphasizes implications of recent research and theory in content literacy and adolescent literacy.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	512	Theoretical Foundations in Language and Literacy	Introduces theoretical lenses useful in understanding issues in language and literacy education and research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	520	Essential Elements of Elementary Literacy (K-8)	Intended for practicing teachers, focuses on the development of a comprehensive approach to Reading and Writing Instruction K-8.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	525	Emergent Literacy	Examines research on oral language and literacy development and effective strategies for teaching language and literacy in birth to grade 1, including phonemic awareness and alphabet instruction and beginning decoding.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	531	Language and Literacy I	Focuses on the theoretical knowledge and pedagogical skills necessary to equip future teachers to plan and implement high-quality reading and writing instruction in a classroom setting. Course objectives and topics are aligned to standards for reading and research from the International Reading Association (IRA), Arizona College and Career Ready Standards (ACCRS), Interstate Teacher Assessment and Support Consortium (InTASC) standards, and the National Reading Panel Report (2000). Focuses on reading readiness, language development, phonemic awareness, phonics, fluency, vocabulary and comprehension. Presents strategies and assessments to support struggling readers as well as a variety of ability levels and cultural and linguistic backgrounds to include English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Teachers College graduate student; Credit is allowed for only RDG 531 or SPE 538
RDG	532	Language and Literacy II	Builds on the theoretical knowledge and pedagogical skills presented in the previous course. Uses diagnostic assessments in the planning and implementation of intervention literacy lessons for struggling readers/writers in a classroom setting as part of the course case study assignment. Includes differentiated instructional and assessment strategies to address the needs of diverse learners to include English language learners. Also includes an emphasis on writing and composition to ensure future teachers have the knowledge necessary to teach all forms of writing in the elementary classroom. Includes an overview of the historical development of children's literature and the criteria necessary for analyzing and selecting all genres of quality children's literature.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Teachers College graduate student; Pre- or corequisite(s): RDG 531
RDG	550	Practicum Experiences in Elementary and Secondary Reading	Practicum experience utilizing assessment and instructional techniques for classroom settings. See RDG 557 for State of Arizona reading endorsement.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	555	Formal Measures of Literacy	Understanding the attributes of standardized tests and applying this information to analyze, select, and explore their use.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	556	Assessment and Procedures in Elementary and Secondary Reading	Techniques for classroom and clinical reading/literacy assessment and instruction. Emphasizes continuous assessment. May be taken concurrently with RDG 550 or 557. Recommended for State of Arizona reading endorsement.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	557	Advanced Elementary and Secondary Reading Practicum	Advanced practicum experience utilizing specialized reading and other assessment and instruction techniques for classroom and clinic settings. Lab sections. Recommended for State of Arizona reading endorsement. May be taken concurrently with RDG 556.	N	PRA	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	563	Children's Literature	Selects and uses children's literature and related nonprint media to support the elementary school curriculum.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RDG	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
RDG	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
RDG	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Graduate student (degree seeking or nondegree seeking) or Postbaccalaureate Undergraduate student
REA	300	Real Estate Analysis	Applies economic theory and analytical techniques to real estate markets. Topics include law, finance, appraisal, market analysis, investments, development.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: W.P. Carey BS or BA student, OR non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree or Graduate student.

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REA	380	Real Estate Fundamentals	Real estate for the student/consumer with an emphasis on the applied aspects of each area of real estate specialization. Not open to Real Estate majors.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: Minimum cumulative GPA of 2.00; Minimum 56 hours OR Non-degree student with minimum 2.0 ASU cum GPA, OR Graduate student
REA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
REA	401	Real Estate Appraisal	Factors affecting the value of real estate. Theory and practice of appraising and preparation of the appraisal report. Appraisal techniques.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey BA or BS major OR non-business major with FIN 300 (or FIN 302 or 303 or REA 380) with C or better; 2.50 ASU GPA; 2.50 ASU business GPA; minimum 56 hours
REA	411	Real Estate Law	Legal and ethical aspects of land ownerships, interests, transfer, finance development, and regulations of the real estate industry.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s) with C or better: FIN 300 or 302 or 303 or REA 380; W.P. Carey BA or BS Business major OR non-business student with minimum 56 hours and 2.50 ASU and business GPA OR non-degree graduate student. Credit is allowed for only LES or REA 411
REA	441	Real Estate Land Development	Neighborhood and city growth. Municipal planning and zoning. Development of residential, commercial, industrial, and special purpose properties.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s) with C or better: FIN 300 or 302 or 303 or REA 380; W.P. Carey BA or BS Business major OR non-business student with minimum 56 hours and 2.50 ASU and business GPA OR non-degree graduate student
REA	456	Real Estate Investments	Analyzes investment decisions for various property types. Cash flow and rate of return analysis.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Finance	3		Prerequisite(s): W.P. Carey BA or BS major OR non-business major with FIN 300 (or FIN 302 or 303 or REA 380) with C or better; 2.50 ASU GPA; 2.50 ASU business GPA; minimum 56 hours
REA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	GNA	W.P. Carey School of Business	Department of Finance	1-12		
REA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey BS or BA student, OR Non-business students with minimum 56 earned hours and 2.5 ASU GPA OR Non-degree OR Graduate student.
REA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
REA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	W.P. Carey School of Business	Department of Finance	1		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
REA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		
RED	501	Urban Economic and Real Estate Development Principles	Explores the basic principles of urban economics and their application to real estate decision making.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1		Prerequisite(s): degree- or nondegree-seeking graduate student
RED	502	Real Estate Valuation-Finance and Capital Markets	Addresses the concepts of valuation applied to real estate and teaches how to apply these principles. Intermediate- to advanced-level course in mortgage finance, and associated capital market innovations.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only RED 691-Real Estate Fin/Analysis or RED 502
RED	503	Real Estate Market Analysis	Focuses on market analysis and market data gathering methods, means, and techniques necessary in identifying market opportunities and developing specific market strategies for successful real estate development.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only RED 503 or 591 (Real Est Site Analys/Dsg)
RED	504	Real Estate Site Analysis, Master Planning and Design	Analyzes the physical characteristics of a property, including the site and physical area, legal, political, economic, and financial facts that impact the highest and best use of a property and what can be built upon the property.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only RED 504 or 591 (Real Estate Develop Principles)
RED	505	Land Use Law and Public Entitlement Process	Covers a basic understanding of the legal and practical zoning and governmental land entitlement process. Examines the legal history, structure, and implications of zoning, as well as the fundamentals of "real life" situations that occur in the entitlement and real estate development field. Provides a broad overview of this process from a legal and development viewpoint, but is not intended to be a comprehensive analysis of all entitlement issues.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only RED 505 or 591 (Mkt Segmentation/Analysis)
RED	506	Real Estate Law for Developers	Covers the nature of property and the legal system as it relates to purchase agreements, title, surveys, declarations of covenants, defining easements, and licenses among other related topics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only RED 506 or 591 (Public Entitlement Process)
RED	507	Synthesis Project #1 Residential Development	Employs the students learning through application of developing a specific parcel of land.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	1		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for RED 507 or 591 (Mkt Segmentation/Analysis)
RED	508	Real Estate Engineering and Construction	Explores the basic principles of engineering and construction of real estate development projects. Reviews construction technologies within the framework of architectural design and engineering as well as construction means, methods, and systems.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: Graduate (degree or nondegree) student; Credit is allowed for only RED 508 or 598 (Compar Analys; in Fill Housing)
RED	509	Advanced Financial Analysis for Commercial Real Estate	Teaches more complex financial analysis of income-producing property, including various decision-making tools such as Monte Carlo, option pricing, assessing alternatives, and how to build these into financial models. Also teaches financial analysis of business structures to determine potential outcomes such as debt and equity structures, waterfalls, claw backs, and other business and ownership concepts. Emphasizes strategic alternatives, assessing risk and conversion events.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: MRED student; Credit is allowed for only RED 509 or 691 (Contemp Issues Real Estate Dev)
RED	510	Real Estate Development Business and Project Management	Teaches management of real estate development companies and process. Students learn the various aspects of project management, financial management and project accounting, lending relations and managing loans and pay applications as well as dispute resolution and strategic partnerships.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: MRED student; Credit is allowed for only RED 510 or 598 (Income Analys; Comm/Retail)
RED	511	Design of the Built Environment	Teaches the built environment and how that applies to creation of places, market positioning, capturing value and the importance of good design to the business of real estate.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: MRED student; Credit is allowed for only RED 511 or 691 (Real Estate Dev Project Mgmt)
RED	512	Real Estate Law for Developers	Teaches issues faced by developers such as various types of financing structures, including special districts, TIF and bond financing. Covers issues and process of raising capital and various forms of securing equity. Discusses private placement memorandums, limited liability companies, partnerships and public private partnerships. Students also learn about environmental law, income tax issues, negotiation, and alternative dispute resolution.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: MRED student; Credit is allowed for only RED 512 or 691 (Adv Real Estate Finance/Analys)

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RED	513	Advanced Real Estate Engineering, Construction Management and Sustainable D 2	Covers various construction delivery methods, construction project management and scheduling, construction contracts, mechanics and materialmans liens, and pay applications. Students also learn about sustainability and the built environment.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Pre-requisite: MRED student; Credit is allowed for only RED 513 or 691 (Real Estate Dev. Project Mgmt)
RED	514	Synthesis Project #2 Income Property Development	Through application to a specific problem given by faculty, students work in teams to analyze and seek solutions to development of land for an income-producing property. Students investigate a specific parcel of land, performing due diligence, preparing a market and segmentation analysis, defining highest and best use(s), designing a solution, preparing residual land value analysis, defining a product offering, pricing points, building design, site planning and comparative valuation analysis.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	2		Prerequisite(s): MRED student; Credit is allowed for only RED 514 or RED 691 (Adv Real Estate Finance/Analys)
RED	515	Synthesis Project #3 Capstone Project Mixed-Use Property Development	Employs all that the students have learned through application to a specific problem given by faculty. Students work in a team to analyze and seek solutions to development of land for a complex, mixed-use project. Students investigate a specific parcel of land and are required to perform due diligence, prepare a market and segmentation analysis, define highest and best use(s), design a solution, prepare residual land value analysis, define a product offering, price points, building design, site planning and comparative valuation analysis.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Finance	4		Pre-requisite: Master of Real Estate Development major; Credit is allowed for only RED 515 or 598 (Ret Analys; High Dens Mix Use)
RED	520	Real Estate Development Business and Project Management Internship	Integrates the knowledge and skills cultivated in the MRED program (real estate business management, creative problem solving, team building, critical analysis and thinking). Helps students secure relevant functional and industry experience by providing hands-on work experience across a variety of internship sites demonstrating the varied and changing demands and possibilities of work within the real estate industry. Uses internship experiences to analyze the shifting landscape of work and to assess potential employment environments and career paths.	N	PRA	N	YGB	W.P. Carey School of Business	Department of Finance	3		Pre-requisite: MRED student
RED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
RED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
RED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
RED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-4		
RED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	W.P. Carey School of Business	Department of Finance	1-12		
RED	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
RED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
RED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Finance	1-12		
RED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Finance	1-12		
REL	100	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & G	Credit is allowed for only REL 100 or 200
REL	100	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Credit is allowed for only REL 100 or 200
REL	100	Religions of the World	Introduces the history of religious traditions of the world, including Buddhism, Christianity, Hinduism, Islam, Judaism, and others.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Credit is allowed for only REL 100 or 200
REL	101	Religion, Culture and Public Life	Explores how religions are conditioned by cultural values and operate in the political sphere.	Y	LEC	Y	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	
REL	107	Religion and Globalization	Explores how different religions interact with the various processes of globalization, including how the world's major religions have been transformed by economic, political, cultural, and technological aspects of globalization. Topics include religious terrorism, human rights, religion, and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Credit is allowed for only REL 107, 194 (Religion and Globalization) or SGS 107
REL	111	Introduction to Asia	Offers a basic introduction to the geography, history, cultures, states, and societies of South and Southeast Asia as well as China, Japan, and Korea.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST 111 or REL 111

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	131	Biblical Hebrew I	Offers an introduction to Biblical Hebrew, the language in which most of the books of the Hebrew Bible/Old Testament have been written. Provides the basic tools to understand and translate Biblical Hebrew texts. Covers the Hebrew alphabet, basic vocabulary, morphology and syntax. Students learn idiomatic expressions, basic literary techniques in narratives and poetry, as well as specificities of Semitic languages. Emphasizes a critical approach to the ancient text. Also introduces the evolution of the biblical text, from ancient manuscripts to contemporary editions and translations. Includes an introduction to the development of writing and to the evolution of Hebrew, from earliest inscriptions to its revival in modern Israel. The texts translated in class are situated in the history of Israel, but also in their Jewish and Christian cultural and religious contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Credit is allowed for only HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I)
REL	132	Biblical Hebrew II	Completes the study of basic Biblical Hebrew grammar and vocabulary (Futato's Beginning Biblical Hebrew, chapters 21-40). Prepares students to translate narrative and legal texts from Hebrew Bible. Students learn to use dictionaries, grammars, paradigms and critical editions of the biblical text.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 131 or HEB 194 (Biblical Hebrew I) with C or better; Credit is allowed for only HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II)
REL	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
REL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	200	Exploring the World's Religions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & G	Pre-requisites: Maximum 75 hours; Credit is allowed for only REL 100 or 200
REL	200	Exploring the World's Religions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Pre-requisites: Maximum 75 hours; Credit is allowed for only REL 100 or 200
REL	200	Exploring the World's Religions	Writing-intensive course introducing analytical skills necessary for understanding religious traditions. Beliefs, practices, and communities of several religious traditions of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Pre-requisites: Maximum 75 hours; Credit is allowed for only REL 100 or 200
REL	201	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	
REL	201	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	
REL	201	Religion and the Modern World	Introduces the nature and role of religious beliefs and practices in shaping the lives of individuals and societies, with particular attention to the modern world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
REL	202	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & C	Credit is allowed for only FMS 202 or REL 202
REL	202	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	Credit is allowed for only FMS 202 or REL 202
REL	202	Religion and Popular Culture	Explores various intersectors between religion and the popular media, including music, news, advertising, the visual arts, literature, performance, and film.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C	Credit is allowed for only FMS 202 or REL 202
REL	203	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & H	
REL	203	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	203	Saints and Sinners: Explorations in Sacred Biography	Comparison of the role of biography across religions to examine the process of categorizing people as saints or sinners.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	
REL	205	Life, Sex and Death	Ways that religions have understood birth, sexuality, death, and the passing of generations. Examples from traditions throughout the world.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
REL	205	Life, Sex and Death	Ways that religions have understood birth, sexuality, death, and the passing of generations. Examples from traditions throughout the world.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
REL	207	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	
REL	207	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	
REL	207	Ritual, Symbol, and Myth	Ritual, symbol, and myth as types of religious expression, with examples selected from the nonliterate religions of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
REL	210	Introduction to Judaism	Beliefs, ceremonies, festivals, and institutions of Judaism emphasizing the contemporary era. Assumes no previous knowledge about Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only JST 210 or REL 210

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REL	211	Jews and Judaism in America	Chronological analysis of Jews and Judaism in American history and letters.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	SB & H	Credit is allowed for only HST 211 or JST 211 or REL 211
REL	225	African American Religion	Introduces the history and development of the African American religious tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	
REL	230	Introduction to Jewish Civilization	Overview of Jewish civilization from antiquity to the present. Answers the following questions: Who are the Jews? What do Jews believe? How did Jews interact with non-Jews? What was the lasting contribution of Jews to the world? In the attempt to answer these questions, provides the skills of being a good college student. Presents Judaism as an evolving civilization with an overarching distinctive culture but with a variety of subcultures and ethnic diversity. Presents the Jewish civilization through literature, films, music, and internet resources, with an overview of its complexity and diversity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Credit is allowed for only HST, JST or REL 230
REL	231	Biblical Hebrew III	Advanced study of Biblical Hebrew. Deepens understanding of the grammar and composition of the Hebrew Bible. Translates texts of different literary genres (narrative, legal, poetic, prophetic) and different periods. Introduces the basic principles of textual criticism and different approaches to interpret the texts of the Hebrew Bible.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 132 or HEB 194 (Biblical Hebrew II) with C or better; Credit is allowed for only HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III)
REL	232	Biblical Hebrew IV	Addresses advanced topics in Biblical Hebrew grammar and interpretation. The first half of the semester is devoted to texts from the Hebrew Bible; the second half on extra-biblical texts written in ancient Hebrew (for example: Dead Sea Scrolls, Rabbinic texts, ancient Hebrew poetry). Topics and texts change annually.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: HEB, JST, REL 231 or HEB 294 (Biblical Hebrew III) with C or better; Credit is allowed for only HEB, JST, REL 232 or HEB 294 (Biblical Hebrew IV)
REL	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
REL	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & G	Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
REL	245	Introduction to South Asia	Provides an introduction to the history and major contemporary political, economic, social, religious and cultural features of the South Asia region at large and of selected South Asian nations in particular.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HST 245 or POS 245 or REL 245 or SGS 245 or SLC 245
REL	260	Introduction to Islam	Examines Islamic beliefs, ceremonies, festivals, and institutions. Assumes no prior knowledge about Islam.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	
REL	270	Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	
REL	270	Introduction to Christianity	Beliefs, ceremonies, festivals, and institutions of Christianity, emphasizing the contemporary era. Assumes no previous knowledge about Christianity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
REL	282	PreHispanic Native Am Wldview	Surveys cosmological traditions of indigenous civilizations on the Pre-Columbian American continents	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
REL	287	Topics in Film, Media, and Religion	Explores specialized topics in the study of film, media and religion. Analyzes how religious values, identities and practices related to various cultural traditions are constructed, communicated and presented through films and media.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Credit is allowed for only FMS 287 or REL 287
REL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
REL	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
REL	300	The Future of Religions	Critical theorists of modern religious and secular beliefs argued that both theism and atheism have had their martyrs and tyrants. Nietzsche proclaimed "God" of the West dead, Marx unmasked religion as opium for the oppressed masses, and Freud analyzed religious future as an unconscious illusion. The future of secular progress has become equally suspect in the wake of the Holocaust, Hiroshima, the gulags, the killing fields of Cambodia, Rwanda. Globally motivated terror revealed itself as capable of religious as much secular justifications. The future of faith and reason has become a doubly open theoretical and practical question in philosophy, religious studies, literary study, critical theory, cultural and gender studies, and all sciences. Applies theoretical and methodological tools to critically exam beliefs, practices, and communities and their role in both generating and transforming the ethical and spiritual discontents of the global age.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; Credit is allowed for only HON 394 (The Future of Religions), PHI 303 or REL 300
REL	301	Comparative Mysticism	Comparative examination of Eastern and Western mystical traditions from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	307	Approaches to Religion	Examines the intellectual history of academic study of religion through various theoretical approaches, major themes, and thinkers.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): Religious Studies major; ENG 102, 105, or 108 with C or better; REL 207 with C or better
REL	310	Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	310	Western Religious Traditions	Religious traditions of Judaism, Christianity, and Islam, comparing their doctrinal, institutional, and ritual systems and social histories.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	311	Israeli Society and Culture	Different partitions of the Israeli society, based on ethnic origin, by religious affiliation or by political association. Depicts how Israel is an absorbing immigration state. Israel is a welfare state and the course covers aspects of a welfare state, such as health, retirement, public transportation, art, higher education and more.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better. Credit is allowed for only HEB 348 or HEB 394 (Israeli Culture and Society) or JST 348 or REL 311 or SLC 348
REL	312	History and Memory of the Holocaust	In-depth study of the history of the genocide of Jews, the rise of modern antisemitism within the context of Nazi Germany, and the memory and memorialization of the Holocaust post 1945.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 369 or JST 369 or REL 312 or HST 304 (Shoah: History, Memory, and Representation) or HST 394 (History of the Holocaust)
REL	313	Anti-Semitism in the Media	By examination and discussion of various media, explores the phenomenon of modern anti-Semitism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better
REL	314	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
REL	314	Jewish Philosophy	The history of Jewish philosophy from its origins in the Hebrew Scriptures to postmodern expressions.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 390, JST 314, PHI 390 or REL 314
REL	315	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST or REL 315
REL	315	Hebrew Bible (Old Testament)	Nature, content, background, historical situation, and message of the books of the Hebrew Bible in English translation.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST or REL 315
REL	316	Literary Readings of the Hebrew Bible	Literary analysis of two of the main genres of the Hebrew Bible: narrative art and poetry. Students learn the main literary conventions of biblical prose and poetry, and how these conventions are applied or subverted. Each class comprises the study of a literary aspect, close readings, and thematic discussions. Biblical texts are read only in translation. They are situated in the religious, literary and artistic traditions that have developed on their basis.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Prerequisite(s): minimum 45 hours. Credit is allowed for only ENG 316, HEB 316, JST 316, REL 316 or HEB 394 (Literary Readings of the Bible)
REL	317	Introduction to Rabbinic Judaism	Historical analysis of the thought, literature, and institutions of rabbinic Judaism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST 317 or REL 317
REL	318	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(HU or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST 318, REL 318 or SOC 375
REL	319	Religion, Violence and America	In-depth study of ways in which religion and violence have shaped American history, culture and identity.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only REL 319 or 394 (Religion, Violence & America)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	320	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	320	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	320	American Religious Traditions	Examines the formation, development, and interaction of major American religious traditions (indigenous, African American, Asian American, and Euro-American).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	321	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	321	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	321	Religion in America	History of religion in America with attention to issues of historiography, pluralism, gender, race, ethnicity, politics, and social reform.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & C & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	323	African American Religion: A Biographical Approach	Examines the experiences, motivations, and contributions of a number of figures associated with African American religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	324	Spirituals and the Blues	Multidisciplinary exploration of the African American religious and musical response to the North American diaspora experience.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	326	U.S. Latino Religion and Culture	U.S. Latino and Latin American religious history with special attention to what have become Hispanic mestizo hybrid cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only TCL 328 or REL 326
REL	330	Native American Worldviews	Presents worldviews through the art, architecture, writing, mythology, ritual and folklore of tribes in Native America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & C	Prerequisite(s): minimum 24 hours; ENG 102, 105, or 108 with C or better
REL	331	History of Native American Religions	Explores the role of religion in Native American history, including missionization; adaptation; and prophetic, messianic and religious revitalization movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & C & H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 24 hours
REL	332	South American Indian Religions	Introduces the sacred stories, ceremonies, and beliefs of Native South American peoples in their historical contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): minimum 30 hours; ENG 102, 105, or 108 with C or better
REL	338	The Daoist Bible: Daode jing	At 5,000 words, the Daode Jing (Tao-te ching) is arguably the shortest religious book in the world. It is also the most widely translated, after the Christian Bible. Introduces the wisdom of the Old Boy, Laozi himself, and to some of the startlingly wide variety in which his short, gnomic utterances have been interpreted. No knowledge of Chinese required; all readings and lectures in English.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101, 105 or 107 with C or better; Credit is allowed for only CHI 338, 394 (Daoist Bible: The Dao De Jing) or REL 338
REL	343	Daoism	Introduces the history, doctrines, and practices of Taoism from the mid-second century CE up to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only CHI or REL 343
REL	344	Religion and Values in Japanese Life	Japanese values expressed in the life and annual cycles of the family, local and national identities, and popular culture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	345	Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	345	Asian Religious Traditions	Introduces the major concepts of religious beliefs, rituals, and practices in Hinduism and Buddhism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	346	Chinese Religions	Examines the history and practices of Chinese religions with particular attention to culture, society, and history.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	347	Peace and Conflict in India	In-depth analysis of major Indian religious traditions in historical and contemporary context, with attention to theologies, textual genres, doctrines, rituals, political and cultural expressions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 24 hours; Credit is allowed for only REL 347 or REL 394 (Religions of India)
REL	348	Religion and Culture in Southeast Asia	In-depth study of the religious diversity of Southeast Asia including Hinduism, Buddhism, Islam, Christianity, spirit cults and ancestral religions.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 24 hours; Credit is allowed for only REL 294 (Southeast Asia Global Crossroads) or REL 348
REL	350	Hinduism	Studies diverse forms of Hinduism through its institutions, literature, folklore, art, and architecture.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better

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REL	351	Buddhism	Doctrines, practices, and institutions of the Buddhist religion, emphasizing its role in the history and culture of Asian societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	352	Modern Buddhism	Focuses on modern issues related to Buddhism with special attention to colonialism, nationalism, the development of the nation-state and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only REL 352 or 394 (Modern Buddhism)
REL	354	Religions of Korea	Explores major religious traditions and folk religions in Korea. Covers diverse topics such as mythology, indigenous practices, doctrinal and meditation Buddhism, early and Neo-Confucianism and Christianity as well as the new religions of modern times. Discusses the development of religious ideas and practices in light of the political, cultural and social milieu. Focuses on cultural importation and adaptation as well as interaction and conflict among the different religious traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 24 hours; Credit is allowed for only KOR 354 or REL 354
REL	355	Japanese Cities and Cultures to 1800	Relations among ideas and literary, visual, and performing arts of the ancient aristocracy, medieval samurai, and early modern townspeople.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
REL	356	Buddhism in America	Examines diverse Buddhist traditions in the U.S. among Asian-American communities and converts to this religion.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	357	Theravada Buddhism in South and Southeast Asia	Examines Theravada Buddhist institutions, practices, and communities in ancient and contemporary south and southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	360	Ancient Greek Religion	Surveys ancient Greek religion, including its gods, ritual practices and festivals. Analyzes the development of the religion over time, and how both ancient and modern figures interpreted its meaning.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; Credit is allowed for only GRK 362, REL 360, SLC 362 or SLC 394 (Ancient Greek Religion)
REL	361	Roman Religion	Roman religion was never static, despite the best efforts of the Roman state to make it so. Understands the artifacts and procedures of Roman state cult from its earliest origins to the late empire, using ancient literary sources, archaeology throughout the ages and modern scholarly theories. Clarifies the forces that influenced development and change in Roman religion, both internal and external.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only LAT 361, REL 361, SLC 361 or SLC 394 (Roman Religion)
REL	362	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 372 (or AFS 372) or REL 362 or SGS 366 or AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History)
REL	363	Islam and World Affairs	Advanced examination of complex trends to construct the roles of Islam as a belief, its institutions, leaders and ordinary believers in contemporary world affairs. Studies different developments, including the rise of (political Islam) fundamentalism, to subsequent changes in the Muslim world, challenges Muslims face, and domestic and international conflicts. Challenges students to reconceptualize and broaden their understanding of the powerful presence of religion in this era of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 373 (or AFS 373) or REL 363
REL	364	Islam in Eurasia and Central Asia	Examines the changing role of Islam in Eurasia and Central Asia through history and interprets current transformations in the region.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only REL 364 or 394 (Islam in Eurasia & Central Asia)
REL	365	Islamic Civilization	Global historical survey of Islamic cultures and societies up to the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105, or 108 with C or better
REL	366	Islam in the Modern World	Examines the worldwide transformations of Islamic religion, cultures, and societies in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	369	Women in Islam	Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
REL	369	Women in Islam	Examines the roles women have played through Islamic history (Middle East) and the changing discourse on gender identity.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
REL	371	New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU	
REL	371	New Testament	Origins and literature of early Christian communities; historical investigations of the types of oral and written tradition in the New Testament.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	

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REL	372	Formation of the Christian Tradition	Origins, development, and expansion of Christianity; major themes and tensions from the New Testament world to the beginning of the Middle Ages.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisite: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	373	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: Minimum 24 hours; ENG 102, 105 or 108 with C or better or WST 100 or WST 300 with C or better; Credit is allowed for only JST 373, REL 373 or WST 372
REL	374	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours. Credit is allowed for only HST 361 or REL 374
REL	374	Witchcraft and Heresy in Europe	Background, origins, and development of the Inquisition; persecution of women and marginal groups.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & H	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours. Credit is allowed for only HST 361 or REL 374
REL	375	Lost Scriptures, Lost Christianities	Wide diversity of early Christianity and its suppressed and lost texts, which have been found in modern times.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	376	Virgin Mary in History, Film, and Culture	Introduces formation and development of cult of the Virgin Mary; analyzes transformations of Mariology within historical, cinematic, and cultural contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Pre-requisites: ENG 102, 105 or ENG 108 with C or better. Credit is allowed for only FMS 376 or REL 376
REL	377	Religion in Russia	Examines the history of the various religious traditions of Russia and the former USSR from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only HST 371 or REL 377
REL	378	Religion, War and Peace	In-depth study of the religious, political and ethical dimensions of violence and war. Compares perspectives of Christian, Jewish and Islamic traditions as well as secular viewpoints.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L	Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only POS 378, REL 378 or 394 (Religion, War and Peace)
REL	379	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only REL 379 or SGS 343
REL	380	Theology of Terror	Historical background, theological foundations, and consequences of violent Islamist movements.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	381	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or HU	
REL	381	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	
REL	381	Religion and Moral Issues	Manner in which human religiousness relates to social concerns, e.g., sexuality, the environment, bioethical issues, and violence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	
REL	382	Magick, Religion and Science	Relationship and conflict among magic, religion and science in the West from antiquity to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L or HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	384	The Bible and Archaeological Discoveries	Studies the Bible alongside the stories that architecture, pottery, metalwork, sculpture, tombs, and paintings of the ancient Near East have to tell. May be repeated for credit.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only JST 384 or REL 384
REL	385	Contemporary Western Religious Thought	Introduces contemporary Jewish and Christian thought. Topics include religion and politics, problem of evil, interpretations of God, and feminist theology.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	386	America and the Holocaust	Analyzes the historical and sociopolitical factors that shaped U.S. policy decisions regarding Germany's assault on Europe's Jews.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU or SB	
REL	387	Religion and Conflict: Theories and Cases	In-depth study of religion and conflict across multiple traditions and regions.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	(L or HU) & G	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 24 hours; Credit is allowed for only REL 387 or 394 (Religion and Conflict: Theories and Cases)
REL	388	Religion, Ethics, and International Politics	Religious and ethical dimensions of international politics. Addresses historical and contemporary ideas, movements, issues and events.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only POS or REL 388

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
REL	390	Women, Gender and Religion	Examines the role of women and the construction and practice of gender identities across religious traditions and cultures.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	HU & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only REL 390 or WST 390
REL	390	Women, Gender and Religion	Examines the role of women and the construction and practice of gender identities across religious traditions and cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only REL 390 or WST 390
REL	390	Women, Gender and Religion	Examines the role of women and the construction and practice of gender identities across religious traditions and cultures.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only REL 390 or WST 390
REL	391	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or ENG 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357 or PHI 391 or REL 391
REL	391	Historical Perspectives on Philosophy and Religion	Comprehensive, advanced study of central concepts in the philosophy of religion in the history of Western philosophy.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisite: ENG 102, 105 or ENG 108 with C or better; Minimum 30 hours; Credit is allowed for only HST 357 or PHI 391 or REL 391
REL	393	Religion and Sexuality	Examines what issues are involved in incorporating sexuality into religion and how/why religious traditions seek to control sexuality.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better
REL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
REL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
REL	396	Women in the Bible	Uses feminist criticism to reconstruct the remarkable women who stand in the shadow of the patriarchy in the bible.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only JST or REL 396
REL	401	Sacred Scriptures and Social Choices	Examines relationships among contemporary moral issues and the sacred scriptures to support choices at individual, group, and public levels.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Credit is allowed for only IAS 401, MAS 598 (Sacred Scriptures & Social Choices) or REL 401
REL	405	Problems in Religious Studies	Selected topics in religious studies; involves students in research interests of instructor.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: REL 307 with C or better; Religious Studies major
REL	406	Religious Studies Capstone I	Develops skills necessary for conducting and presenting in-depth research in the field of religious studies.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		Prerequisite(s): REL 307 with C or better; Religious Studies major; senior standing
REL	407	Religious Studies Capstone II	Uses previously developed research to produce original research project in religious studies.	N	SEM	N	GNA	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	2		Prerequisite(s): REL 406
REL	410	Judaism in Modern Times	Variety of expressions of Judaism and Jewishness in the modern period. Topics may include American Judaism or religious responses to the Holocaust.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	411	Judaism and the Beginnings of Christianity	Studies the beginnings of Christianity in relation to Judaism: their common context, the process of their distinction and their mutual influence. Through a historical and thematic approach, explores the parallel construction of Jewish and Christian identities. Combines readings from primary sources (Hellenistic Judaism, Qumran, New Testament, Early Christianity, Rabbinic Judaism) and up-to-date scholarly literature.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 101 or 105 or 107 or 108 or HST 100 or 102 or REL 100 or SLC 142 or 202 with C or better; Credit is allowed for only HEB/JST/REL 411 or HEB 394 (Judaism and the Origins of Christianity) or HEB 494 (Judeo-Hellenistic Literature)
REL	420	Religion in American Life and Thought	Influence of religion on American society, culture, and ideas; the distinctive character of religion in America.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU	
REL	427	American Religious Thought	Thought of representative American religious thinkers, e.g., Jonathon Edwards, William Ellery Channing, Horace Bushnell, and Reinhold Niebuhr.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	430	Shamans and Mesoamerica	Analyzes process of religious hybridization in Mesoamerica; examines symbolic interpretations of Amerindian religious practice and cosmological concepts of Mesoamerican priests.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better
REL	460	Studies in Islamic Religion	Issues in the interpretation and understanding of Islamic texts, history, society, culture, and rituals. May be repeated for credit when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & G	

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REL	461	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Shari'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AFR 480 (or AFS 480) or REL 461 or SGS 442
REL	470	Religion in the Middle Ages	Religious aspects of medieval life and thought; variety of forms of dissent, heresy, and reform movements from the 4th to 13th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	471	Reformation and Modern Christianity	Protestant Reformation to contemporary Christian movements; includes factors in the dissolution of the Medieval Christian synthesis, variety of reform movements and reformation patterns, Catholic counter-reform measures, formation of liberal theology, ecumenical movement, and the World Council of Churches.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	HU & H	
REL	480	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3	L & G	Credit is allowed for only REL 480 or SGS 441
REL	482	Religion, Violence, and Conflict Resolution	Focuses on the ambiguous, often confounding role of religion in local and global conflict and the pursuit of peace.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only JUS 473, POS 473 or REL 482
REL	483	Religion and Science	Investigates the correlation between science and religion as an interdisciplinary study from a historical perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		
REL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		Pre-requisite: Minimum CUM GPA of 2.00
REL	486	Holocaust on Film	Examines how motion pictures recorded actual holocaust events and have depicted them since World War II.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: ENG 102, 105 or 108 with C or better; FMS 100 with C or better. Credit is allowed for only FMS 486 or REL 486
REL	490	Senior Thesis	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student.	N	RSC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		
REL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
REL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
REL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6	L	Prerequisite(s): Barrett Honors student
REL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		
REL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
REL	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-6		Prerequisite(s): Barrett Honors student
REL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-7		
REL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		
REL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-3		
REL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
REL	500	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	501	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on classical texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	502	Research Methods in Religious Studies	Explores the major themes and methods in the study of religion, with primary focus on contemporary texts.	N	SEM	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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REL	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	585	Philosophical and Spiritual Issues in Death and Dying	From Plato to Maimonides to Heidegger to Kubler-Ross, scholars, clinicians, and spiritual writers have recognized that attitudes about death and dying contribute to understandings of human existence. Recalling the ancient Socratic, biblical, and other spiritual traditions of the cura animarum (care for and cure of the soul) and joining contemporary post/secular conversations relevant to integration of body-mind-spirit, this course introduces basic concepts and practices of care ethics and spirituality. Focuses on relations among existential (ontological), therapeutic (psychosomatic), and spiritual (religious) dimensions of care. Theoretically, the course is inter-faith in approach, holistic in scope, and specialized in content. Practically, students examine real-life issues in care ethics and spirituality from multiple perspectives.	N	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3-9		Pre-requisites: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only MAS, PHI 550 or REL 585
REL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
REL	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
REL	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		
REL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
REL	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	603	Teaching World Religions	Seminar designed to prepare participants to teach a course similar to ASU's REL 100.	N	LEC	N	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	3		Pre-requisites: Phd or Masters student in Religious Studies
REL	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		
REL	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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REL	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
REL	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1		
REL	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Historical, Philosophical & Religious Studies, Sch	1-15		
ROM	101	Elementary Romanian	Basic grammar with intensive drills in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
ROM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	201	Intermediate Romanian	Continuation of ROM 101. Intensive drill of fundamentals in class and lab directed toward conversational fluency.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
ROM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	313	Romanian Composition and Conversation	Develops skills in written Romanian and correct oral expression. Must be taken in sequence with ROM 314.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ROM 201
ROM	314	Romanian Composition and Conversation	Continuation of ROM 313. Develops skills in written Romanian and correct oral expression. Must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ROM 313
ROM	411	Advanced Spoken and Written Romanian I	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ROM 101, 201, 313, 314 with C or better
ROM	412	Advanced Spoken and Written Romanian II	Improvement of spoken and composition skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: ROM 101, 201, 313, 314, & ROM 411 with C or better
ROM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
ROM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
ROM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
ROM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	101	Elementary Russian	Structural grammar and basic vocabulary. Introduces and reinforces aural/oral reading and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
RUS	102	Elementary Russian	Structural grammar and basic vocabulary. Introduces and reinforces aural/oral reading and writing skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
RUS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: Freshman standing; Maximum 25 hours
RUS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	201	Intermediate Russian	Systematic review of grammar. Develops vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	
RUS	202	Intermediate Russian	Systematic review of grammar. Develops vocabulary through reading and writing. Drill in aural/oral skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	
RUS	211	Basic Russian Conversation	Intensive aural/oral drill to supplement reading and grammatical skills acquired in RUS 101, 102, 201, and 202. Required of Russian majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	
RUS	212	Basic Russian Conversation	See RUS 211.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	
RUS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	311	Russian Composition and Conversation	Develops writing ability and oral expression.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: RUS 202 with C or better

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RUS	312	Russian Composition and Conversation	See RUS 311.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: RUS 202 with C or better
RUS	321	Foundations of Russian Literature	An in-depth study from Early Kievan religious writings and the medieval epic "The Lay of Igor's Host", to folklore and 18th Century literary movements in prose, poetry and drama.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
RUS	322	Scandals and Scoundrels: The Nineteenth-Century Russian Novel	An in-depth study of the Golden Age of Russian literature, including novels of Pushkin, Lermontov, Gogol, Khvoshchinskaia, Turgenev, Dostoevsky, Tolstoy, and Chekhov. Taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
RUS	323	Russian Literature and Revolution: The Twentieth Century	An in-depth study of 20th-Century Russian prose and poetry by Zinovieva-Annibal, Gorky, Bely, Babel, Mayakovsky, Platonov, Pasternak, Erofeev, Petrushevskaia, and other writers. Taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Pre-requisites: ENG 102, 105 or 108; Credit is allowed for only RUS or SLC 323
RUS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	411	Advanced Composition and Conversation I	Improves aural discrimination and self-expression in oral and written skills, emphasizing vocabulary building. Subject materials drawn from current post-Soviet-Russian publications.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: RUS 312 with C or better
RUS	412	Advanced Composition and Conversation II	See RUS 411.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: RUS 312 with C or better
RUS	421	Pushkin	Pushkin's poetry, plays, and prose fiction, including Eugene Onegin, The Little Tragedies, Tales of Belkin, Queen of Spades and The Captain's Daughter. Taught in English. Does not satisfy the Liberal Arts and Sciences language requirement for BA degree.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	
RUS	423	Dostoevsky and Tolstoy	An in-depth study of Dostoevsky's and Tolstoy's major works, including "Crime and Punishment", "Brothers Karamazov", and "Anna Karenina". Taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
RUS	424	Tolstoy and War and Peace in Russian Literature and Cinema	In English, course includes Tolstoy's War and Peace, the Sebastopol Tales, and Hadji Murad; Babel's Red Cavalry (Russian Civil War); and classic films of War and Peace, World War II, and the war in the Caucasus.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): ENG 102, 105, or 108 with C or better
RUS	425	Chekhov and Russian Drama	An in-depth study of Chekhov's major works, representative short stories and major plays, including "The Cherry Orchard" and "Three Sisters". Taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only RUS or THE 425
RUS	430	Russian Short Story	Detailed study of representative works of the Russian short story genre. Includes authors from both Imperial and Soviet Russia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: RUS 312 with C or better
RUS	439	Art in Exile: Vladimir Vladimirovich Nabokov	In English. The scandalous success of Lolita (1955) allowed Vladimir Nabokov to retire from teaching at Cornell University and move to Switzerland to devote himself to fiction, translation, criticism and lepidoptery. This was only one of the many metamorphoses that Nabokov, a Russian noble, underwent while in exile, moving from Russia to the Crimea, Cambridge UK, Berlin, Paris, Cambridge MA, Ithaca, Hollywood and finally Montreux. Examines the Russian roots of Nabokov's Russian (in translation) and American novels about exile: his first novel, Mary (1926), The Defense (1929), Glory (1932), and his tribute to 19th-century Russian literature, The Gift (1938), which he considered his greatest Russian novel. These are followed by Lolita (1955), Invitation of a Small Guest (1957) and Pale Fire (1962), his memoirs, Speak, Memory (1966), and some essays and short stories. Films include Lolita by Stanley Kubrick (1962) and Adrian Lyne (1997).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only RUS 439 or SLC 494 (Art in Exile: Vladimir Vladimirovich Nabokov)
RUS	440	Russian Mass Media	Explores various aspects of modern Russian life through printed mass media, especially Internet media sources, and helps to develop advanced spoken, listening, reading and written skills in Russian. Students work with live television news broadcasts and investigate the most important general sources of electronic information, including electronic newspapers and the main Russian Web sites on a wide range of issues such as culture and the arts, government and politics, business and economics, armed conflicts, and accidents and catastrophes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): RUS 211; 212 with C or better. Credit is allowed for only RUS 440 or RUS 494 (Russian Mass Media)
RUS	441	Survey of Russian Culture	Interplay of artistic, social, and political forces in the development of Russian culture from the Kievan period to the present. Exclusive use of Russian language source materials.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G & H	Pre-requisites: RUS 312 with C or better
RUS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
RUS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
RUS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
RUS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
RUS	495	Russian for Heritage Speakers	Generates professional proficiency by developing advanced communicative and written competency in standard literary Russian.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		
RUS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
RUS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
RUS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
RUS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SAO	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
SAO	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	196	Study Abroad Office Placeholder	Reserved for undergraduate participants in Study Abroad Office (SAO) Partnership and Exchange study abroad programs. This placeholder course remains on the student's academic record until the student's record is updated by SAO following the completion of the student's study abroad program. This course is then dropped and replaced with the ASU courses, credits, and grades equivalent to the coursework completed abroad. Students must register for at least the number of credits equivalent to full-time study at ASU (i.e., 12 hours during the fall and spring semesters, or 1-6 hours during the summer session). Students participating in an SAO Partnership program must register for the topic "SAO: Study Abroad Program"; participants in an SAO Exchange Program must register for the topic "SAO: Exchange Program." NOTE: This placeholder course is not an indication of the level of coursework or the total number of credits the student may complete abroad. Acceptance to an ASU Study Abroad Office program is required.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Office of the Provost	Office of the Provost	1-12		
SAO	494	International Program Courses	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SAO	596	Study Abroad Office Placeholder	Reserved for graduate participants in Study Abroad Office (SAO) Partnership and Exchange study abroad programs. This placeholder course remains on the student's academic record until the student's record is updated following the completion of the student's study abroad program. This course is then dropped and replaced with the ASU courses, credits, and grades equivalent to the coursework completed abroad. Students must register for at least the number of credits equivalent to full-time study at ASU (i.e., 9 hours during the fall and spring semesters, or 1-6 hours during the summer session). Students participating in an SAO Partnership program must register for the topic "SAO: Study Abroad Program"; participants in an SAO Exchange Program must register for the topic "SAO: Exchange Program." NOTE: This placeholder course is not an indication of the level of coursework or the total number of credits the student may complete abroad. Acceptance to a Study Abroad program is required.	N	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-18		
SAO	598	International Program Courses	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Office of the Provost	Office of the Provost	1-4		
SBS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SBS	200	Introduction to Social and Behavioral Sciences	Overview of the social and behavioral sciences, indicating their contributions to society and emphasizing interdisciplinary integration	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SBS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SBS	300	Careers in Psychology	Professional and academic careers in psychology, with a focus on both career and adult development. Provides opportunities to enhance self-assessment and evaluation strategies for both academic planning and postbaccalaureate professional pursuits while also addressing current issues that affect us at any stage of development.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): minimum 45 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SBS	301	Cultural Diversity	Critical analysis of the complexities of the cultural politics of difference in the contemporary United States. Through interdisciplinary and comparative study, examines a range of theoretical and public/popular cultural discourses about the cultural contributions, experiences, perspectives of, by, and about U.S. residents of diverse racial, ethnic, class, gender, sexual, and transnational origins or identities. Analyzes the social conditions and historical precedents that have shaped current diversity concepts and debates, deepening knowledge and understanding of multiple perspectives on these issues and their relevance to social and behavioral sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(L or SB) & C	Pre-requisites: Minimum Junior standing; ENG 102, 105 or 108 with C or better
SBS	302	Qualitative Methods	Basic methodological issues in the systematic application of qualitative analysis of human social life. Surveys range of qualitative methods used by social and behavioral scientists.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	303	Quantitative Methods	Concepts underlying design and implementation of quantitative research methods.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	304	Social Statistics I	Statistical techniques of the social and behavioral sciences.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	CS	
SBS	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
SBS	342	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB, SBS or SOC 342
SBS	356	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356
SBS	374	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only ASB, POS, SBS or SOC 374
SBS	389	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 389 or SBS 389 or SOC 389
SBS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SBS	404	Social Statistics II: Multivariate Analysis	Analysis of variance, multiple regression, dummy variable regression, path analysis, and related topics. Computer application to problem solving.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	CS	Pre-requisites: SBS 303 with C or better; SBS 304 with C or better
SBS	410	Topics in Identity/Difference	Topics which focus on race/ethnic, gender, sexual or cultural identity/difference. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	430	Topics in Power/Knowledge	Selected topics concerning the effects of political and social institutions on perceptions of politics and political culture. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	440	Family Studies	Theoretical frameworks for analyzing the development of family systems. Impact of social and economic conditions on family forms. May be repeated for credit when topics vary.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	447	Citizenship, Nationalism, and Identity	Historical and contemporary examination of citizenship as a form of belonging and fidelity, and the creation of good citizens within the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB, POS or SBS 447
SBS	450	Topics in Local/Global	Examines links among social, political, economic changes at local, national, global levels. May be repeated for credit when topics vary.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
SBS	460	Global Cities	This close look at megacities in the global south decisively challenges the outdated impression that the rest of the world's cities still lag way behind the U.S. and Europe. The social sciences' debate over "global cities" anchors our examination of the reorganization of metropolitan social space under impact of neoliberal globalization since the 1970s. Explores urban inequalities of slums and dreamworlds; compares vernacular and transnational styles of urbanism (in architecture, design, markets, consumerism, jobs, ads, ways of living); and asks how transnational flows of people, capital and culture have reconfigured ethnic relations and national identities rooted in global cities. Students become virtual transnational flâneurs, tacking between the slums and skyscrapers of global cities, and conduct guided research on a global megacity to investigate how the production of the global city changes the lived space and urban culture of local residents, and how they respond. We ask, whose city is it?	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum junior standing; Credit is allowed for only ASB 442 or SBS 460
SBS	480	Global Justice	Explores questions of justice that cross national borders, including delivery of foreign aid, immigration, and military intervention.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	Credit is allowed for only POS 480, SBS 480, CMN 598 (Global Justice), JHR 598 (Global Justice) or MAS 598 (Global Justice)
SBS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		

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SBS	490	Senior Thesis I	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. First part of a six-semester-hour sequence, followed by SBS 491.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	491	Senior Thesis II	Supervised, independent, interdisciplinary research and writing on an intellectual issue or social problem chosen by the student. Second part of a six-semester-hour sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SBS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
SBS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
SBS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SBS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-7	L	
SBS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
SBS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SCM	300	Global Supply Operations	Explores modern global integrated supply chain management. Covers traditional supply chain topics such as procurement, inventory management, operations, quality management, logistics and transportation. Also discusses issues related to sustainability, humanitarian logistics, ethical business practices and supply chain analytics in the context of evolving supply chains around the world. Students discover how business processes, performance metrics and modern supply chain IT tools aid in the management and growth of effective and efficient supply chains.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prereqs: WPC or Nonbus major with C or better; ACC 231, 232, 261; CIS 105, 236, CON 251; ECN 221, 231, IEE 380, STP 280; MAT 211, 266, 271; min 2.5 GPA OR Egr Mgmt major: CSE 110; IEE 380; MAT 266; Coreqs: ACC 241, 242, 271; Credit for OPM 301 or SCM 300
SCM	301	Introduction to Modern Global Supply Chain Management	Examines the purchasing, operations, and logistics functions from the customer, producer, and employer perspective.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): non-Business major; minimum 2.00 ASU cumulative GPA; minimum 56 earned hours. Credit is allowed for only SCM 300 or SCM 301
SCM	303	Honors Global Supply Operations	Provides an overview of supply chain management, specifically for Barrett Honors students. Explains principles and concepts from a managerial perspective and how they are used for decision making. Course topics include supply management, operations management and logistics management as applied to a supply chain system. Discusses planning, forecasting, performance measurement and improvement, and collaboration from the perspective of providing excellent customer service. Current topics of interest include the impact of sustainability, security and globalization on managing today's supply chains. Class methodology focuses on an open-forum discussion of principles and a detailed analysis of case studies.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey School of Business Honors student; ECN 221 or 231 with C or better; Pre- or corequisite(s): ACC 241 or 242 or 271
SCM	314	Analytics for Logistics	Focuses on practical tools for real-world decision making.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey BA or BS major; SCM 300 or SCM 303 with C or better
SCM	315	Business Decision Models	Introduces quantitative tools used to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisites: SCM 300 or SCM 303 with C or better
SCM	344	Applied Logistics Management	Presents a synthesis of the principles in logistics (and supply chain) activities emphasizing the operation and integration of activities such as transportation, inventory, warehousing, facility location, customer service, packaging and materials handling.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre- or corequisite(s): SCM 314 with C or better if completed
SCM	345	Logistics Management	Explores the many areas of supply chain management; in each case the logistics view is described and understood. Emphasizes movement of product/material, information and money in each section.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey Supply Chain Management BS major; Pre- or corequisite(s): SCM 315 with C or better if completed
SCM	354	Procurement of Services	Management of the supply function for logistics-based organizations. Allows students to better understand the nature of procuring a service, contracting that service and establishing appropriate performance metrics.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): SCM 300 or SCM 303 with C or better

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SCM	355	Supply Management	Management of the supply function, including organization, procedures, supplier selection, quality, inventory decisions, and price determination.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3	L	Pre-requisites: W.P. Carey Supply Chain Management BS student; SCM 300 or 303 with C or better
SCM	385	Business and Sustainability I	First of two related courses; provides a general overview of sustainability topics that are important to business today with a focus on consumer products and services and the social and environmental impact of the organizations that provide them.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): minimum 60 hours; SCM 300 or SOS 110 with C or better; Credit is allowed for only SCM or SOS 385
SCM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		
SCM	432	Planning and Control Systems for Supply Chain Management	At the core of all supply chain management processes and essential to the determination and direction of the flow of resources needed to produce goods and services. Uses Microsoft Excel for supporting analysis. Includes processes and methods to forecast, manage inventory, plan needed capacity, determine resources needed for production, determine priority and sequencing of activities, perform master scheduling and material requirements planning.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey Supply Chain Management BS major; SCM 315 with C or better; SCM 345 with C or better; Pre- or corequisite(s): SCM 355
SCM	440	Quality Management/Measurement	Provides a broad introduction to quality management frameworks and tools, with an emphasis on supply chain and operations management issues. Introduces modern quality management approaches including Total Quality Management, Lean and Six Sigma. Students learn how to define quality for a product or service, develop appropriate measurement systems, and apply statistical and systems thinking to control and improve the underlying processes. Covers quality awards and performance excellence programs and quality management systems such as the ISO 9000 family of standards.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey Business (Retail Management) BA or Supply Chain Management BS major; SCM 300 or 303 with C or better
SCM	445	Advanced Logistics Management	Logistics processes account for approximately 10% of U.S. GDP; therefore, the efficient and effective execution of these processes is critical to supply chain managers in corporations, government entities and nonprofit organizations. Includes an overview of the processes involved, a survey of the institutions and players in the processes, and the analytical tools to evaluate their efficiency and effectiveness.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): SCM 344 with C or better
SCM	455	Research and Negotiation	Supply management ensures an organization has resources (i.e., materials, services, equipment) to deliver on promises to stakeholders. This happens by strategically designing supply systems for categories of spend and creating favorable supply agreements. A real-world class project and a real-time contract negotiation simulation helps students understand (1) the relationship among organizational, supply management and purchase category objectives; (2) frameworks and tools to analyze the supply conditions of a category, specifically spend analysis, market/demand analysis and price/cost analysis; (3) how to develop category strategies to ensure adequate and highest value resource supply into the future; (4) the translation of category strategies into manageable supply contracts; and (5) the requisite skills and processes for planning and executing successful contract negotiations.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): W.P. Carey Supply Chain Management BS major; SCM 355 with C or better
SCM	463	Global Supply Chain Management	With increased globalization and offshore sourcing, global supply chain management is becoming an important issue for many businesses. Like traditional supply chain management, the underlying factors behind the trend are reducing the costs of procurement and decreasing the risks related to purchasing activities. The big difference is that global supply chain management involves a company's worldwide interests and suppliers rather than simply a local or national orientation. Enables students to appreciate the challenges of operating supply chains across international boundaries including how to manage various salient issues including sociocultural, economic, technological and political factors that may shape decisions relating to sourcing and moving goods and services across different geographical boundaries.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3	G	Prerequisite(s): W.P. Carey BA or BS major; SCM 300 or 303 with C or better
SCM	479	Supply Chain Strategy	Discusses the management of supply chains at the strategic level and from a systems point of view. Views key supply chain functions, drivers and metrics within an integrated system. Topics include network design, innovation, sustainability, coordination and management of the critical areas of the supply chain. Class methodology focuses on an open-forum discussion of supply chain strategy and a detailed analysis of case studies. Student teams investigate and report on current news and trends in supply chain management.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3	L	Prerequisite(s): W.P. Carey Supply Chain Management BS major; SCM 355 with C or better; SCM 432 with C or better
SCM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	485	Business and Sustainability II	Second of two related courses focusing on the environmental, social and economic dimensions of sustainable technologies and exposes students to a variety of related concepts and theories. Describes technology hotspot analysis, life cycle assessment and a variety of models of technology forecasting and diffusion.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): SCM 385 or SOS 385 with C or better; Credit is allowed for only SCM 485 or SCM 494 (Business and Sustainability II) or SOS 485

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SCM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-6	L	Prerequisite(s): Barrett Honors student
SCM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Pre-requisite(s): Minimum 60 hours
SCM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-6		Prerequisite(s): Barrett Honors student
SCM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-7		
SCM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-3		
SCM	502	Operations and Supply Management	Contemporary management issues, including environmental, project, and supply chain management; new product development; quality control; TQM.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey MBA students
SCM	511	Integrated Supply Chain Management	Management of sourcing, operations, and logistics as an integrated process.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	515	Decision Models for Supply Chain Management	Decision modeling approaches for supply chain management such as optimization, simulation, and decision analysis. Emphasizes spreadsheet-oriented approaches.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	516	Introduction to Applied Analytics	Provides a solid foundation and deeper understanding of the use of quantitative modeling tools and techniques to solve problems faced in modern supply chains. Uses Excel workbooks to implement the appropriate quantitative methods, including forecasting demand, determining the capacity of a manufacturing line and the cycle times of parts being processed on the line, and methods to manage inventory.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): Business Analytics MS major
SCM	517	Data-Driven Quality Management	Addresses the use of analytics tools and techniques to enhance the ability of quality management approaches to improve processes. Introduces modern quality management approaches including six sigma and design for six sigma. Covers the define, measure, analyze, improve and control (DMAIC) improvement cycle: the core process used to drive six sigma projects. DMAIC refers to a data-driven improvement cycle used for improving, optimizing and stabilizing business processes and designs. Provides an analytics roadmap to help users work through the DMAIC problem-solving process.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): Business Analytics MS major
SCM	518	Analytical Decision Modeling I	Covers the skills and knowledge necessary for mastery of the use of quantitative modeling tools and techniques to support a variety of business decisions. Deterministic optimization techniques, including linear programming, nonlinear programming, integer programming, network models and a brief introduction to metaheuristics. Covers the use of these models for a variety of common business problems. Requires implementation of these models using Excel and standalone software. Studies how to ensure that these solutions work in a wide variety of situations (what-if analysis).	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): Business Analytics MS major
SCM	519	Analytical Decision Modeling II	Addresses the skills and knowledge necessary to model situations where uncertainty is an important factor. Covers models including decision trees, queuing theory, Monte Carlo simulation, discrete event simulation and stochastic optimization. Uses these models for a variety of common business problems. Requires implementation of these models using Excel and stand alone software. Studies how to ensure that these solutions work in a wide variety of situations (what-if analysis). Describes each of these methods in detail.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Prerequisite(s): Business Analytics MS major
SCM	520	Strategic Procurement	Applies the principles, philosophies, and processes of supply management to the purchasing management process on a global basis and to facilitate the continuous improvement of the purchasing management system.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisites: SCM 502 with C or better
SCM	521	Supply Management and Negotiation	Selecting, developing, and executing appropriate sourcing strategies and processes.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	532	Supply Chain Cost and Design Issues	Strategic design and development of supply chains. Focus on cost-management tools applied to supply chain design and supplier management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	541	Logistics in the Supply Chain	Critical issues for customer perception of supply chain performance, including inventory planning, transportation, warehousing, information technology, and integrated logistics service.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	2-4		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	542	Logistics, Globalization, and Economic Development	Global trade, global networks and the influence those networks have on economic development worldwide. Exposes geographic, economic and sociopolitical perspectives on these issues and invites students to draw conclusions from an increasingly informed perspective.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisite: SCM 502 and 541; Co-requisite: SCM 515
SCM	545	Cases in Global Logistics	Capstone experience for students in the MS in Global Logistics program. Synthesizes learnings from previous courses and applies this learning to specific issues that have a major global logistics component.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	3		Pre-requisite: SCM 502, 515, 541 and 542
SCM	551	Operations Planning and Execution	Managing the conversion of raw materials to finished goods, including scheduling, work-in-process inventory management, and postponement/customization.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student

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SCM	581	Management of Technology and Innovation	Technology life cycles, technology forecasting, new product development process, innovation teams, innovation best practices.	N	LEC	N	OPT	W.P. Carey School of Business	Department of Supply Chain Management	2-4		
SCM	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	N	LEC	N	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SCM	587	Project Management	Planning, scheduling, and controlling of projects in R & D, manufacturing, construction, and services. Project selection, financial considerations, and resource management.	N	LEC	N	GNA	W.P. Carey School of Business	Department of Supply Chain Management	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SCM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		
SCM	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	W.P. Carey School of Business	Department of Supply Chain Management	1-12		Pre-requisites: W.P. Carey degree seeking Graduate student
SCM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	N	Z3	W.P. Carey School of Business	Department of Supply Chain Management	1		
SCM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	W.P. Carey School of Business	Department of Supply Chain Management	1-15		
SCN	205	Introduction to Tropical Ecology: A Cultural Exchange	To better understand the astonishing diversity of tropical ecosystems, students work together to investigate the ecology and cultures of Neotropical ecosystems: how they were formed and how they are changing.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Credit is allowed for only SCN 205 or SCN 305 or SCN 505 or SCN 294 (Costa Rican Language, Culture, Society) or SCN 294 (Tropical Ecosystems of Costa Rica)
SCN	209	Introduction to Environmental Education Project	Covers topics in environmental education that assist students with being able to learn about and investigate their environment in order to make intelligent and informed decisions.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		
SCN	250	Physical Science by Inquiry	Laboratory-based development of concepts and reasoning skills in the physical sciences. Emphasizes open-ended investigations, dialogues between the instructor and individual students, and small group discussions. Helps students think of physical science as an active process of discovery in which they can participate. Helps preservice teachers understand inquiry and develop inquiry skills. Liberal arts students gain experience in the scientific process. Useful for students who wish to improve their science preparation before taking further science courses. Forms foundation for scientific literacy.	N	LAB	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	4	SQ	Credit is allowed for only SCN 250 or 294 (Physical Science by Inquiry)
SCN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SCN	300	Foundations of Environmental Education	Introduces environmental education, including the philosophy, historical development, resource identification, curriculum development, field trips and other activities designed to provide the structure and development of the field of environmental education. Explores the antecedents to the present-day field and connects the field of environmental education to curricular programs that are an outgrowth of perceived and actual need in the field of environmental education.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
SCN	301	Ecology and Natural History of the Sonoran Desert	Overview of the plants, animals, and geology of the desert ecosystem based on the Arizona K-12 Science Standards. Provides students with basic knowledge of the Sonoran Desert characteristics and its relationship to the total school curriculum.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
SCN	302	Outdoor Education	Develops a meaningful framework for those who wish to enhance their skills in teaching about outdoor education and personal knowledge of the desert. Whether it be for personal challenge, leadership training or professional certification, outdoor education offers all participants the experience, inspiration and encouragement to live more sustainable lifestyles. The best thing you can do for the natural environment is to discover it then show it to others.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SCN	303	Environmental Education Internship	Provides opportunities to learn more about natural sciences and local history; outdoor education and field trip course facilitation and training; individual and group development; facility care and maintenance including landscaping, gardening and carpentry; and the restoration and maintenance of the grounds and teaching materials. Supports and/or develops education projects and programs as outlined by the locations' Educational Outreach office. Various other tasks include: field trip coordination, development of curriculum and classroom materials, hands-on fieldwork, school outreach, off-site outreach events support, and Outdoor Education event support.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-2		Prerequisite(s): Minimum 45 hours
SCN	304	Sonoran Desert Flora	Plants and plant communities support much of the diversity of life in the Sonoran Desert and the surrounding regions. Covers the fundamentals of ecology from the perspective of plants including population, community and ecosystem ecology. Also includes identification and classification of plants and plant communities in the Sonoran Desert region. Incorporates practical field exercises designed to acquaint the student with plant community analysis, classification and description.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours
SCN	305	Tropical Ecology: A Cultural Exchange	To better understand the astonishing diversity of tropical ecosystems. Investigates the ecology and cultures of Neotropical ecosystems: how they were formed and how they are changing. Introduces language, culture and society of people and communities in tropical countries of Central and South America. Also examines cultural perspectives and beliefs. Focuses on four areas: (1) background on history and present day society of Central or South America, introductory conversational Spanish for interacting with Central and South Americans; (2) living in Central and South America, community, family and education: visiting families and private and public schools; (3) debriefing and reflecting on Central and South America language and culture and (4) the location of Central and South America countries, the rain forests' impact on the world, climate, cultures and contributions to science.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only SCN 305 or SCN 494 (Tropical Ecosystems of Costa Rica)
SCN	307	Learning from Nature: Biomimicry and STEM	Introduces biomimicry, an emerging discipline that seeks to learn from nature to solve human problems. "Biomimicry" (from bios, meaning life, and mimesis, meaning to imitate) is a new discipline that studies nature's best ideas and then imitates these designs and processes to solve human problems. With an emphasis on getting outside and exploring the land around, focuses on observing, appreciating and learning from nature and natural systems in our local environment.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only SCN 307 or SCN 494 (Learning from Nature: Biomimicry & STEM)
SCN	308	Urban Environmental Education	Environmental education and educators translate the complex web of earth systems science, sustainability, environmental issues and environmental change for the public. Provides opportunity to understand and experience the interface between humans and the planet to facilitate ecological literacy and ecologically responsible behavior. Assists students in becoming more sensitive to and aware of earth systems and environmental change. Also provides the knowledge, skills and motivation for understanding sustainable living in the urban environment.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours
SCN	400	Sustainability Science for Teachers	Explores the challenges of sustaining human health and well-being on Earth due to human exploitation of natural resources. Seeks sustainable solutions through science, technology and society acting at global and local levels. Covers diverse approaches used by scientists, scholars and practitioners to study and assess human-environment interactions pertaining to sustainability challenges and solutions. Focuses on how to teach sustainability concepts in the K-8 classroom.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only SCN 400 or SCN 401 or SCN 494 (Sustainability for the Elementary Teacher)
SCN	401	Sustainability Science, Technology, and Society	Explores the challenges of sustaining human health and well-being on Earth due to human exploitation of natural resources. Prepares students to think and engage critically with the world around them. Seeks sustainable solutions through science, technology and society acting at global and local levels. Uncovers diverse approaches used by scientists, scholars and practitioners to study and assess human-environment interactions pertaining to sustainability challenges and solutions.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): non-Teacher Preparation student; minimum junior standing; Credit is allowed for only SCN 400 or SCN 401 or SCN 494 (Sustainability Science, Technology, and Society)
SCN	411	Science in Elementary Schools	Science education standards, curriculum, instructional and assessment strategies for all children.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 411 or SCN 411
SCN	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
SCN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SCN	501	Ecology and Natural History of the Sonoran Desert	Gives students an opportunity to study the common plants and animals of the southwest Sonoran Desert. Study also includes their distribution, adaptations, behavior and ecology. Also includes the physical geography and geology of the region.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SCN	502	Outdoor Education	Ignites question, wonder and reflection related to the ways we educate ourselves and the next generations as stewards of this planet. Through lived experiences, classroom exercises, relevant readings, individual and group projects and activities, students gain a wider and deeper appreciation of ecological, sustainability and science education. Explores the historical and philosophical foundations of the diverse emphases and uses of outdoor, experiential education and place-based education.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	504	Sonoran Desert Flora	Plants and plant communities support much of the diversity of life in the Sonoran Desert and the surrounding regions. Covers the fundamentals of ecology from the perspective of plants including population, community and ecosystem ecology. Also includes identification and classification of plants and plant communities in the Sonoran Desert region. Incorporates practical field exercises designed to acquaint the student with plant community analysis, classification and description.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	505	Tropical Ecology: A Cultural Exchange	To better understand the astonishing diversity of tropical ecosystems, students work together to investigate the ecology and cultures of Neotropical ecosystems: how they were formed and how they are changing.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	507	Learning from Nature: Biomimicry and STEM	Offers an introduction to biomimicry, an emerging discipline that seeks to learn from nature to solve human problem. "Biomimicry" (from bios, meaning life, and mimesis, meaning to imitate) is a new discipline that studies nature's best ideas and then imitates these designs and processes to solve human problems. With an emphasis on getting outside and exploring the land, focuses on observing, appreciating and learning from nature and natural systems in our local environment.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	508	Urban Environmental Education	Environmental education and educators translate the complex web of earth systems science, sustainability, environmental issues and environmental change for the public. Gives students an opportunity to understand and experience the interface between humans and the planet to facilitate ecological literacy and ecologically responsible behavior. Assists in becoming more sensitive to and aware of earth systems and environmental change and also provides the knowledge, skills and motivation for understanding sustainable living in the urban environment.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	509	Environmental Education Project	Covers topics in environmental education that assist students with being able to learn about and investigate their environment in order to make intelligent and informed decisions.	Y	LEL	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SCN	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	588	Solar Energy Colloquium	Discussion-oriented class focusing on topical issues in solar energy. Knowledge of thermodynamics or electric power systems is recommended to succeed in this course.	N	LEC	N	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	3		Prerequisites: Graduate Engineering major; credit is allowed for only MAE 588 or SEC 588
SEC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		
SEC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		
SEC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-4		
SEC	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Enrgy	1-12		

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SEC	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report or publication. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Energy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Energy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	784	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Energy	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SEC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Energy	1-12		
SEC	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	School for Engineering of Matter,Transport & Energy	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	111	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1		
SED	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SED	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SED	322	Classroom Leadership in Secondary Schools	Theories and practices for managing and maintaining secondary classrooms for learning; strategies for home/school communication; and leadership roles for teachers.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Prerequisite(s): admission to the Professional Program
SED	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): admission to the Professional Program
SED	396	Clinical Experience I	Applies course content in middle/secondary setting grades 6-12. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): admission to the Professional Program
SED	397	Clinical Experience II	Applies course content in a middle/secondary school setting grades 6-12. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	0-1		Prerequisite(s): admission to the Professional Program
SED	398	Clinical Experience	Applies course content in middle/secondary setting grades 6-12. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): admission to the Professional Program
SED	464	Middle-School Curr/Org	Educational implications of the characteristics of a diverse adolescent population on middle-level organization and components, curriculum, instructional strategies, assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SED	478	Student Teaching: Secondary Education (Grades 6-12)	Student teaching in middle/secondary setting grades 6-12: synthesized experience in curriculum, instruction, assessment and classroom management.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3-15		Prerequisite(s): admission to the Professional Program
SED	480	Special Methods of Teaching Social Studies	Interdisciplinary approaches; production and collection of materials.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SED	481	English Teaching Methods for Secondary Schools	Instructional, organizational, and presentation methods for English in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SED	482	Science Teaching Methods for Secondary Schools	Methods of instruction, organization, and assessment of science for secondary and middle grade schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SED	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): admission to the Professional Program
SED	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SED	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
SED	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SED	496	Clinical Experience III	Applies course content in middle/secondary setting grades 6-12. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1		Prerequisite(s): admission to the Professional Program
SED	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): admission to the Professional Program
SED	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	501	Introduction to Effective Instruction	Introductory course for certification program in secondary education. Emphasizes developing basic classroom management, instruction, and evaluation. Includes a field assignment of at least 120 hours.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	511	English/Language Arts Teaching Methods in Secondary School	Instructional, organizational, and presentation methods. This course, which focuses on the general content and pedagogy of Secondary English/Language Arts, is aligned directly with the State of Arizona Professional Teaching Standards and NCTE standards for teaching secondary English.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): enrolled in the MAC or InMAC program
SED	512	Math Teaching Methods for Secondary Schools	Examines secondary school curricular material and analyzes instructional devices. Teaching strategies, evaluative techniques, diagnosis, and remediation and problem solving.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): enrolled in the MAC or InMAC program
SED	513	Science Teaching Methods for Secondary School	Methods of instruction, organization, and assessment of science for secondary and middle grade schools. This course, which focuses on the general content and pedagogy of secondary science, is aligned directly with the State of Arizona Professional Teaching Standards and INTASC Principals.	N	LEL	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): enrolled in the MAC or InMAC program
SED	520	Science Methods for Early Adolescence	Examines the interrelationships between theory and practice in teaching science.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	522	Secondary School Curriculum Development	Social processes, issues, principles, patterns, and procedures in curriculum development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student
SED	533	Middle/Secondary Instruction, Management, and Assessment	Analyses of procedures, methods, techniques, and experiments in teaching in secondary schools.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Must be a graduate student
SED	544	Creating Classroom Climates	Emphasizes classroom management and instructional strategies for establishing positive classroom climates that facilitate learning. Includes field experience.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	547	Teaching Mathematics in the Middle Grades (5-9)	Strategies and methodologies to teach mathematics in the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	560	Teaching Mathematics with Technology	Strategies and methodologies to teach mathematics with technology, focusing mainly on the middle grades (5-9).	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	561	Teaching Science with Technology	Strategies and methodologies for effective technology-enhanced science classrooms and improved learning. Models student-driven inquiry teaching throughout the course.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	567	Clinical Experience I	Applies course content in middle/secondary setting grades 6-12. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	576	Clinical Experience II	Applies course content in middle/secondary setting grades 6-12. Emphasizes observation, pupil management, planning and delivering instruction, and assessment.	Y	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	578	Student Teaching: Secondary Education	Student teaching in middle/secondary setting grades 6-12: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	579	Apprentice Teaching: Secondary Education (Grades 6-12)	Apprentice teaching in secondary school classrooms. Synthesized experience in classroom management, curriculum, instruction and assessment. Must be taken four times for a total of 12 semester hours.	N	PRA	Y	YGB	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	2-3		Prerequisite(s): degree- or nondegree-seeking graduate student
SED	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: postbaccalaureate undergraduate or graduate student (degree seeking or nondegree seeking)
SED	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SED	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SED	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SEM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-3		
SEM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
SEM	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		
SEM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-4		
SEM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		
SEM	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		
SEM	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-12		

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SEM	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-15		Pre-requisites: Science & Engr of Materials PhD students
SEM	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Materials Science and Engineering Program	1		
SEM	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Materials Science and Engineering Program	1-15		Pre-requisites: Science & Engr of Materials PhD students
SER	100	Object-Oriented Software Development	Introduces problem solving with a state-of-the-art programming language. Expressions, statements, basic control flow and methods. Data, data aggregation and usage. Uses a structured personal software development process to implement solutions representative of common computing applications. Uses development kits for some course activities.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		
SER	101	Programming for Information Technology	Introduces problem solving with a state-of-the-art programming language. Expressions, statements, basic control flow and methods. Data, data aggregation and usage. Uses a structured personal software development process to implement solutions representative of common computing applications. Students create several small programs.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		
SER	102	Object-Oriented Programming for Information Technology	Introduces object-oriented programming, classes, objects, interfaces, encapsulation, inheritance, introduction to object-oriented design and object modeling, introduces data structures and collections. Project-based.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CSE 100 or CSE 110 or CST 100 or SER 100 or SER 101 with C or better
SER	105	Personal Computing Environment	Introduces computing devices and their ethical use for creativity, communication and organizing information; utilizes a range of devices and applications; program-ability for the end-user; approaches for organizing, sharing, securing and communicating information; managing a secure computing environment.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		
SER	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-3		
SER	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
SER	200	Core Data Structures with Object Oriented Programming	Design, implementation and use of core data structures; object-oriented software development: design, analysis and programming.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 100 or SER 100 with C or better; Credit is allowed for only ACO 102 or CSE 205 or CST 200 or SER 200
SER	215	Software Enterprise: Personal Process	Software engineering; personal software processes for individual professionalism; time and defect estimation, yield, and productivity. Software tools. Project based.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 200 or SER 200 with C or better
SER	216	Software Enterprise: Testing and Quality	Project-centered course covering testing and quality in software engineering; concepts, tools, and methods in testing and quality management; teamwork and communication in software engineering. Project based.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Pre- or corequisite(s) with C or better if completed: SER 215 and SER 222
SER	221	Programming Languages and Their Execution Environment	Introduces the fundamental programming language concepts of data, type, control, abstraction, and structure; software development and execution environments; programming language paradigms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 200 or SER 200 with C or better; Credit is allowed for only CST 220 or SER 221
SER	222	Design and Analysis of Data Structures and Algorithms	Data structures and related algorithms for their specification, complexity analysis, implementation and application. Sorting and searching. Professional responsibilities that are part of program development, documentation and testing.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 200 or SER 200 with C or better; MAT 243 with C or better; Credit is allowed for only CST 230 or SER 222
SER	232	Computer Systems Fundamentals I	Logic design, number systems and arithmetic, boolean algebra; digital systems components, and hardware description languages.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3	CS	Pre- or corequisite(s): CST 100 or SER 100 or SER 101; MAT 117, 170, 171, 210, 251, 265, or 270 with C or better if completed or Mathematics Placement Test score of 50% or higher; Credit is allowed for only CST 150 or SER 232
SER	250	Microcomputer Architecture and Programming	Microcomputer architecture, instruction set, assembly language programming and debugging, I/O considerations, memory interface, peripherals and busses, exception/interrupt handling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 100 (or SER 100) with C or better; CST 150 or SER 232 with C or better
SER	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SER	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	Z1	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student
SER	315	Software Enterprise: Design and Process	Software process from the design perspective. Engineering design process, user-centered design and software safety design. User interface, software architecture and design patterns and software design constraints.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 230 or SER 222 with C or better; Pre- or corequisite(s): SER 215 with C or better if completed
SER	316	Software Enterprise: Construction and Transition	Best practices in software construction in the context of a team project, including refactoring, defensive programming, unit testing, and configuration and release management.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre- or corequisite(s): CST 315 or SER 315 with C or better if completed
SER	321	Principles of Distributed Software Systems	Design and implementation of distributed software components; process and memory management underlying software applications; sockets, protocols, threads, XML, serialization, reflection, security, and events.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 222 with C or better; Pre- or corequisite(s): SER 334 (or SER 234) with C or better if completed; Credit is allowed for only CST 420 or SER 321
SER	322	Principles of Database Management	Fundamental methods in modeling and managing data-oriented systems. Relational, object, and hierarchical data modeling techniques. Query languages including SQL. Semantics of transaction processing. Database system architectures including cloud-based, client-server, and embedded databases. Security and privacy issues. Modern trends in data management including managing data on the cloud, unstructured data type management, data mining, and business analytics, and NoSQL data management platforms.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 222 with C or better; Credit is allowed for only CST 433 or CST 598 (Principles of Database Management) or IFT 433 or SER 322
SER	332	Introduction to Graphics and Game Development	Foundations of graphics as used in modern rendering and basic principles of the game development pipeline. Graphics and math concepts and their application in games, graphics and visualization.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 200 or SER 200 with C or better
SER	334	Operating Systems and Networks	Fundamentals of operating systems, process management, scheduling, synchronization techniques and file management. Network technology, topologies, protocols, application control; network and operating system security.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 230 or SER 250 with C or better; Pre- or corequisite(s): SER 222 with C or better if completed
SER	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
SER	401	Computing Capstone Project I	First half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier coursework.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Applied Computer Science BS or Software Engineering BS major; senior standing or postbaccalaureate; CST 316 or SER 316 with C or better
SER	402	Computing Capstone Project II	Second half of a comprehensive project experience based on cumulative knowledge and skills gained in earlier coursework.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 401 with C or better
SER	415	Software Enterprise: Inception and Elaboration	Third course in the four-course enterprise sequence. Students perform inception (project launch) and elaboration (requirements analysis) activities in project teams.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3	L	Pre- or corequisite(s): CST 316 or SER 316 with C or better
SER	416	Software Enterprise: Project and Process Management	Project-centric course focusing on applying software process, project management, and technical leadership. Final course in the software enterprise sequence.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 415 or SER 415 with C or better
SER	421	Web-Based Applications and Mobile Systems	Distributed Web and mobile applications, their design, architecture and supporting technologies; user-interaction concepts and technologies; design and implementation of software servers for Web and mobile systems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 321 with C or better or graduate Software Engineering student
SER	422	Web Application Programming	Design and implementation of Web application. Languages, frameworks, technologies, tools and methods used to realize Web client and server solutions. Approaches for securing, testing as well as determining the quality and reliability of Web applications.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 433 or IFT 433 or SER 322 with C or better; SER 421 with C or better OR graduate Software Engineering student
SER	423	Mobile Systems	Mobile applications, their architecture, design, and supporting technologies; mobile device operating systems and frameworks; synchronizing mobile applications, support for inter-application data-exchange; accessing and manipulating special-purpose device capability such as location, orientation and input modality. Practices for securing mobile runtimes and optimizing run-time performance.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 421 with C or better or graduate Software Engineering student
SER	431	Advanced Graphics	Topics in real-time rendering and graphics hardware. Uses graphics processing unit hardware to implement rendering of higher-order surfaces and special effects.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 332 with C or better or graduate Software Engineering student
SER	432	Game Engine Architecture	Functional requirements of a modern game engine architecture. Students work in teams to develop advanced features for a game engine.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 332 with C or better or graduate Software Engineering student
SER	450	Computer Architecture	Price/performance analysis, instruction set design, RISC/CISC, processor design and implementation, pipelining, instruction-level parallelism, memory hierarchy, storage and I/O systems.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 250 or SER 250 with C or better

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SER	456	Embedded Interfaces: Sensors and Actuators	Electromechanical sensors and electrical actuators, analog-to-digital and digital-to-analog conversion, hardware and software interfaces for embedded systems.	N	LEL	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 150 or SER 232 with C or better; CST 200 or SER 200 with C or better OR graduate Software Engineering student
SER	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		
SER	486	Embedded C Programming	Programming concepts for embedded systems. Interfacing and controlling LED, LCD, keypads, buttons. Embedded OS concepts. Timers and interrupts. Serial communication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 222 with C or better; SER 334 with C or better OR graduate Software Engineering student
SER	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-6		Prerequisite(s): Barrett Honors student
SER	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Software Engineering	1-6	L	Prerequisite(s): Barrett Honors student
SER	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		
SER	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-7		
SER	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	IND	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-3		
SER	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	501	Advanced Data Structures and Algorithms	Advanced algorithms and how they are effectively applied to solve problems. Algorithm design, analysis, classification, optimization, and application. Practice implementing and employing algorithms to solve realistic problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Fulton Engineering graduate student
SER	502	Emerging Languages and Programming Paradigms	Emerging programming languages, their design, description, implementation, and advanced features; API design, including facilities for creating secure distributed applications, facilities supporting software services, naming and composition; language paradigms and the resulting implications on execution; run-time systems and storage management; approaches to compilation and execution. Requires ability to program in an object-oriented programming language and knowledge of data structures, algorithms, and analysis.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Fulton Engineering graduate student
SER	515	Software Enterprise: Inception and Elaboration	Project-centric course focusing on the relationship of software processes to entrepreneurship and business processes; requirements specification and requirements analysis; study of the context and evolution of the software enterprise. The first of a two-semester sequence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Master of Computing Studies or Software Engineering MS student
SER	516	Software Enterprise: Project and Process Management	Project-centric course focusing on software process, project management, and technical leadership. Study of the context and evolution of software enterprise project management. The second of a two-semester sequence.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 515
SER	517	Software Factory I	First in a two-semester capstone culminating experience for graduate students. Student teams work through concurrent product and service offering lifecycles in a project context. Covers concepts including opportunity assessment, risk management, technology evaluation, licensing models, resource planning, delivery models such as hosted, turnkey, and Software as a Service (SaaS), technology acquisition, outsourcing, governance, quality assurance, software certification, and continuous process improvement.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Masters of Computing Studies or Software Engineering MS student
SER	518	Software Factory II	Second in a two-semester capstone culminating experience for graduate students. Student teams work through concurrent product and service offering lifecycles in a project context. Covers concepts including opportunity assessment, risk management, technology evaluation, licensing models, resource planning, delivery models such as hosted, turnkey, and Software as a Service (SaaS), technology acquisition, outsourcing, governance, quality assurance, software certification, and continuous process improvement.	N	LEL	N	GNA	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): SER 517

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SER	520	Computer Architecture	Basics of computer architecture. RTN, RISC, CISC concepts; computer arithmetic; ALUs; memory systems; I/O.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Fulton Schools of Engineering student; CST 364 (CET 364) OR Graduate, Non-Degree, or Post Bacc student
SER	533	Database-Centric Enterprise Applications Development	Solutions for enterprise software systems based on relational database technology. Persistence solutions in middleware frameworks. O/R, XML, and scalability issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0; CST 433
SER	540	Internet-Enabled Embedded Devices	Accessing hardware devices through Internet, including Applets, HTTP, custom byte streams, XML-RPC, SOAP. Building network-based applications that interface hardware.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): CST 420 with C or better
SER	552	Digital Systems Design	Digital system design techniques and applications.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); CST 452
SER	554	Distributed Computing	Topics in distributed systems, including communications, distributed operating systems, fault-tolerance, and performance issues.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	556	Distributed Applications for Windows Platforms	Distributed Web-based applications using Windows frameworks such as .NET. Essential components, XML, remoting, Web services, windows services, user interfaces.	N	LEC	N	OPT	Ira A. Fulton Engineering	Software Engineering	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); CST 420 with C or better
SER	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Minimum University Cum GPA 3.0
SER	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		
SER	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
SER	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Pre-requisite: Graduate student (degree seeking or nondegree seeking)
SER	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Ira A. Fulton Engineering	Software Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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SER	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Software Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Software Engineering	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Software Engineering	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SER	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Software Engineering	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	100	Introduction to Exploration	Science and engineering of Earth, solar system, and space exploration. Experimental design, engineering design; teaming; the professions of science and engineering.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	CS	Prerequisite(s): Mathematics Placement Test with a score of 50% or higher or Pre- or corequisite(s): MAT 170 (or MAT 171, 210, 251, 265 or 270) with C or better if completed

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SES	106	Habitable Worlds	Are we alone in the Universe? If so, why? If not, where are our cosmic cousins? Such questions, once the domain of science fiction, are on the verge of being answered with science facts. Astronomers are discovering planets around other stars. Planetary scientists are exploring the worlds in our solar system. Biologists are unlocking the secrets of metabolism and evolution. Geoscientists are determining how the Earth supports life. And as we struggle to build a sustainable future for ourselves, all of us are finding out how technologically advanced civilizations rise and how they might fall. This course surveys these topics. In the process, students master basic concepts from across the major areas of science and learn what makes the Earth a habitable world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4	SQ	
SES	111	Exploration of Science Teaching	General overview of the profession of the science educator with a look at student, teachers, curricula, and classroom techniques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1		
SES	121	Earth, Solar System, and Universe I	Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth. Both SES 121 and SES 123 must be taken together to secure SQ General Studies credit.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3	SQ	Prerequisite(s): Mathematics Placement Test with a score of 50% or higher or pre- or corequisite(s): MAT 170 (or MAT 171, 210, 251, 265 or 270) with C or better if completed
SES	122	Earth, Solar System, and Universe II	Basic principles of geology and astronomy combined to examine the history of the universe, the solar system, and Earth.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): SES 121 with C or better
SES	123	Earth, Solar System, and Universe Laboratory I	Studies astronomical and geological processes through observations and measurements. Requires field trips and evening telescopic observing. Both SES 121 and SES 123 must be taken together to secure SQ General Studies credit.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1	SQ	Pre/Corequisite(s): SES 121 with C or better if completed
SES	124	Earth, Solar System, and Universe Laboratory II	Studies astronomical and geological processes and life through observations and measurements. Requires field trips and evening telescopic observing.	N	LAB	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): SES 123 with C or better. Pre- or corequisite(s): SES 122 with C or better if completed
SES	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		
SES	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	311	Essentials of Astrobiology: Exploration for Life in the Universe	Origin and evolution of life on Earth. Strategies to explore for life in the cosmos. Possible field trips to explore regional geological analogues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): BIO 181 (188), CHM 113 or PHY 121; MAT 265 or 270
SES	330	Practical Electronics and Instrumentation	Applied principles of electronics and mechanical design as used by the modern instrument builder, using a systematic approach to the design process: Identify a scientific problem, develop specifications necessary to solve the problem, develop a prototype solution, test solution for plausibility, break down problem into components, design and build the solution then test in a relevant environment. Builds on introduction to circuits and engineering concepts from prerequisite courses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	4		Pre-requisites: PHY 131 and 132 with C or better
SES	350	Engineering Systems and Experimental Problem Solving	Introduces integration of scientific and engineering computational methods into scientific research and successful exploration. Provides an active, project-based environment for learning science and engineering by means of a common set of computational tools. Also provides a detailed overview of procedural and object-oriented programming with an emphasis on problem solving. Students solve problems by developing software in an interpreted language (Python). Problems may include visualizing data, interfacing with hardware, or solving numeric problems. Covers procedural programming concepts including data types, variables, control structures, arrays, and data I/O. Covers object-oriented programming concepts including object creation and use, object interaction, and the design of simple classes. Covers software engineering concepts including testing, incremental development, understanding requirements, and teamwork.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): MAT 267, 272 or 275; PHY 131 and 132 (or 151) with a grade of C or better
SES	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	405	Exploration Systems Engineering	Provides an introduction to systems engineering with an emphasis on the following topics: the systems engineering process, requirements, design fundamentals, subsystem fundamentals, trade studies, integration, technical reviews, case studies and ethics. Prepares the student for the capstone spacecraft/mission design course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Prerequisite(s): MAT 266 or 271 with C or better; PHY 121 and 122 (or PHY 150) with C or better
SES	410	Senior Exploration Project I	Design and development of an Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: ENG 101, ENG 105 or ENG 107; Senior standing

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SES	411	Senior Exploration Project II	Continuation of SES 410. Development of Earth, solar system, or space exploration project. Conceptualization, design, development, deployment, data analysis, communication.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	3		Pre-requisites: ENG 101, ENG 105 or ENG 107; SES 410
SES	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
SES	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6	L	Prerequisite(s): Barrett Honors student
SES	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-6		Prerequisite(s): Barrett Honors student
SES	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-3		Prerequisite(s): minimum 45 hours
SES	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		
SES	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Earth and Space Exploration	1-4		
SES	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Earth and Space Exploration	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SES	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Earth and Space Exploration	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SET	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		
SET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
SET	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		
SGS	101	Thinking Globally: The Individual and Authority	Examines the changing notions of the individual and authority over history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Credit is allowed for only SGS 101 or SGS 301

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SGS	107	Religion and Globalization	Explores how different religions interact with the various processes of globalization, including how the world's major religions have been transformed by economic, political, cultural, and technological aspects of globalization. Topics include religious terrorism, human rights, religion, and gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & G	Credit is allowed for only REL 107, 194 (Religion and Globalization) or SGS 107
SGS	111	Global History Since 1500	Surveys Africa, the Americas, and Eurasia; changes in communication, communities, demography, economics, environment, politics, religion, technology, warfare, and women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H & G	Credit is allowed for only HST 101 or SGS 111
SGS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
SGS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	202	Technology and Nature in World Settings	Examines changing interactions among humans and nature, geographic systems, global demography, and environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	G	
SGS	203	Contemporary Global Trends	Gives a grounding in patterns of international politics and global social change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	
SGS	204	Professional Global Career Development	Orients the student to working in global contexts and to thinking critically about careers in the global arena. Focuses on working in organizational settings distinctly global. Three modules: nation-state, corporations, and working international organizations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
SGS	240	Introduction to Southeast Asia	Interdisciplinary introduction to the cultures, religions, political systems, geography, and history of Southeast Asia.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	(HU or SB) & G	Pre-requisites: Credit is allowed for only ASB, GCU, HST, POS, REL or SGS 240
SGS	245	Introduction to South Asia	Provides an introduction to the history and major contemporary political, economic, social, religious and cultural features of the South Asia region at large and of selected South Asian nations in particular.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & H & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HST 245 or POS 245 or REL 245 or SGS 245 or SLC 245
SGS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	301	Principles of Global Studies	Presents current debates about globalization and subjects these to critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only SGS 101 or SGS 301
SGS	303	Global Trends	Analyzes the process of globalization across boundaries through the investigation of the determinants and ramifications of globalization from the vantage of modern social sciences. Students are expected to conduct and articulate independent critical analyses toward a more in-depth understanding of this social phenomena, global history, and particularly the global economy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Pre-requisites: Minimum 30 hours; ENG 102 with C or better
SGS	305	Empirical Political Inquiry	Logic of political inquiry, including research problems, concepts, hypotheses, theories, measurement, data collection, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB	Prerequisite(s): minimum 45 hours; Credit is allowed for only POS 301 or SGS 305
SGS	310	Global Urban Systems	Comparative approach focuses on relationship between development of comparative urban systems and environmental impacts at local, regional, global scales.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: SGS 101 or 301 with C or better
SGS	311	Urbanization in China	Explores contemporary and future Chinese urbanization from economic, built form, and environmental perspectives.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102 with C or better
SGS	315	Energy Policy	Examines the regulation of energy production and consumption in the U.S. at the federal, state and local levels. Identifies energy stakeholders in the U.S. and examines how they have shaped U.S. policies around energy. Explains past and current U.S. energy policies and how energy needs have shaped U.S. relations with other countries. Compares U.S. energy policies to that of other countries in the world, as well as how Arizona's energy policies compare to other states within the U.S.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only PAF 394 (Energy Policy) or POS 394 (Energy Policy) or SGS 315 or SGS 394 (Energy Policy) or SOS 315 or SOS 394 (Energy Policy)
SGS	320	Mechanisms of Governance	One of the fundamental issues in the social sciences concerns the problematic attainment of social order, which is the principal aim of governance. Presents the five principal mechanisms purported to account for social order, and illustrates these by providing empirical examples of each; includes film clips.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102 with C or better
SGS	321	International Institutions and Global Governance	Provides an in-depth examination as to how the international community organizes itself, through international institutions, to deal with serious international issues, and how the institutions of international governance can be improved. Studies diverse examples of international institutions primarily from the perspective of international relations (IR) theory and the role of international law (IL).	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only SGS 321 or 394 (International Institutions)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SGS	324	Negotiating Global Trade	Practical aspects of global trade including historic background, negotiations, supply chain, global terms, transportation, chartering, marine insurance, international arbitration, foreign exchange, letters of credit, barter, ethics, leadership, networking, country analysis and introduction to global management theories.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): minimum 45 hours or junior standing; Credit is allowed for only SGS 324 or SGS 394 (Global Trade in Real Time) or SGS 394 (Global Negotiations)
SGS	325	Globalization and Socio-Economic Justice	Addresses a trend producing increasing interconnectedness of economies and societies, as well as creating new conflicts and divisions. Provides greater understanding of global forces, as well as the effect of these forces on global economic justice.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Minimum 2.00 GPA. Credit is allowed for only JUS 325 or SGS 325
SGS	330	Globalization and the Environment: Problems and Solutions	Assesses the impact of globalization on the earth's environment. Examines such issues as biodiversity loss to pollution to urbanization to climate change, among others, and assess how globalization has driven, impacted or improved these environmental problems. Emphasis on understanding the social, political and economic factors that have contributed to global environmental change and the degree to which globalization processes are something 'new', as well as on examining the ability of communities, nations and transnational institutions to manage these global problems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102, 105 or 108 with C or better; 30 completed hours
SGS	340	Violence, Conflict and Human Rights	Interdisciplinary examination of the evolution and role of human rights in global society. Major themes include the political struggles over enforcement of human rights and curtailment of violence against individuals. Pays close attention to the role of non-governmental organizations and diplomacy in advancing human rights norms and also examines America's role in human rights, both at home and abroad. Focuses on the causes and effects of violence and human rights abuses in the context of torture, the "war on terror," and crimes against humanity.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisite: ENG 102, 105 or 108; SGS 101 (or 301); 30 minimum hours; Credit is allowed for only SGS 340 or 394 (Violence/Conflict/Human Right)
SGS	341	Humanitarian Crisis and International Intervention	Focuses on political, legal, and ethical issues raised by decision about military interventions in genocide and humanitarian crisis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
SGS	343	Religion, Nationalism, and Ethnic Conflict	Examines the role of religion in national and ethnic conflict in the contemporary world.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	HU & G	Pre-requisites: Minimum 24 hours; ENG 102, 105 or 108 with C or better; Credit is allowed for only SGS 343 or REL 379
SGS	344	Facing the Past: Truth, Memory, Denial After Atrocities	The past has never been so present as it is today. Over the last two decades, the world has shown an increasing interest in uncovering the hidden and forgotten histories of state-sponsored atrocities and acknowledging the fate of victims and survivors. Studies this movement for the recovery of truth, memory, and moral responsibility includes a wide range of actors and takes a number of different forms.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		
SGS	350	Economic Development and Globalization	Major issues and models in economic development. Studies development policy and foreign aid practiced since the 1970s and recent critique of these practices. Analyzes the mistakes made in the last 40 years, and potential for improving the practice of foreign aid. Contemporary issues in development economics, including the impacts of bad governance, foreign aid, corruption, war, military intervention and democracy on economic growth with emphasis on policy evaluations in health, education, microfinance and monitoring corruption.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 30 hours; Credit is allowed for only SGS 350 or 394 (Prin of Econ Dev Global)
SGS	360	Cultural Aspects of Globalization	Cultural aspects of globalization, starting with a theoretical discussion of what culture is and then weaving this discussion into an empirical examination of UNESCO's World Heritage program as a practical means of studying the role of culture in globalization. A number of questions guide our inquiry: What is culture? What forms does it take? Can culture be preserved? If so, what are the consequences? How is the UNESCO World Heritage Program structured? How does it conceive culture? What is its understanding of the global and the role of the local in it?	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; SGS 101 or 301; Minimum 30 hours; Credit is allowed for only SGS 360 or 394 (Cultural Aspects of Globalization)
SGS	366	Islam and Islamic Societies in Africa: Social and Political History	An in-depth study of the fundamental principles of Islam. Course will examine various forms of development of Muslim societies and institutions in Africa through time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	G	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 hours; Credit is allowed for only AFR 372 (or AFS 372) or REL 362 or SGS 366 or AFS 394/REL 394/SGS 394 (Islam and Islamic Societies in Africa: Social and Political History)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SGS	377	Arizona, Immigration, Latinos and Politics	Contemporary immigration and its related issues have generated significant debates, reforms and responses by government officials, businesses and private citizens, to name but a few in this country. This course provides a much-needed framework for understanding some of the immigration issues in Arizona and the country generally. It also focuses on some of the political responses by Latinos and their significant mobilization at the local, state and federal levels.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only JUS 377 or POS 377 or SGS 377 or TCL 377 or HST/JUS/POS/SGS/TCL 394 (Arizona, Immigration, Latinos and Politics)
SGS	381	Modern Southeast Asia	Vietnam, Laos, Cambodia, Thailand, Burma, Malaysia, Singapore, Brunei, Indonesia, and Philippines since 1750: imperialism, revolution, and independence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	SB & G & H	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST 391 or SGS 381
SGS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	401	Political Statistics	Basic concepts in statistics as they facilitate the description, explanation, and prediction of social and political phenomena.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	CS	Prerequisite(s): POS 301 or SGS 305 with a C or better; Credit is allowed for only POS 401 or SGS 401
SGS	441	Religion and Global Politics	Explores the nature and role of religion in international politics in the modern period.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	L & G	Credit is allowed for only REL 480 or SGS 441
SGS	442	Different Voices Within Contemporary Islamic Discourse	Examines modern Muslim discourse on major contemporary issues such as Sharf'a, Jihad, secularism, gender, civil rights, democracy, extremism, religious violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AFR 480 (or AFS 480) or REL 461 or SGS 442
SGS	454	Gender, Culture, and Development	In-depth analysis of gender roles related to health, family, work, education and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	3	(L or SB) & G	Prerequisite(s): WST 100 or 300 or minimum 45 hours; Credit is allowed for only SGS 454 or SOS 447 or TCL 447 or WST 447 or TCL 598 (Gender, Culture & Development)
SGS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-12		
SGS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Prerequisite(s): Barrett Honors student
SGS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-6	L	Prerequisite(s): Barrett Honors student
SGS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-4		
SGS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-6		Prerequisite(s): Barrett Honors student
SGS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Politics and Global Studies	1-7		
SGS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Politics and Global Studies	1-3		
SGS	501	Global Theory	Examines theoretical and analytical frameworks employed by institutions to frame action related to increased global uncertainty including economic, sociological, psychological, decision theory, gaming and institutional behavior frameworks. Uses case studies in key global issue areas such as climate change/natural hazards, energy security, urbanization, food security, security, failed states.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SGS	502	Global Institutions and Actors	Examines key types of global institutions, (1) multinational businesses, e.g., Toyota, (2) international development organizations, e.g., the World Bank, and (3) voluntary organizations, e.g., the Red Cross/Crescent, in terms of the roles that they play in shaping localized outcomes. Using case studies, explores the impact of international actors in terms of the power and influence that they exert through international treaties, standards, information diffusion, influence on local governments and other organizations, dissemination of international "best practice."	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SGS	503	Methods: Global Decision Making Under Uncertainty	Examines and critically assesses approaches and methods used in decision making and planning under uncertainty in global contexts, e.g., scenarios, SWOT, risk analysis, contingency planning, gaming, economic forecasting, anticipation-foresight techniques, decision making under complex conditions, and rapid assessment techniques. Explores the strengths and weaknesses of different approaches under varying conditions, synergies achievable through application of multiple methodologies, and normative assumptions underlying various methodologies. Students gain "hands-on" experience in the use of a variety of techniques through assignments based on real-world situations.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): SGS 501; SGS 502; Pre- or corequisite(s): SGS 504
SGS	504	The Individual As Decision Maker in Cross-Cultural Global Contexts	Focuses on the role of the Individual decision maker in cross-cultural contexts, acting in the context of globally engaged institutions. The individual is virtually always embedded in an institutional environment whether as manager, planner, advocate, frequently acting as part of a team. It is recognized that the various agents/stakeholders involved in addressing an issue, negotiating a deal, in a global context, almost invariably hold significantly different worldviews, cultural norms and decision-making styles. Deals with the individual decision maker in both public and private decision-making milieus. Discusses modes of intervention and initiative. Addresses issues of leadership, reconciliation of different decision-making modes, and acting effectively in cross-cultural environments. Emphasizes decision making under high uncertainty, using case studies, e.g., pending nationalizations or privatization.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): SGS 501; SGS 502; Pre- or corequisite(s): SGS 503
SGS	505	Preparation for the Global Field Project	Prepares students for the global field project. In addition to scheduled classes, each student meets with her/his advisor at regular intervals during the semester to prepare for the Global Field Project. During the semester, students prepare a work plan for their Global Field Project, including objectives of the exercise, specifications of deliverables. Network building is an important secondary objective, and development of an esprit de corps among Global Studies masters students.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Politics and Global Studies	3		Prerequisite(s): SGS 501; SGS 502; Pre- or corequisite(s): SGS 503; SGS 504
SHS	101	American Sign Language I	Basic receptive/expressive conversational skills; basic grammar and syntax rules. Orientation to deafness and deaf culture.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		
SHS	102	American Sign Language II	Further development of receptive/expressive conversation skills in ASL; finger spelling. Continued exploration of deaf culture.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): SHS 101 with C or better; taken within the past two years
SHS	105	Introduction to Human Communication Disorders	Introduces hearing, language, and speech problems in children and adults.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-3		Prerequisite(s): Freshmen; maximum 25 earned hours
SHS	201	American Sign Language III	Continued development of fluency in ASL with emphasis on more abstract concepts and the ability to narrate events.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): SHS 102 with C or better and taken within the past two years
SHS	202	American Sign Language IV	Further development of fluency in ASL with emphasis on literature, folklore, and signing narratives with multiple characters.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): SHS 201 with C or better and taken within the past two years
SHS	250	Introduction to Phonetics	Introduces English phonetics with emphasis on phonetic transcription, articulation, phonology, and disorders of speech.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		
SHS	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-6		Prerequisite(s): Barrett Honors student
SHS	310	Anatomical and Physiological Bases of Speech	Noncadaveric study of anatomical systems that underlie human speech and language, including respiration, phonation, articulation, and related nervous system processes.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): BIO 201; PHY 101; Pre- or corequisite(s): SHS 250
SHS	311	Hearing Science	Studies the physical characteristics of sound and of the structure and function of the human auditory system.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): BIO 201; PHY101; SHS 105
SHS	350	Brain Memory and Language	Covers memory and language and their associated brain areas, and the resulting behavioral consequences of injury and disease.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	367	Language Science	Normative aspects and integration of language structure, comprehension, and production in children and adults.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3	SB	
SHS	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	375	Speech Science	Normative aspects of speech, hearing, and language.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 310; SHS 311; Pre- or corequisite(s): SHS 250
SHS	376	Psychoacoustics	Introduces acoustics, cochlear anatomy and physiology, and the perception of sound.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SHS	401	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 311; Credit is allowed for only SHS 401 or 501
SHS	402	Clinical Methods and Treatment of Communication Disorders	Principles and techniques for planning speech and language intervention, including observation experiences.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 250, 465
SHS	461	Accent Modification	Increases speech intelligibility in non-native English speakers by changing their English pronunciation skills. International students learn the pronunciation of American English vowels and consonants, intonation and stress patterns, and rhythm of speech. Conducts pre- and post-assessments of the students' intelligibility to determine the need for improvement on specific sounds and speech patterns.	Y	LEC	Y	GNA	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): minimum 45 hours
SHS	465	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3	SB	Pre- or corequisite(s): SHS 250; Credit is allowed for only SSH 465 or SHS 565
SHS	470	Developmental Speech and Language Disorders	Introduces the nature of speech and language disorders in children.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 465; Pre- or corequisite(s): SHS 250
SHS	473	Implementation of Treatment Plans for Individuals with Communication Disorders	Students will learn to follow written treatment plans, individual education programs, individual support plans or protocols developed by the supervising speech-language pathologist. Opportunities to learn methods for eliciting therapy targets and to apply critical thinking and problem solving during therapy will be provided.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science
SHS	483	Professional Issues and Ethical Considerations for the SLPA	Studies licensure laws, professional conduct, and ethical practice in the field of speech language pathology.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Admission to the Speech and Language Assistant Program in Dept of Speech and Hearing Science
SHS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		Prerequisite(s): minimum 45 hours
SHS	485	Acquired Speech and Language Disorders	Introduces acquired speech and language disorders across the lifespan.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 310
SHS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-6		Prerequisite(s): Barrett Honors student
SHS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-6	L	Prerequisite(s): Barrett Honors student
SHS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		
SHS	496	Aural Rehabilitation	Approaches to aural rehabilitation of children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 311, 375 and 401; Credit is allowed for only SHS 496 or 596
SHS	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-6		Prerequisite(s): Barrett Honors student
SHS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-7	L	
SHS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-3		
SHS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		Prerequisite: MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	501	Introduction to Audiology	Introduces hearing disorders and the purposes and procedures for basic clinical tests of auditory function.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS 311 with C or better; Credit is allowed for only SHS 401 or 501
SHS	502	Basic Audiometry	Covers the bases, purposes, rationales, and procedures for the core clinical tests of auditory function in adults and children.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	504	Amplification I	Operation, electroacoustic measurement, selection, and prescriptive fitting of amplification devices.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	505	Survival Sign Language	Facilitates effective manual and alternative methods of communication with deaf individuals in clinical settings.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		

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SHS	508	Pediatric Audiology	Emphasizes the principles and procedures for early identification and management of congenital and early-onset hearing loss.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	510	Amplification II	Verification and validation of hearing aid performance, benefit, and satisfaction. Fitting considerations for pediatric and geriatric populations.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	511	Auditory Perception by the Hearing Impaired	Psychophysical methods and behavioral aspects of hearing, with an emphasis on the perceptual consequences of sensorineural hearing loss.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	512	Topics in Management of Medical Aspects of Speech-Language Pathology	Focuses on varying topics in management of medically based speech and language disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	512	Topics in Management of Medical Aspects of Speech-Language Pathology	Focuses on varying topics in management of medically based speech and language disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	513	Neurophysiology of the Auditory System	Focuses on the neurophysiology of the normal auditory system and on changes associated with hearing loss.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	515	Instrumentation and Calibration	Electronic instruments used to produce, modify, and measure characteristics of sound. Measurement standards and methods for calibration of audiologic equipment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	516	Auditory Evoked Potentials	Electrophysiologic assessment of the peripheral and central auditory nervous system. Lecture, lab.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	517	Balance Assessment	Clinical analysis and treatment of balance disorders and dizziness.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	518	Auditory Rehabilitation	Study and clinical application of assistive technology and rehabilitative services for managing the effects of hearing impairment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	519	Auditory Pathologies and Disorders	Familiarizes students with major diseases, pathologies, and disorders of the human auditory system.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		
SHS	520	Auditory Pathologies/Disorders and Otoneurologic Applications	Familiarizes students with major pathologies and disorders of the human auditory system. Examines advanced otologic, neurologic, and audiologic approaches in the differential diagnosis and treatment of peripheral and central disorders of the auditory system.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): Speech and Hearing Science graduate student
SHS	521	Auditory Aging	Focuses on aging and related effects on the auditory system and audition.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	522	Hearing Conservation/Instrumentation	Examines the prevention, identification, physiologic effects, and management of hearing loss due to noise exposure. Incorporates measurement standards and methods for calibration of electronic audiologic instruments used to produce, modify, and measure characteristics of sound.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Speech and Hearing Science graduate student
SHS	523	Advanced Audiometry	Discusses assessment and intervention procedures beyond the basic audiologic test battery and for special populations. Examines relevant new audiologic tests and procedures. Prerequisites: SHS 502, 513; SHS major.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): SHS major; SHS 502 and SHS 513
SHS	524	Counseling in Communication Disorders	Theories of counseling emphasizing the psychological and emotional impact and management of individuals with communication disorders and their families.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	525	Audiology Practice Management	Business practice issues, quality assurance, and professional ethics for the practicing audiologist.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	526	Launch to Clinical Methods in Audiology	In Launch-to-Clinic, students rotate through on-campus observations and group orientation to the ASU Speech and Hearing Clinic. Students learn the policies and procedures of the ASU Speech and Hearing Clinic, software specific to the clinic operations, report writing, and clinical documentation with practice to develop the skills needed to succeed in subsequent clinical rotations both on and off campus.	N	LEC	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	1		Prerequisite(s): Audiology major; Credit is allowed for only SHS 526 or SHS 580 (Audio Clinical Observation) or SHS 580 (Audiology Observation)
SHS	530	Development, Assessment, Intervention: Conception through 3 years	Covers development of children from conception to 3 years of age with a focus in early intervention. Includes child development of anatomical, neurophysiology, cognitive, motor, perceptual, speech, language and hearing aspects. Also addresses service delivery models in different contexts in children with atypical development in the different areas.	N	LEL	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): degree- or nondegree-seeking graduate student

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SHS	538	Clinical Methods in Speech-Language Pathology	Provides the knowledge and skills in clinical methods for treatment and diagnosis in speech-language pathology. Topics cover essential information to participate in screening and prevention opportunities, to structure and implement therapy goals and strategies, to apply for internships, and to administer and interpret informal and formal diagnostic tests.	Y	LEL	Y	GNA	College of Health Solutions	Department of Speech and Hearing Science	1		Prerequisite(s): MS Communication Disorders major.
SHS	539	Professional Issues in Speech-Language Pathology	Covers professional issues in speech-language pathology to ensure that students meet the professional knowledge requirements set forth in the American Speech-Language-Hearing Association (ASHA) certification standards. The topics cover essential information that the student needs to have in order to meet graduation requirements, comply with ASHA's ethical requirements, complete ASHA certification requirements, comply with Arizona state licensure requirements, prepare for a Clinical Fellowship Year and be involved in education and advocacy for the profession of Speech-Language Pathology.	N	LAB	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	1		Prerequisite(s): MS Communication Disorders major. Credit is allowed for only SHS 539 or SHS 580 (SLP Professional Issues)
SHS	540	Development, Assessment, Intervention: Preschool	Covers development, assessment and intervention of children from 3 years to 6 years of age, with a focus on preschool education. It includes child development of anatomical, neurophysiology, cognitive, motor, perceptual, speech, language and hearing aspects. Also it addresses service delivery models in different contexts in children with atypical development in the different areas.	N	LEL	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	4		Prerequisite(s): SHS 530
SHS	550	Development, Assessment, Intervention: School-Age Children	Covers development, assessment and intervention of children from 6 years to 21 years of age, with a focus on school education. Includes child development of anatomical, neurophysiology, cognitive, motor, perceptual, speech, language, reading, writing and hearing aspects. Also addresses service delivery models in different contexts in children with atypical development in the different areas.	N	LEL	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	4		Pre-requisite: SHS 540
SHS	552	Physiological Measures of Auditory Function	Focuses on the measurement of otoacoustic emissions and acoustic immittance.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology or PHD Speech and Hearing Science student
SHS	555	Cochlear Implants	Covers the research and clinical aspects of cochlear implantation with a focus on the principles of speech coding strategies.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	560	Development, Aging, Assessment, Intervention in Adults	Covers development, aging, assessment and intervention in adults with a focus on the elderly and the contexts for their service delivery. Includes changes in the adults related to anatomy, neurophysiology, cognitive, motor, perceptual, speech, language, literacy and hearing aspects. Also addresses service delivery models in different contexts where elderly and young adults with acquired disabilities are served.	N	LEL	N	GNA	College of Health Solutions	Department of Speech and Hearing Science	4		Pre-requisite: SHS 550
SHS	565	Speech and Language Acquisition	Speech and language development in the normal child.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Credit is allowed for only SHS 465 or SHS 565
SHS	567	Neural Bases of Communication Disorders	Neuroscience and its application to matters of normal and disordered communication.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	570	Communication Disorders and Multicultural Populations	Studies racial and ethnic biases and the communication behaviors and disorders in various cultural groups.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	571	Augmentative Communication and Language Programming	Focuses on individuals across the age span who are unable or who are at risk for being unable to communicate with spoken language.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	572	Language Assessment and Intervention in Infants and Toddlers	Focuses on the birth to 3-year-old population who are at risk for or who have communication and language disabilities.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	573	Language Assessment and Intervention with School-Age Populations	Focuses on later language development, linguistic demands of academic settings, assessment and intervention strategies for older children and adolescents.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	574	Management of Voice and Swallowing Disorders	Focuses on assessment and intervention of people with voice, swallowing, and craniofacial disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student

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SHS	575	Aphasia and Related Neurogenic Language Disorders	Assessment and treatment of acquired neurolinguistic impairment.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2-3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	576	Neuromotor Speech Disorders	Evaluation and treatment of the dysarthrias and apraxia of speech. Emphasizes acquired adult disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2-3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	577	Communication Disorders in Autism	Addresses communication disorders in children and adults with autism, as well as evaluation and intervention across a variety of settings and theoretical frameworks.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	577	Communication Disorders in Autism	Addresses communication disorders in children and adults with autism, as well as evaluation and intervention across a variety of settings and theoretical frameworks.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	579	Feeding and Swallowing Disorders Across the Lifespan	Focuses on individuals across the age span who have feeding and/or swallowing disorders. Presents assessment and treatment strategies.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	580	Clinical Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-6		
SHS	581	Right Hemisphere Syndrome, Traumatic Brain Injury, and Dementia	Studies the nature, characteristics, and clinical management of cognitive and communicative impairments accompanying right hemisphere damage, TBI, and dementia.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	581	Right Hemisphere Syndrome, Traumatic Brain Injury, and Dementia	Studies the nature, characteristics, and clinical management of cognitive and communicative impairments accompanying right hemisphere damage, TBI, and dementia.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		
SHS	582	Differential Diagnosis of Communication Disorders	Procedures for assessing speech/language disorders in children and adults.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	584	Clinical Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-6		
SHS	585	Articulation and Phonology: Assessment and Intervention	Assessment and treatment of developmental articulation and phonological disorders.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2-3		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	587	Language Assessment and Intervention with Preschool Populations	Focuses on preschool language disorders and assessment and intervention strategies for preschool children.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): MS Communication Disorders, Doctor of Audiology, or PHD Speech and Hearing Science student
SHS	588	Spanish Language Acquisition	Examines Spanish language acquisition in children and adults in the context of monolingual and bilingual language acquisition.	N	SEM	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); Credit is allowed for only SHS 588 or APL 588
SHS	589	Audiology Grand Rounds	Grand Rounds bridges clinical and academic knowledge through case studies, application of emerging research, and clinical workshops.	N	SEM	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1		
SHS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	Department of Speech and Hearing Science	1		
SHS	596	Aural Rehabilitation	Approaches to aural rehabilitation in children and adults. Introduces educational audiology and assistive listening devices.	N	LEC	N	OPT	College of Health Solutions	Department of Speech and Hearing Science	3		Credit is allowed for only SHS 496 or 596

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SHS	597	Bilingual Speech-Language Pathology	Reviews speech and language assessment and intervention practices with bilingual populations from infants to adults.	N	SEM	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	2		Prerequisite(s): degree- or nondegree-seeking graduate student
SHS	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-4		
SHS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	College of Health Solutions	Department of Speech and Hearing Science	1-15		
SHS	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	OPT	College of Health Solutions	Department of Speech and Hearing Science	1-12		
SHS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	College of Health Solutions	Department of Speech and Hearing Science	1		
SHS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	College of Health Solutions	Department of Speech and Hearing Science	1-15		
SLB	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		
SLB	510	Amateur Sports Law	Studies law, policy and problem solving in the amateur sports context, focusing primarily on interscholastic and intercollegiate athletics. Title IX and racial equality in sports.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-3		Prerequisite(s): College of Law student; Credit is allowed for only SLB 510 or LAW 791 (Amateur Sports Law)
SLB	511	Strategic Career Planning	Focuses on examining job opportunities in the sports industry and the development of strategies for obtaining a position suitable to the talents and abilities of individual students. Students refine their skills in terms of searching for a job. Students also develop a career plan, beginning with an entry-level position for those who have worked in the industry or a next-level position for students currently working in the area.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-2		Prerequisite(s): College of Law student; Credit is allowed for only SLB 511 or LAW 598 (Strategic Career Planning)
SLB	512	Professional Sports Law	Studies law, revenue, branding and problem solving in the professional sports context, focusing primarily on professional sports league governance and regulation, labor relations, representing and marketing players and coaches, and issues of equity and race. Also examines international issues related to professional sports.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-3		Prerequisite(s): College of Law student; Credit is allowed for only SLB 512 or LAW 691 (Professional Sports Law)
SLB	513	Sports Law and Business	Studies law, policy and problem solving in the context of the sports industry at all levels. Exposes professional, amateur and international sports law issues, examining those issues in a problem-focused manner.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	2-4		Prerequisite(s): College of Law student
SLB	514	Contracts: Negotiation and Drafting in the Sports Industry	Provides a working or basic knowledge of contract law, with in-depth instruction with regard to negotiating and drafting in the sports context. As their final project, students select a player, coach, university or club and then negotiate a contract. Negotiation sessions are held during class sessions and students evaluate each other, as well as receiving evaluation from the professor. Replicates the negotiation process in the sports industry.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	2-4		Prerequisite(s): College of Law student; Credit is allowed for only SLB 514 or LAW 598 (Contracts in the Sports Industry)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SLB	515	Sports Business Strategy and Industry Dynamics	Sports can involve a jog around campus or big business. Sports are interesting, important and a vivid context to learn about consumers, organizations, diverse stakeholders, media and entertainment, partnerships and sponsorship, highly competitive strategies in finance and marketing, managing community venues, big events, and other relevant business topics. Maintains a pragmatic, experiential, yet well-grounded focus, studying the role, nature and dynamics of sports business both in and around "sports industries" and in and around "conventional businesses." Builds and "tests" knowledge and exercise skills related to sports business analysis, decision making, communication and both strategy development and execution. Intellectually rigorous, yet fun. Develops a sophisticated, yet practical understanding of the nature, contexts and dynamics of sports business.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	2-4		Prerequisite(s): College of Law student; Credit is allowed for only SLB 515 or MKT 591 (Sports Business Strategy and Industry Dynamics)
SLB	516	Sports Business Development	Develops an appreciation for and understanding of the multiple stakeholders and diverse interests in and around sports business, and of their constantly changing and interactive impact on sports business practice and performance. Gives broad exposure to the major revenue generating domains in the sports industry. Explores the fundamentals of marketing and applies those fundamentals to the domains of sponsorship, endorsement, media, ticketing, merchandising and fundraising as means to create and maintain revenue streams.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-3		Prerequisite(s): College of Law student; Credit is allowed for only SLB 516 or MKT 591 (Sports Business Development)
SLB	517	Marketing for Sports Organizations	Studies the role, nature and dynamics of sports business and builds knowledge and skills related to sports marketing analysis, decision making and strategy development and execution. Intellectually challenging and demanding, yet fun.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	2-4		Prerequisite(s): College of Law student; Credit is allowed for only SLB 517 or MKT 598 (Sports Marketing)
SLB	518	Sports Analytics	Develops and applies analytical skills that are useful in nearly every career. Although the course focuses on applications in the sports context and uses approaches that are rapidly becoming important in the business of sports analytics, this is not a survey course about issues in sports. Instead, this class is about curiosity, storytelling and logic. An understanding and interest in both sports and numbers make this class good. General curiosity makes it great.	N	LEC	N	GNA	College of Law	Sandra Day O'Connor College of Law	1-3		Prerequisite(s): College of Law student; Credit is allowed for only SLB 518 or MKT 591 (Sports Analytics)
SLB	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
SLB	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic or writing a literature review of a topic.	Y	REC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SLB	591	Seminar	A small class emphasizing discussion, presentations by students and written research papers.	Y	SEM	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SLB	592	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
SLB	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		
SLB	598	Special Topics	Topical courses not offered in regular course rotation (e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand).	Y	LEC	Y	OPT	College of Law	Sandra Day O'Connor College of Law	1-4		
SLB	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	College of Law	Sandra Day O'Connor College of Law	1-12		
SLB	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	College of Law	Sandra Day O'Connor College of Law	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SLC	120	Introduction to Chinese Culture	Introduces geographical, historical, literary, and intellectual premises of Chinese culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisites: ENG 101, 105, or 107; credit is allowed for only CHI 120 or SLC 120
SLC	140	Greek and Latin Roots in Bioscientific Terminology	Introduces students to the ancient Greek and Latin root words most commonly used in biological, medical, and other scientific terminology, and gives practice identifying them in context. The knowledge of these root words enables students to memorize with greater ease and increased retention the bioscientific terminology they encounter in other coursework as well as in their medical or scientific profession.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SLC	142	Ancient Greek Civilization	Ancient Greek civilization and culture. Studies (in roughly equal parts) the art, archaeology, literature, culture and history of ancient Greece from prehistoric times until after the conquests of Alexander the Great (the Hellenistic Age).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H	Credit is allowed for only GRK 142, GRK 194 (Ancient Greek Civilization) or SLC 142

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SLC	144	The Ancient Mediterranean	Provides a comprehensive introduction to the Mediterranean world, focusing on (but not limited to) the period of the classical Greeks and Romans. Provides some history of the area, but focuses on the classical world and its interaction with the cultures that surrounded it, including Semitic, Near Eastern, and North African cultures, as well as some of the lost cultures of the area such as the Minoans and Etruscans. Introduces the sources that provide information about these cultures (literary, art historical and archaeological sources), and teaches students to think critically and write persuasively about these sources.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101, 105, or 107 with C or better; Credit is allowed for only SLC 144 or SLC 194 (The Ancient Mediterranean)
SLC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisites: maximum 25 hours
SLC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	201	Introduction to Linguistics	Examines the nature and diversity of world languages, linguistic structures and functions of language, language variation, pragmatics, and language acquisition.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU or SB	
SLC	202	Introduction to Literary and Cultural Theory	Interdisciplinary approaches to understanding culture and cultural production (literature and critical theory, film, visual art, and performance, among others) in different cultures and regions. Classes are taught by a primary instructor aided by several guest lecturers in their area of academic specialization.	N	REC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 102, 105, or 108 with C or better
SLC	221	Survey of Ancient Greek Literature	Introductory survey of ancient Greek literature. Familiarizes students with the important literary genres, texts, and authors of the ancient Greeks from Homer to the Hellenistic period. All readings in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only GRK 221, SLC 221 or 294 (Ancient Greek Literature in Translation)
SLC	222	Survey of Roman Literature	Introductory survey of Roman literature. Familiarizes students with the literary genres, texts and authors of the Romans from the origins of the Latin language to the Silver age. All readings in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only LAT 222, SLC 222, LAT 294 (Roman Literature in Translation) or SLC 294 (Roman Literature in Translation)
SLC	223	Introduction to Greek and Roman Mythology	Familiarizes students with the characters and events of ancient Greek and Roman myths through their literary manifestations, and moves beyond mere narrative to consider the possible interpretations and functions of these myths, thus revealing the central concerns of ancient society and giving insights into the working of our own society and its literary and artistic traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Credit is allowed for only GRK 223, LAT 223, SLC 223, GRK 294 (Greek and Roman Mythology)
SLC	245	Introduction to South Asia	Provides an introduction to the history and major contemporary political, economic, social, religious and cultural features of the South Asia region at large and of selected South Asian nations in particular.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HST 245 or POS 245 or REL 245 or SGS 245 or SLC 245
SLC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	321	Korean Literature in Translation	Introduces various genres of Korean literature written from the seventeenth century to the present in English translation. Aims to help students to understand the history of modern Korean literature in transnational and transdisciplinary contexts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Credit is allowed for only KOR 294 (Korean Lit in Translation), 321, 394 (Korean Lit in Translation) or SLC 321
SLC	323	Russian Literature and Revolution: The Twentieth Century	An in-depth study of 20th-Century Russian prose and poetry by Zinovieva-Annibal, Gorky, Bely, Babel, Mayakovsky, Platonov, Pasternak, Erofeev, Petrushevskaia, and other writers. Taught in English. An in-depth study of 20th-Century Russian prose and poetry by Zinovieva-Annibal, Gorky, Bely, Babel, Mayakovsky, Platonov,	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Pre-requisites: ENG 102, 105, or 108; Credit for RUS 323 or SLC 323
SLC	331	Arabic/Islamic Culture and Literature	General introduction to the Middle East that synthesizes cultural, social, and literary information. Focuses on the experiences of ordinary Middle Eastern people to convey a grassroots sense of the Middle East.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101, 105, or 107 with C or better; Credit is allowed for only ARB 331 or SLC 331
SLC	333	China	Political, economic, social, and cultural history of the Chinese people from early times to the 17th century.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 333, HST 383 or SLC 333
SLC	335	History of Chinese Medicine	Explores developments of Chinese traditions dealing with the natural world, science, and medicine.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Pre-requisites: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only CHI 335, HPS 325, HST 385 or SLC 335

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SLC	336	Interpreting China's Classics	Study of selected Confucian and/or Taoist classics and ways they have been read in both Asian and Western scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 30 hours; Credit is allowed for only CHI 336, HST 386 or SLC 336
SLC	344	Classics and Comics	Explores the connections between the classical tradition of Ancient Greek and Roman literature and the modern American superhero comic book tradition.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GRK 344 or LAT 344 or SLC 344 or GRK/LAT/SLC 394 (Classics and Comics) or SLC 494 (Classics and Comics)
SLC	345	Ancient Greece I: Bronze Age through the Peloponnesian War	Traces Greek History from its prehistoric beginnings through the Peloponnesian War (431-404 B.C.), with a special focus on the Archaic (ca. 800-480 B.C.) and Early Classical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only GRK 347 or HST 347 or SLC 345
SLC	346	Ancient Greece II: Late Classical and Hellenistic Period	Traces the transformation of the Greek world between the end of the Peloponnesian War (404 B.C.) and the absorption of the last major Greek state by growing power of Rome (30 B.C.), with special attention to how Greeks in this period lived and thought and how the period's political and economic changes helped to create new forms of culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & H	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only GRK 346 or HST 346 or SLC 346
SLC	347	Modern Israeli Literature in Translation	Modern Hebrew, or Israeli Hebrew, started at the end of the 19th century in Europe and today it is the language of the State of Israel. During this short period modern Hebrew developed literature with its unique local characteristic, as well as universal ideas. Reads and examines four books against their social and historical background.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only HEB 347 or JST 347 or SLC 347 or ENG/HEB/JST/SLC 394 (Modern Hebrew Literature in Translation)
SLC	348	Israeli Society and Culture	Different partitions of the Israeli society, based on ethnic origin, by religious affiliation or by political association. Depicts how Israel is an absorbing immigration state. Israel is a welfare state and the course covers aspects of a welfare state, such as health, retirement, public transportation, art, higher education and more.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better. Credit is allowed for only HEB 348 or HEB 394 (Israeli Culture and Society) or JST 348 or REL 311 or SLC 348
SLC	360	Greece and Rome at War	Familiarizes students with the major battles, leaders and tactics of Classical Greece and Rome. Supplements lectures with student participation including study of original sources, group presentations, and gaming battle simulations. This multifaceted approach gives a greater sense of the evolution of the leaders, armies and tactical systems of the Greeks and Romans.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 360, HST 397, LAT 360, SLC 360 or SLC 394 (Greece and Rome at War)
SLC	361	Roman Religion	Roman religion was never static, despite the best efforts of the Roman state to make it so. Understands the artifacts and procedures of Roman state cult from its earliest origins to the late empire, using ancient literary sources, archaeology throughout the ages and modern scholarly theories. Clarifies the forces that influenced development and change in Roman religion, both internal and external.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only LAT 361, REL 361, SLC 361 or SLC 394 (Roman Religion)
SLC	362	Ancient Greek Religion	Surveys ancient Greek religion, including its gods, ritual practices and festivals. Analyzes the development of the religion over time, and how both ancient and modern figures interpreted its meaning.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; Credit is allowed for only GRK 362, REL 360, SLC 362 or SLC 394 (Ancient Greek Religion)
SLC	373	Roman History I: Foundations and Republic	Traces the growth of Roman power from Rome's humble beginnings in the eighth century B.C. to its domination of the Mediterranean and the transformation of the Roman Republic into the Roman Empire after the Battle of Actium (31 B.C.).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 373 or LAT 373 or SLC 373
SLC	374	Roman History II: The Roman Empire	The Roman Empire from the reign of the first emperor, Augustus (27 B.C.-A.D. 14), to that of Justinian (A.D. 527-565), focusing on the lives of the Roman emperors, the society and culture of the empire, and the profound changes that eventually contributed to the empire's collapse.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 30 hours; Credit is allowed for only HST 374 or LAT 374 or SLC 374
SLC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	401	Translation Theory and Practice	Translation theories and professional practices and ethics; bibliography, computer technology, and sample texts for natural and social sciences and humanities.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		

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SLC	420	Foreign Literature in Translation	Not for language majors (except in Asian languages and Russian); open to language majors as a related-area course. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	
SLC	421	Japanese Literature in Translation	Readings selected by theme or genre or period from various works of Japanese literature in English translation. May be repeated when topics vary. Graduate students by permission.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	
SLC	429	Studies in European Literature and Culture	Literary, cultural, and historical issues.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours; Credit is allowed for only ENG, SLC or THE 429
SLC	439	Art in Exile: Vladimir Vladimirovich Nabokov	In English. The scandalous success of Lolita (1955) allowed Vladimir Nabokov to retire from teaching at Cornell University and move to Switzerland to devote himself to fiction, translation, criticism and lepidoptery. This was only one of the many metamorphoses that Nabokov, a Russian noble, underwent while in exile, moving from Russia to the Crimea, Cambridge UK, Berlin, Paris, Cambridge MA, Ithaca, Hollywood and finally Montreux. Examines the Russian roots of Nabokov's Russian (in translation) and American novels about exile: his first novel, Mary (1926), The Defense (1929), Glory (1932), and his tribute to 19th-century Russian literature, The Gift (1938), which he considered his greatest Russian novel. These are followed by Lolita (1955), Pnin (1957) and Pale Fire (1962), his memoirs, Speak, Memory (1966), and some essays and short stories. Films include Lolita by Stanley Kubrick (1962) and Adrian Lyne (1997).	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only RUS 439 or SLC 439 or ENG/RUS/SLC 494 (Art in Exile: Vladimir Vladimirovich Nabokov)
SLC	440	Film Theory and Criticism	Examines the major positions and issues in film theory from an historical perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): ENG 102, 105 or 108 with C or better; FMS 100 with C or better; Credit is allowed for only FMS 461 or SLC 440
SLC	441	Fairy Tales	Foundational fairy tale texts collected by the Brothers Grimm and written by Hans Christian Andersen and their modern permutations reflect basic human desires, fears and aspirations as well as the values of the period in which they are written. These stories and their variants in popular culture across the globe permit students to reflect critically on the functions of fairy tales in both past and present civilizations. Students perceive the ways in which ancient tales can be utilized for various purposes and understand the contemporary theoretical debate on the study of fairy tales and their role in popular culture. Course taught in English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Prerequisite(s): ENG 102, 105 or 108 with C or better; one other ENG or GER upper-division course with C or better. Credit is allowed for only GER 441, GER 494 Fairy Tales, or SLC 441
SLC	444	Heroes, Ancient and Modern	Explores the heroic literature of the ancient Greeks and Romans, then traces the classical tradition and reception of the classical hero in medieval and modern texts. Incorporates history, art history and material culture from the relevant societies to supplement study of the texts involved.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Pre-requisite: ENG 101, 105 or 107 with C or better; Credit is allowed for only GRK 444, LAT 444, SLC 444 or SLC 494 (Heroes: Ancient and Modern)
SLC	445	The Holocaust in German-Mediated Memory	Examines representations of the Holocaust from across different media (literature, film, architecture, memoir, photography) and from across multiple generations of German engagement with this period in history.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or ENG 201 or ENG 202 or ENG 204 or FMS 100 or JST 210 or JST 230 or SLC 202 with C or better; Credit is allowed for only FMS/GER/JST/SLC 445 or GER 494 (Holocaust & German Media or Holocaust & German Mediated Memory)
SLC	446	Weimar-Era German Film	Examines early film production in Germany during the period of the Weimar Republic.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only FMS 446 or GER 446 or SLC 446 or GER 494 (Weimar German Cinema) or GER 494 (Studies in German Film)
SLC	447	German Modernism	Examines examples of modernism in literature, art and film from German-speaking Europe.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 or 201 or 202 or 204 or FMS 100 or 200 or SLC 202 with C or better; Credit is allowed for only GER 447 or SLC 447 or GER 494 (German Modernism)

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SLC	450	Experimental Narrative	Examines texts that experiment with form, content and narrative perspective within print, film and digital media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours; Credit is allowed for only ENG 447, FMS 442 or SLC 450
SLC	451	Chinese Cultural History I	China's classics in translation studied both for their intrinsic ideas and for the origins of Chinese thought.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(HU or SB) & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 451, HST 451 or SLC 451
SLC	452	Chinese Cultural History II	Evolution of Confucian thought, its synthesis with Taoism and Buddhism, and modern reactions against, and uses of, Confucian traditions.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB & G & H	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 55 hours; Credit is allowed for only CHI 452 or HST 452 or SLC 452
SLC	455	Multi-Kulti: Multiculturalism Through Film	Examines how ethnic identities are perceived, constructed and marketed as well as how they perceive themselves and the "others." Critically engages with such concepts as migration, assimilation, citizenship, hybridity and authenticity. Focuses on exemplary films, including comparisons with minority experiences in other countries. Through film and other material on the topic, will learn to contextualize recruitment of guest workers, xenophobia and racism, citizenship law, immigration and national identity, the institutions of multiculturalism, religion, the private sphere, multilingualism, popular culture and globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): ENG 101 or 105 or 107 with C or better; Credit is allowed for only GER 455 or SLC 455 or GER 494 (Multi-Kulti: Multiculturalism in Central Europe) or SLC 494 (Multi-Kulti: Multiculturalism in Central Europe)
SLC	465	Intercultural Communicative Competence	Focuses on the importance of culture(s) and the ways in which culture(s) effects and interrelates with communication. Communicating across cultures is very important in order for us to be able to function in a globalized, diverse world, e.g., workplace, city. Using our own experiences and discussions as well as the readings, course increases our sensitivity, understanding and awareness of our own culture(s) as well as other culture(s). Approaches the study of intercultural communicative competence in a theoretical and practical way.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 101, 105, or 107 with C or better; Credit is allowed for only GER 465 or SLC 465 or GER 494 (Intercultural Communicative Competence) or SLC 494 (Intercultural Communicative Competence)
SLC	475	Latin American Film	Examines the role of film in contemporary Latin American culture; films viewed and analyzed as casebook examples. Focuses on the aesthetics and generic conventions of contemporary Latin American films.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102, ENG 105, ENG 108, FMS 100, or SLC 202 with C or better; Credit is allowed for only FMS 475 or SLC 475 or SPA 475 or THE 475 or FMS 494/SLC 494/SPA 494/THE 494 (Latin American Film)
SLC	479	Introduction to Teaching Foreign Languages	Introduces teaching methodologies, language learning, and current best practice in teaching foreign languages in U.S. middle and high schools.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SLC	480	Methods of Teaching Foreign Languages	Teaching foreign languages and literatures at secondary and college levels. Does not meet the Liberal Arts and Sciences General Studies requirement for humanities and fine arts. Required for admission to SED 478.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: SLC 479 with C or better
SLC	481	Technical and Scientific Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as engineering, architecture, agriculture, computer technology, electronics, and physical and biological sciences.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: SLC 401
SLC	482	Business and Financial Translation	Resources, practices, strategies, and lexicon for translation of professional texts in subjects such as economics, finance, insurance, management, marketing, accounting, advertising, and real estate.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: SLC 401
SLC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	485	Translation of Legal Texts	Provides guided practice in the successful completion of professional translation tasks in the legal field. Studies the origin and traditions of contrasting legal approaches as each system of governance (Civil Law Tradition and Common Law Tradition) perceives reality and structures its institutions to reflect differing cultural and linguistic norms. Students work with a broad selection of legal texts involving property rights, family law and commercial law. Places particular emphasis on criminal law. Analyzes legal texts from several Latin American countries as well as from Spain for content and translated into English. Similarly analyzes and translates into Spanish specialized texts currently used in Maricopa County Superior Court.	N	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ASB 480 or SLC 201 or SPA 400

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SLC	486	Medical Translation	Guided practice in the successful completion of professional translation tasks in the medical and scientific domain: medical correspondence, discharge instructions, medical information for patients, general information on topics related to the medical field with a focus on low-literacy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SLC 201 or SPA 400; Credit is allowed for only SLC 486 or SLC 494 (Medical Translation)
SLC	491	Crossing Languages and Cultures	Interdisciplinary and cross-cultural study in two or more world languages or cultures.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: SLC 201 and 202 with C or better
SLC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SLC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
SLC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SLC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		Pre-requisite: minimum 56 hours
SLC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLC	510	Computer-Assisted Language Learning Praxis	Offers graduate students an in-depth practical experience in Computer-Assisted Language Learning (CALL) praxis, including tools, approaches to using technology in the language classroom, the techniques and best practices of online instruction, and the development of a teaching portfolio.	N	LEC	N	GNA	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 557
SLC	515	Second-Language Acquisition	Discusses and applies theories of second-language acquisition.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisite: SLC 400
SLC	551	Global Approaches to Translation	Familiarize students with various approaches to translation practice. Examines issues related to the cultural role of translation. Students [prepare a translation, justification of translation choices, and discussion of the complexities posed by the translation. Readings address a broad array of translation theories, with most focused on translation as a globally theorized phenomenon in the 20th and 21st centuries. Readings and discussions focus on how one translates, and on translation as a culture-making enterprise inextricably tied to the questions of who translates, in what context, for whom, and to what ends. Students understand translation theories from different eras and cultures; understand how translation is implicated in different forms of intercultural contact (colonialism, commerce, proselytization); gain experience translating texts from a source language into English; and can explain why they translated the way they did.	N	RSC	N	GNA	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SLC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
SLC	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		

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SLC	602	Literary and Cultural Theory	Trains SILC Ph.D. students in understanding the central role of languages and literatures in the composition of culture. Employs a range of interdisciplinary approaches to various forms of cultural production, specifically as they relate to language, literature, film, visual art, and performance. Through exploration of primary works and foundational theoretical texts, shows students how to question the motivations, aesthetics, transmission, reception, and social control of a variety of works and media. At the center of this analysis stand the critical debates about the nature and definition of the term culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SLC	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLC	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SLC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	304	Computational Linguistics of Slavic Languages	Information technology and Slavic languages, including Web design, digitalized resources, information retrieval, math/statistical analysis, and PERL.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	CS	
SLV	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	440	History of Slavic Languages	Comparative evolution of East Slavic, West Slavic, and South Slavic languages from the earliest record to the standardizing of national languages in the 19th and 20th centuries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	SB	
SLV	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SLV	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SLV	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
SLV	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SLV	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SLV	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SLV	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SOC	101	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Credit is allowed for only SOC 101 or 301
SOC	101	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Credit is allowed for only SOC 101 or 301
SOC	101	Introductory Sociology	Fundamentals of sociology, organization of human groups and society, processes of interaction, and social change.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only SOC 101 or 301
SOC	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		Pre-requisites: Freshmen; maximum 25 earned hours
SOC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
SOC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
SOC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SOC	210	Sociology of Murder	Sociological perspectives on various forms of murder and types of murderers. Also considers forms of punishment for murder.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only FOR 210 or SOC 210
SOC	220	Sport and Society	Examines sports in American society as a source of socialization and an institution where gender, race/ethnicity, and class interact.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	

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SOC	220	Sport and Society	Examines sports in American society as a source of socialization and an institution where gender, race/ethnicity, and class interact.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SOC	241	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
SOC	241	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	241	Modern Social Problems	Race relations, poverty, unemployment, and other current issues.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SOC	264	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only FAS 264 or SOC 264
SOC	264	Gender and Society	Analysis of the development, nature, and consequences of gender in contemporary society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only FAS 264 or SOC 264
SOC	270	Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	
SOC	270	Racial and Ethnic Relations	Problems of minorities in heterogeneous societies. Evaluates theories of prejudice and research dealing with discrimination, desegregation, and assimilation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	
SOC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
SOC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SOC	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
SOC	301	Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Credit is allowed for only SOC 101 or 301
SOC	301	Principles of Sociology	Intensive and critical analysis of the concepts of sociology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only SOC 101 or 301
SOC	312	Adolescence	In-depth examination of the developmental and social processes that help explain modern adolescence.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: Minimum 24 hours; SOC 101, PSY 101(PGS 101), FAS 101 or FAS 330 with C or better; Credit is allowed for only CDE 312 or SOC 312
SOC	315	Courtship and Marriage	In-depth study of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	315	Courtship and Marriage	In-depth study of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	315	Courtship and Marriage	In-depth study of courtship, marriage, and related processes, focusing on problematic aspects of these institutions from the sociological perspective.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	321	Sociology of Work	Social and cultural analysis of industry. Occupational roles, status, and social participation of workers.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	324	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & H	Credit is allowed for only FAS 324 or SOC 324
SOC	324	Work and the Workplace	Historical and comparative examination of changes in the structure and meaning of work and current shifts in people's work lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & H	Credit is allowed for only FAS 324 or SOC 324
SOC	328	Migration and Culture	Examines migration and culture embedded in a transnational field of social, economic and political processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours. Credit is allowed for only ASB 340 or SOC 328
SOC	331	Environmental Sociology	Analyzes human organizational responses to population growth, technological change, and environmental stressors on both a national and global scale.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G	Prerequisite(s): minimum 45 hours
SOC	331	Environmental Sociology	Analyzes human organizational responses to population growth, technological change, and environmental stressors on both a national and global scale.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Prerequisite(s): minimum 45 hours
SOC	332	The Modern City	In-depth analysis of the growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	G	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	332	The Modern City	In-depth analysis of the growth, characteristics, and problems of the modern city.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	Pre-requisites: minimum 24 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better

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SOC	333	Population	Global trends in population growth, composition, and distribution; theories, policies, and impact of population trends on environmental quality and development.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G	Pre-requisite: minimum 45 hours; Credit is allowed for only ASB 344 or SOC 334
SOC	334	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Pre-requisite: minimum 45 hours; Credit is allowed for only ASB 344 or SOC 334
SOC	334	Technology and Society	Development of technology in relation to society, work, science, the environment, public health, and cultural values related to social change.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	L or SB	Pre-requisite: minimum 45 hours; Credit is allowed for only ASB 344 or SOC 334
SOC	339	Grassroots Social Movements	Explores how groups mobilize collectively to produce social, political, economic, and cultural change, with an emphasis on the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: ENG 101 (or 105 or 107) with C or better; Credit is allowed for only ASB 339, POS 339 or SBS 339 or SOC 339
SOC	340	The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisite: SOC 101 or 301
SOC	340	The Sociology of Deviance	Sociological analysis of stigmatized behaviors and conditions, including the causes, effects, and management of stigma.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisite: SOC 101 or 301
SOC	342	Mexico-U.S. Borderlands	Contemporary examination of socioeconomic and political dimensions of border communities, and formation of Mexican-origin communities within and outside the Southwest.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & C	Credit is allowed for only ASB, SBS or SOC 342
SOC	350	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 355, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
SOC	352	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G & H	
SOC	352	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G & H	
SOC	352	Social Change	Patterns of social change, resistance to change, and change-producing agencies and processes.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G & H	
SOC	353	Death and Dying in Cross-Cultural Perspective	Scientific and humanistic approaches to the study of death and dying from the perspective of anthropology and allied disciplines. Uses a global, comparative approach across space and time from the earliest human burials to contemporary funeral events.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3-4	(HU or SB) & G	Pre-requisite: 45 earned credit hours; Students who have credit for ASB 353, may not enroll in SOC 353
SOC	356	Central American Studies	Part of the summer ASU study abroad Costa Rica Program, which is a language and social sciences immersion program in the capital city, San Jose. A summer offering permits students to enroll in the program without conflicting with full course loads during the fall or spring semester. However, the course is proposed as a stand-alone course that can be offered in a regular semester as well. May be repeated once for credit.	N	REC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	Credit is allowed for only ASB 356 or GCU 356 or POS 354 or SBS 356 or SOC 356
SOC	360	Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: Minimum 24 hours; SOC 101, PSY 101(PGS 101), FAS 101, or FAS 330 with C or better
SOC	360	Sociological Psychology	Interaction patterns between the sociocultural order and individuals; socialization process; norms, roles, and statuses; collective behavior.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: Minimum 24 hours; SOC 101, PSY 101(PGS 101), FAS 101, or FAS 330 with C or better
SOC	363	Men and Masculinity	Sociological analysis of how masculine identity is defined, negotiated, and variously constructed depending upon class, ethnicity, age, and sexual orientation.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Prerequisite(s): SOC 101
SOC	364	Popular Culture and Society	Studies the social approaches to popular culture, focusing on the function of various forms (literature, film, theatre, and music).	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours
SOC	365	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
SOC	365	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	365	Sociology of Mass Communication	Sociological exploration of the major mass media as a communicative process in American society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SOC	366	Film and Society	Studies the social approaches to film as an art form, mass medium, and ideological construct.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SOC	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with C or better; ASB 100 or 102, SOC 101, SOS 110, or SSH 100 with C or better. Credit is allowed for only ASB, SOC, SOS, or SSH 370

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	371	Inequality and Sustainability	Efforts to shift societies onto a sustainable trajectory are facing profound challenges from the degree and dynamics of global inequalities of income, wealth, and life chances. Data and ideas from a spectrum of disciplines are employed to examine, analyze, and criticize the prospects for redressing global inequalities in a sustainable manner.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ASB or SOC 371
SOC	371	Inequality and Sustainability	Efforts to shift societies onto a sustainable trajectory are facing profound challenges from the degree and dynamics of global inequalities of income, wealth, and life chances. Data and ideas from a spectrum of disciplines are employed to examine, analyze, and criticize the prospects for redressing global inequalities in a sustainable manner.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only ASB or SOC 371
SOC	374	Cultures and Politics of the Internet	Explores the culture and politics of the Internet in global perspective, including virtual communities, free software, copyleft, blogs, and hacktivism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Credit is allowed for only ASB 374, POS 374, SBS 374 or SOC 374
SOC	375	Contemporary American Jewish Identities	Analyzes the complexity and diversity of the contemporary American Jewish community in religious and secular affairs.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	(HU or SB) & C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 24 hours; Credit is allowed for only JST 318, REL 318 or SOC 375
SOC	378	Migration and Society	Application of social scientific theories and principles in order to understand the social and ethnic consequences of international migration with a focus on the United States. Students will communicate views formulated from empirical evidence and reasoned analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & C	Prerequisite(s): ASB 102 or SOC 101 with C or better; 45 minimum hours
SOC	389	Ethnographic Field Lab	Hands-on, guided ethnographic qualitative research and interpretative analysis.	N	LAB	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 389 or SBS 389 or SOC 389
SOC	390	Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	
SOC	390	Social Statistics I	Descriptive and inferential statistical methods for analysis of social data. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	CS	Pre-requisite: MAT 142 or higher
SOC	391	Research Methods	Methods of social science research, including the fundamental assumptions underlying research, critique, research design, data collection, and data analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Prerequisite(s): SOC 101 or SOC 301 or CDE 232; SOC 390; Credit is allowed for only FAS 361 or SOC 391
SOC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
SOC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
SOC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SOC	400	Perspectives on Aging	Broad overview of gerontological issues; e.g., physical aging, retirement, living options, caregiving, theoretical background, death.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SOC	415	The Family	Family considered from the institutional viewpoint; in-depth look at its historical development and its adaptation to a changing culture; analysis of the family system in many cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: minimum 30 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	418	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & H	Pre-requisites: FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better; minimum 30 hours. Credit is allowed for only CDE 418 or SOC 418
SOC	418	Aging and the Life Course	Examines aging as a process of change and adaptation over the lifespan, patterned by social, cultural, and historical forces.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & H	Pre-requisites: FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better; minimum 30 hours. Credit is allowed for only CDE 418 or SOC 418
SOC	419	Organizations and Technological Change	Explores the increasing impact of information technology on corporate, governmental, and private organizations. May involve fieldwork.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	G	
SOC	420	Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L or SB	
SOC	420	Sociology of Religion	Interrelationship of culture, society, and religion; religion and social stratification; religious, economic, and political institutions; social change and religion. Emphasizes American society and institutions.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	
SOC	421	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
SOC	421	Education and Society	Uses contemporary sociological perspectives to examine effects of schools and schooling on individuals and society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	424	Women and Health	Women as healthcare workers and an in-depth analysis of issues of health, illness, and healthcare for women	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: minimum 30 hours; FAS 101, 330, PSY 101(PGS 101) or SOC 101 with C or better
SOC	426	Social Inequality	Examines stability and change in social inequality based on class, race and gender, and in the context of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	

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SOC	426	Social Inequality	Examines stability and change in social inequality based on class, race and gender, and in the context of globalization.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	
SOC	427	Sociology of Health and Illness	Social aspects of illness and sociological analysis of the healthcare system and its practitioners.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Prerequisite(s): minimum 45 hours
SOC	427	Sociology of Health and Illness	Social aspects of illness and sociological analysis of the healthcare system and its practitioners.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours
SOC	433	Applied Demography	Science of population analysis. Covers techniques for measuring fertility, mortality, migration, and population composition.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	
SOC	435	Advanced Marriage and Family Relationships	In-depth examination of research, issues, and trends relating to marriage and family interaction.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	L or SB	Pre-requisites: Minimum 30 hours; FAS 101, 331, PSY 101(PGS 101) or SOC 101 with C or better; Credit is allowed for only FAS 435 or SOC 435
SOC	443	Sociology of Corporations	Examines corporations as social institutions and the implications of their status as a legal person on politics, culture, and economy.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
SOC	445	Globalization, Development, and Resistance	Explores the interconnections among globalization, development, and grassroots movements for social change in Africa, Asia, and Latin America.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
SOC	448	Epidemics and Society	How epidemics occur; how they are perceived in society; how epidemics affect society.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G	
SOC	451	Comparative Sociology	Cross-cultural study of basic social institutions; the methodology of cross-cultural research.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB & G	
SOC	456	Political Sociology	Social factors associated with voting; nature and structure of the electorate and political parties and the nature of national and international power structure.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		
SOC	457	Global Social Movements	Examines how groups mobilize across borders to pursue social goals, including equality, justice, peace, and salvation in a global context.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB & G	
SOC	460	Leadership, Research, and Collaboration in Community Change	Advanced understanding of leadership and the development of proposals for innovative plans that enhance the well-being of children, youth and families.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): minimum 60 hours; Credit is allowed for only FAS 460 or FAS 498 (Leadership Research & Collaboration in Change) or SOC 460
SOC	461	Community Action Research Experience Research Internship	Second course in Community Action Research Experience (CARE) sequence. Students apply leadership, professional collaboration, project management and research skills in conducting an approved community action research project.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite: FAS 460 (or SOC 460); Minimum 60 hours. Credit is allowed for only FAS 461 or SOC 461
SOC	483	History of Social Thought	Social thought in human culture. Background of modern sociology.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Prerequisite(s): minimum 45 hours
SOC	483	History of Social Thought	Social thought in human culture. Background of modern sociology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Prerequisite(s): minimum 45 hours
SOC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
SOC	486	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3	SB	Pre-requisites: SOC 101 or 301
SOC	486	Contemporary Theory	Contemporary issues and crises in social theory with major focus on particular theorists. Ideological factors in theory, philosophical issues, the nature of theory and its relationship with methodology.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	SB	Pre-requisites: SOC 101 or 301
SOC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
SOC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6		Prerequisite(s): Barrett Honors student
SOC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6	L	Prerequisite(s): Barrett Honors student
SOC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-6	L	Prerequisite(s): Barrett Honors student
SOC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		
SOC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		
SOC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-6		Prerequisite(s): Barrett Honors student
SOC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-7		
SOC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-7		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
SOC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-3		
SOC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-3		
SOC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	501	Social Statistics	Understands and uses statistics for applications in the social sciences.	N	LEC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only CDE 501, SOC 501 or SOC 598 (Statistics for Social Sciences)
SOC	505	Applied Regression Analysis	Multiple linear regression topics relevant to social science data analysis. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 505; Graduate students only (degree and non-degree)
SOC	507	Categorical Data Analysis	Logistic regression and related topics relevant to categorical data analysis in social sciences. Computer applications.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 507; Graduate students only (degree and non-degree)
SOC	508	Structural Equation Analysis for the Social Sciences	Theory and application of structural equation modeling. Path analysis and latent variable models such as CFA, multiple group analysis and models for longitudinal data. Projects involve conducting analyses and writing results.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 508; Graduate students only (degree and non-degree)
SOC	509	Event History Analysis	Proportional hazards models and other methods for analyzing longitudinal data and establishing hazard rates of events for exploratory variables.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 509; Graduate students only (degree or non-degree)
SOC	512	Secondary Data Analysis	Works with existing data to produce a publishable article.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Pre-requisites: Credit is allowed for only FAS or SOC 512; Graduate students only (degree or non -degree)
SOC	515	Studies of the Family	Current developments in the study of marriage and the family.	N	LEC	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	516	Family Demography	Current developments in the study of family demography.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
SOC	523	Social Stratification	Overviews significant themes, issues, and bodies of work in the field of social stratification, a fundamental topic of sociological inquiry.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
SOC	533	Demographic Methods	Emphasizes methods and techniques in demographic analyses such as life tables.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		
SOC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	585	Sociological Theory	Analyzes major sociological theories, from classical to contemporary.	N	SEM	N	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	586	Capstone I	Professional exploration and goal specification for non-thesis capstone project.	N	PRA	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): 3 hours in any CDE, FAS or SOC 500-level course with C or better; Credit is allowed for only FAS 586 or SOC 586

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SOC	587	Capstone II	Develops professional expertise and area of focused interest.	N	RSC	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): FAS 586 or SOC 586. Credit is allowed for only FAS 587 or SOC 587
SOC	588	Capstone III	Applies developed expertise and knowledge to professional goal.	N	PRA	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): CDE 501 or SOC 501; CDE 531 or SOC 585; FAS 500 or SOC 500; FAS 587 or SOC 587; 12 additional graduate-level hours in CDE, FAS, and/or SOC; Credit is allowed for only FAS 588 or SOC 588
SOC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
SOC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		
SOC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	603	Perspectives in Sociological Inquiry	Provides an overview of core theoretical frameworks and associated analytic approaches in sociology. Taught by faculty members from across the university with sociological training or research interests, providing students with foundational and advanced research tools as well as introducing them to ongoing research at ASU, the distinctive contributions of sociological perspectives to inter- and transdisciplinary projects, and potential opportunities for research residency.	N	SEM	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	685	Applied Social Theory	Overviews main classical and contemporary theoretical paradigms and concepts in sociology and provides advanced training on using them to build empirical analytic models. Students identify theoretical perspectives appropriate for research questions, build corresponding conceptual frameworks, and formulates testable hypotheses. Seminar format and therefore students' active participation is expected.	N	SEM	N	GNA	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		
SOC	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		

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SOC	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SOC	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	Sanford School of Social and Family Dynamics	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	100	Introduction to Sustainability	Introduces basic concepts, global trends, and local responses, philosophical, ethical, and cultural dimensions.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	G	Pre-requisites: Not open to Sustainability majors or majors with a Sustainability concentration
SOS	100	Introduction to Sustainability	Introduces basic concepts, global trends, and local responses, philosophical, ethical, and cultural dimensions.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	G	Pre-requisites: Not open to Sustainability majors or majors with a Sustainability concentration
SOS	101	Introduction to Applied Mathematics for the Life and Social Sciences	Introduces quantitative techniques as applied to problems in the life and social sciences. Includes challenges like understanding the complexities of the human genome or the implications of globalization for infectious disease, human health, and economic stability.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	MA	Prerequisite(s): MAT 117 with C or better or Mathematics Placement Test with a score of 50% or higher; Credit is allowed for only AML 100 or SOS 101
SOS	110	Sustainable World	Lays the groundwork for understanding the fundamental geological, biological, and social processes that gave rise to the world we live in and continue to maintain its viability for human life.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	SB	
SOS	110	Sustainable World	Lays the groundwork for understanding the fundamental geological, biological, and social processes that gave rise to the world we live in and continue to maintain its viability for human life.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	SB	
SOS	111	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	(HU or SB) & G	Credit is allowed for only PUP 190 or SOS 111
SOS	111	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3	(HU or SB) & G	Credit is allowed for only PUP 190 or SOS 111
SOS	111	Sustainable Cities	Introduces technological, social, and cultural principles and innovations for cities under the notion of sustainability and sustainable development within the global, regional, and local contexts.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	(HU or SB) & G	Credit is allowed for only PUP 190 or SOS 111
SOS	117	Food System Sustainability	Food systems are particularly important for human societies to sustain and are also particularly vulnerable to multiple threats related to the interconnected sustainability challenges we face. Introduces the concepts and issues involved in food systems sustainability. Divided into four modules, the first three of which address the other systems with which food systems interact--socio-ecological, socio-cultural and socio-technical systems. The final module addresses the future of food systems. Teaches students about the main issues in food system sustainability and allows students to enhance their critical thinking skills by applying them to the many sustainability challenges associated food system activities via solutions-based learning including the social, ecological, economic and institutional dimensions.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		
SOS	171	The Thread of Energy	Follows the thread of energy through every aspect of our lives. Discusses the technical, social, legal, and policy contexts of all energy resources, including present and unconventional fossil fuels, nuclear power, and renewable resources. Addresses energy use throughout history, the influence of energy on quality of life, the role it plays in political strategies and environmental quality, how it shapes our neighborhoods and cities, its contribution to our personal comfort and national security, and how its importance is reflected in the worlds of business and the humanities. Its dual role is as a stand-alone introduction to energy, and as a first step to more advanced studies of energy in the natural, technical, and social sciences.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3	SB & G	Credit is allowed for only GCU or SOS 171
SOS	181	Technological, Social, and Sustainable Systems	Introduces the importance and role of technological, social, and sustainable systems in the modern world. Provides a framework for the theory and practice of sustainable engineering.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	HU	Credit is allowed for only SOS, FSE or CEE 181

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOS	182	Water Planet	Overview of the processes that control water supply to natural ecosystems and human civilizations. Part I introduces the basic science that helps us understand the water planet, including the hydrologic cycle, glaciers and ice; rivers, oceans, and natural hazards associated with water such as flooding, landsliding and tsunamis. Part II covers some of the management and resource allocation topics that face humanity today, including droughts, groundwater contamination, impacts on fisheries, conflicts over water, patterns of water use, and effects of global climate change on future water supplies. Uses water issues facing Arizona and California as examples.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	4	SQ	Credit is allowed for only GLG 108 or SOS 182
SOS	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-3		
SOS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		
SOS	201	Introduction to ASU and Sustainability	Introduces all ASU transfer students to the unique elements, culture, challenges and opportunities of the university.	N	LEC	N	YGB	School of Sustainability	School of Sustainability	1		Pre-requisites: Sustainability major; Minimum 24 hours
SOS	211	Calculus and Probability for the Life and Social Sciences	Introduces two of the most important and useful mathematical frameworks used to study natural and social phenomena: probability and calculus. Probability is used to describe an attitude of mind toward some proposition whose truth is not certain. Calculus is the branch of mathematics used to study the behavior and dynamics of functions: calculus is the mathematical study of change. Students gain the basic competence needed for applying probability and calculus when thinking about and research problems in sustainability. Focuses on and discusses applications, the meaning of important concepts, the origins of the rules of derivation and integration, and logic behind why the methods work.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3	MA	Pre-requisite: AML 100 or SOS 101 with B or better
SOS	212	Calculus-Based Modeling for the Life and Social Sciences	Introduces the evaluation and construction of mathematical models used in the life and social sciences. Includes the basic steps in developing a model, analyzing it, and testing it with actual data. Covers the first steps concerning how to use formal mathematical techniques including developing equation-based relationships, plotting graphs, linear regression, and solving equations using computer software.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): SOS 211; Credit is allowed for only SOS 212 or SOS 294 (Intro to Math Tools & Modeling)
SOS	220	Systems Thinking	Introduces systems thinking and complexity science, with an emphasis on analytical relevance for thinking about a myriad of issues involved in sustainability. Hones students' abilities to read critically, articulate their views clearly, and think about the many systems that shape their lives.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	230	Professional skills in Sustainability	Builds interpersonal competence, which is a key competence in sustainability. Students work on a small hands-on sustainability project in order to practice professional skills in four domains: teamwork, project management, self-directed and continuous learning, and stakeholder engagement. Students learn how to effectively collaborate in teams, use project management tools to achieve quality products in time, innovate their ways of learning, and create productive dialogue with stakeholders.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	1		Pre-requisites: PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	231	Careers in Sustainability	Aids in career exploration and development for School of Sustainability majors. Explores values, motivations and career options. Students learn how to approach the job search and how to communicate sustainability to employers; also how to prepare a quality résumé, cover letter, and gain a better understanding of the benefits of networking.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	1		Pre-requisites: BA or BS Sustainability major; Minimum 45 hours; PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	272	Environmental Justice	Surveys key environmental justice issues and movements. Uses interdisciplinary social science perspectives to review and analyze U.S. and international case studies.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3	SB	Credit is allowed for only ASB 272 or SOS 272
SOS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: SOS 101 or AML 100 with C or better
SOS	300	Advanced Concepts and Integrated Approaches in Sustainability	Integrates disciplinary contributions to sustainability, teaches advanced concepts in sustainability, and explores methods for identifying sustainability challenges and generating solutions. Focuses on diversity of sustainability research, and integrates specialized approaches in sustainability. Advanced concepts in sustainability, including systems-thinking, complexity, nonlinearity, cascading effects, coupled natural-human systems, governance, future thinking, unintended consequences, normative concerns, transformation, power, participation, and equity.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisite: Sust minor with SOS 100 (or 110 or SOS 111/PUP 190) with C or better; 6 hrs from two Sust themes OR Civil and Environ Engineering major with a Sust conc OR Tourism major with a Sust Tourism conc OR Interdisc Studies major with a Sust conc
SOS	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOS	309	History and Philosophy of Sustainability	Examines sustainability issues in a broadly interdisciplinary way, but with a special emphasis on humanities perspectives, focusing on human ideas, values and institutions as they have evolved over time.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 25 hours; Credit is allowed for only HST 308 or PHI 322 or SOS 309 or BIO/HST/PHI/SOS 394 (History & Philosophy of Sustainability)
SOS	310	Equity, Justice and Sustainability	Introduces the "social justice" aspects of sustainability science and practice. Sustainability problems are a special class of problems arising from a complex set of issues spread across time, space and institutional scales. These problems can threaten underlying social, economic and ecological systems which are highly intertwined and interdependent. Explore these issues through study of both theory and practice.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	311	Future Thinking and Strategies	Offers a critical introduction to future-oriented theories and methods. Explores anticipation in contemporary society through a series of cases studies that probe real-world sustainability issues and how the future is created and contested. By characterizing and critiquing future-oriented practices across governmental, academic and private sectors, offers a critical perspective on different methodological approaches and the implications of their use.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: PUP 190 (or SOS 111) and SOS 110 with C or better
SOS	314	Basic Energy Science	Explains the concepts of the science of energy for those without a background in engineering. Allows non-engineering students to better grapple with the issues that surround sustainable energy issues. Covers the most common methods of electricity generation as well as renewable technologies and fuels.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only SOS 314 or SOS 394 (Basic Energy Science)
SOS	315	Energy Policy	Examines the regulation of energy production and consumption in the U.S. at the federal, state and local levels. Identifies energy stakeholders in the U.S. and examines how they have shaped U.S. policies around energy. Explains past and current U.S. energy policies and how energy needs have shaped U.S. relations with other countries. Compares U.S. energy policies to that of other countries in the world, as well as how Arizona's energy policies compare to other states within the U.S.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only PAF 394 (Energy Policy) or POS 394 (Energy Policy) or SGS 315 or SGS 394 (Energy Policy) or SOS 315 or SOS 394 (Energy Policy)
SOS	320	Society and Sustainability	Establishes an understanding of the human, social, and cultural dimensions of sustainability from multi- and interdisciplinary perspectives and at a variety of spatial and temporal scales.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	L or SB	Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	321	Policy and Governance in Sustainable Systems	Explores the wide array of political questions that are raised when we view the Earth's environment as an integrated, global system.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	322	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Sustainability or Business (Sustainability) major; SOS 110 and 111 (or PUP 190) with C or better OR Non-Sustainability major with 2 courses with C or better: SOS 100, 110, 111 (PUP 190), SOS 300
SOS	323	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better

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SOS	324	Sustainable Energy, Materials, and Technology	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	325	The Economics of Sustainability	Applies economic principles to the allocation of environmental goods and services, external environmental effects, and environmental public goods; decision-making under uncertainty, adaptation to and mitigation of environmental change.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	326	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning, and the provisioning of ecosystem services; use of economic and other social science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	327	Sustainable Food and Farms	Food systems and sustainability. Theories of food security, rural livelihood sustainability, and food sovereignty. Critically examines the social, ecological, economic, and institutional dimensions of the many sustainability challenges associated food system activities (production, processing, distribution, consumption, waste). Students develop a food system framework and apply knowledge to an assessment of the sustainability of one aspect of the local food system.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	328	Sustainability and Enterprise	Examines the evolving interface between sustainability and human enterprise. Explores and reviews key fundamental concepts in the sustainability arena, including economic and scientific drivers and select historical and structural aspects that create the current context for the enterprise and sustainability interface found today. Delves into more specific case studies of attempts by current businesses to become "greener" and "more sustainable," exploring challenges and opportunities that are commonly found as well as how decisions are often made in today's business settings and by whom. Explores alternative enterprise models and examples of businesses that are using the current context to redefine the sustainability and enterprise. Given the emergent nature of this effort, uses timely and "real-world" examples from current events where possible. Explores and applies an integrated approach to sustainability and enterprise. Readings include popular texts, original research articles and current events.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisite: Sustainability or Business (Sustain) major; SOS 110 and 111 (or PUP 190) with C or better; OR Non-Sustain major with 2 courses: SOS 100, 110, 111 (PUP 190), SOS 300 with C or better; Credit for only SOS 328 or 394 (Sustain and Enterprise)
SOS	353	Perspectives on the Western Diet: Food, Health and Sustainability	Hybrid course covering political, ethical, social and cultural issues inherent in the U.S. food system. Topics include examination of U.S. food guidance; the food system and food environment; the history of food and farm policy; food security and aspects of sustainability in relation to food system impacts on the health of humans, society and the environment.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only NTR 353 or NTR 394 (The Western Diet: Food, Health, & Sustainability) or SOS 353
SOS	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	L or SB	Pre-requisites: ENVR 102 (or ENG 105/108) with C or better; ASB 100 (or 102), SOC 101, SOS 110 or SSH 100 with C or better; Credit is allowed for only ASB, SOC, SOS or SSH

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SOS	371	Inequality and Sustainability	Efforts to shift societies onto a sustainable trajectory are facing profound challenges from the degree and dynamics of global inequalities of income, wealth, and life chances. Data and ideas from a spectrum of disciplines are employed to examine, analyze, and criticize the prospects for redressing global inequalities in a sustainable manner.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: ENG 101, 105 or 107 with C or better; Minimum 45 hours completed; Credit is allowed for only ASB or SOS 371; Students who have received credit for ASB or SOS 394 (Inequality and Sustainability) may not enroll in SOC 371
SOS	372	Earth Science in Arizona and the Southwest	Place-based application of geology and allied Earth system sciences to explore and interpret the landscapes, rocks, geologic history, climate, resources, and natural hazards of Arizona and the Southwest. Integrates case studies of the interactions of Southwest cultures and societies (past and present) with Earth systems, and inquiry into the future sustainability of Southwestern communities and lifeways.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; GLG 101 (or GLG 102 or 110 or GPH 111 or SES 121); MAT 117 or higher. Credit is allowed for only GLG 301 or GLG 394 (Earth Sci in AZ & SW) or SOS 372
SOS	373	Minerals, Energy, and Society	Studies the science and technology of the minerals and energy industries, how these industries interact with society, and how these interactions may change in the future.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre-requisites: ENG 101 (or 105 or 107) with C or better; GLG 101 (or 102 or 110) or GPH 111 or SES 121 or Junior standing; Credit is allowed for only GLG 304, 394 (Minerals, Energy & Society) or SOS 373
SOS	374	Earth's Critical Zone	The Earth's near surface environment (the "critical zone") supports most life and is the dynamic interface between the solid Earth and its fluid envelopes where much of the geologic record is produced. We now know that we face rapid climate change and the consequences of changes in land use, water resources, and ecosystems. Critical to planning a response to, or mitigation of, environmental change is understanding how the Earth surface works. Focuses on how changes to the environment manifest themselves in the critical zone--in the form and function of the Earth's surface (landforms, water resources, soils, ecosystems). Offers a quantitative introduction to the form and function of the processes impacting the Earth's critical zone to build an understanding of the interactions of physical, chemical and biotic processes in shaping the surface and determining fluid, solute and sediment fluxes.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisites with C or better: GLG 101 & 103 or SES 121 & 123; MAT 170 or 171 or 210 or 251 or 265 or 270; PHY 101 or 111 or 121 or 150 or CHM 101 or 107 or 113 or 114 or BIO 100 or 181 or 182 or 281 or 282. Credit is allowed for only GLG 327 or SOS 374
SOS	375	Humans and the Environment: What's the Connection?	How do diverse human groups across global ecosystems (desert, tropics, arctic, alpine, urban) interact with and adapt to their environments and how are these relationships changing in response to globalization, climate change and other social, historical and political-economic drivers? Cultures situated in landscapes are the basis for an incredible global diversity of worldviews and behaviors that in turn affect how humans experience and "use" their environments. This course will provide an introduction to current and benchmark literature and methods in environmental and ecological anthropology that address people-environment interactions.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	(L or SB) & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 375 or SOS 375 or ASB 394 (People: Environment Connections in Anthropology) or ASB 494 (Ecological and Environmental Anthropology)
SOS	385	Business and Sustainability I	First of two related courses; provides a general overview of sustainability topics that are important to business today with a focus on consumer products and services and the social and environmental impact of the organizations that provide them.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): minimum 60 hours; SCM 300 or SOS 110 with C or better; Credit is allowed for only SCM 385 or SOS 385
SOS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-4		Pre-requisites: Sustainability or Business Sustainability major; SOS 110 and SOS 111 (or PUP 190) with C or better; OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111 (or PUP 190), SOS 300 with C or better
SOS	414	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3	SB	Prerequisite(s): ASB 100, 102, 222, 223, AML 100, ASM 104 or SSH 100 with C or better; minimum 45 hours; Credit is allowed for only ASM 414 or SOS 414 or SSH 414

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SOS	421	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): BIO 320 with C or better. Credit is allowed for only BIO 421 or BIO 521 or SOS 421 or SOS 521
SOS	424	Dynamic Modeling in Social and Ecological Systems	Introduces the development and use of dynamic mathematical models to study social and ecological phenomena.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	4		Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit allowed for only ASM, BIO or SOS 424
SOS	429	Human Impacts on Ecosystem Functioning	Explores our current understanding of how humans are impacting the functioning of ecosystems and how changes in ecosystems would affect provisioning of ecosystem services and ultimately human well-being. The two primary drivers of ecosystem change are growth of the human population and increased consumption per capita. These drivers affect the Earth's cycles of carbon, nitrogen and water, as well as regional and global-scale changes in biodiversity and climate. Includes an in-depth discussion of scenarios for the next 50 and 100 years, which articulate costs and benefits of alternative development pathways in terms of climate change, food production, clean water and biodiversity. Scenarios of change in biodiversity lead to the topic of the consequences of biodiversity change for the functioning of ecosystems from the point of view of their productivity and stability. Human activities have disrupted several biogeochemical cycles including nitrogen and carbon cycles.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): BIO 320 (or SOS 326); Credit is allowed for only BIO 429, BIO 528, SOS 429, SOS 528, or SOS 494/598 (Human Impacts on Ecosystem Functioning), or BIO 494/598 (Human Impacts on Ecosystem Functioning)
SOS	433	Sustainable Water Use	A clustered learning network on the problem of water scarce regions, includes insights from hydrology, engineering, biology, economics and public policy. May be repeated once for credit.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3		
SOS	434	People and Nature: Ecosystem Services	Explores the drivers of biodiversity change and the consequences they have for human wellbeing, taking both an ecological and an economic perspective.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Pre-requisites: MAT 117 or SOS 101; junior standing. Credit is allowed for only BIO 434, SOS 434, or BIO 494 (Ecosys Servcs:People&Nature)
SOS	435	U.S. Energy: Pathways to Sustainability	Organized around four mores of energy and environmental policy: energy supply, technology for efficiency, environmental sustainability and infrastructure. Also incorporates the wider context of energy and the environment in the society in which we live, taking into account our historic past and future potential life experience with energy availability and use. Through critical examination and analysis of these mores, students apply knowledge to the creation of a comprehensive energy and environmental policy plan that addresses past conditions, present states and future possibilities.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Credit is allowed for only SOS 435 or SOS 494 (Energy and Environmental Policy) or SOS 494 (US Energy: Pathways to Sustainability) or SOS 555 or SOS 594 (Energy & Environmental Policy)
SOS	441	Mathematical Concepts and Tools in Sustainability	Explores various mathematical analysis and models pertinent to sustainability science drawn from both social and natural sciences and introduced in a problem-based context. Demonstrates basic concepts from game theory such as pure-strategy and mixed-strategy Nash equilibriums in such classic games as prisoner's dilemma, hawk-dove, coordination. Explores the evolutionary dynamics of these games through the replicator equations. Studies important concepts of stability and regime shift for selected problems. Also discusses some basic solution concepts in cooperative game theory (depending on interest and time).	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s) with C or better: AML 253, or SOS 210(or SOS 294 Intro to Math Tools & Modeling). Credit is allowed for only AML 441 or 494 (Math Concepts & Tools in Sustainability) or SOS 441 or 494 (Mathematical Concepts and Tools in Sustainability)
SOS	442	Sustainability Indicators	Measures of sustainability (or sustainable development), focusing on sustainability indicators and indices (SIs). Discusses key conceptual and methodological issues on gauging sustainability and examines a wide range of sustainability indicators and indices that have been commonly used at global, regional and local scales.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only SOS 442, 494 (Sustainability Indicators and Indices), 542 or 598 (Sustainability Indicators and Indices)
SOS	447	Gender, Culture, and Development	In-depth analysis of gender roles related to health, family, work, education and politics in developing countries.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	(L or SB) & G	Prerequisite(s): WST 100 or 300 or minimum 45 hours; Credit is allowed for only SGS 454 or SOS 447 or TCL 447 or WST 447 or TCL 598 (Gender, Culture & Development)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SOS	456	Human Rights and Sustainability	Addresses the connections between human rights and environmental sustainability. Legal and scholarly approaches linking these areas present new perspectives for addressing some of the greatest challenges of our time, given the important resource dimensions of economic and social rights and the human dimensions of sustainability. Yet human rights demands and environmental concerns are not always in harmony. Explores these tensions and opportunities by examining three substantive areas: urban ecology and human rights, the human right to food, and the human rights implications of extractive industries such as oil and mining. Following an introduction to the key concepts of human rights and sustainability, explores the substantive areas through theoretical and empirical readings on each; grassroots accounts of struggles over environment-related human rights; and selections from literature and film that illustrate the environmental justice issues at stake.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3	(L or SB) & G	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 36 hours. Credit is allowed for only JUS 456, SOS 456, JUS 394 (Human Rights & Sustainability), or JUS 497 (Seminar in Human Rights)
SOS	463	Political Ecology of the Border	Examines the political ecology of the human-environment relationship in Mexico and on the U.S.-Mexican border. Through case studies, students learn about the most pressing environmental issues facing human populations and their communities on both sides of the U.S.-Mexican border and the various ways in which these issues are dealt with.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3	SB & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 463 or SOS 463 or TCL 443
SOS	465	Sustainable Urbanism	History, theory, principles and practice of New Urbanism, including current critiques and counter-critiques of both movements.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s) with C or better: Sustainability major in a sustainability concentration: SOS 110, 111 (or PUP 190); minimum 45 hours. All other majors: PUP 301. Credit is allowed for only PUP 465 or PUP 565 or SOS 465
SOS	474	Collaborative Design Development I	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 464 or IND 464 or MGT 464 or SOS 474
SOS	475	Collaborative Design Development II	Team-based product development course featuring applied projects. Open to senior students from business, engineering, design, and other disciplines.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	5	L	Prerequisite(s): minimum 45 hours; Credit is allowed for only GRA 465 or IND 465 or MGT 465 or SOS 475
SOS	480	Achieving Career Success in Sustainability	The need for sustainability-minded workers and leaders has never been more important than right now. Yet sustainability as a career track is still very new and means different things to different people. Challenges students to explore their own ambitions and "personal brands," to shape their work personas, to model the behaviors and competencies that build long-term career success, and to uncover the sustainability potential of any job, whether or not "sustainability" is in the job title.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Pre/Co-requisite: SOS 110, 111, PUP 190 with C or better if completed; Credit is allowed for only SOS 480 or 494 (Achieving Career Success in Sustainability)
SOS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): minimum 45 hours
SOS	485	Business and Sustainability II	Second of two related courses focusing on the environmental, social and economic dimensions of sustainable technologies and exposes students to a variety of related concepts and theories. Describes technology hotspot analysis, life cycle assessment and a variety of models of technology forecasting and diffusion.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): SCM 385 or SOS 385 with C or better; Credit is allowed for only SCM 485 or SCM 494 (Business and Sustainability II) or SOS 485
SOS	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	School of Sustainability	School of Sustainability	1-6		Prerequisite(s): Barrett Honors student
SOS	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	School of Sustainability	School of Sustainability	1-6	L	Prerequisite(s): Barrett Honors student
SOS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		Prerequisite(s): Sustainability or Business Sustainability major; SOS 110 with C or better; SOS 111 or PUP 190 with C or better, OR Non-Sustainability major with 2 of the following courses: SOS 100, SOS 110, SOS 111, PUP 190, SOS 300 with C or better

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SOS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	School of Sustainability	School of Sustainability	1-7	L	Pre-requisites: Sustainability major; Minimum 9 hours of SOS 320, 321, 322, 323, 324, 325, 326, 327, 328 (or SOS 394 ST: Sustainability and Enterprise), 465 (or PUP 465)
SOS	499	Individualized Instruction		Y	SEM	Y	Z1	School of Sustainability	School of Sustainability	1-3		
SOS	501	Foundations of Sustainability	Provides a knowledge base to help students to succeed in the online MSL program. Supports MSL students in the four learning threads of the program, which include communications and sustainability, global context, strategic sustainability and sustainability leadership.	N	LEC	N	YGB	School of Sustainability	School of Sustainability	1		Prerequisite(s): Sustainability Leadership MSL student; Corequisite(s): EMS 502; EMS 503
SOS	502	Tools and Techniques for Sustainability	Forthcoming federal legislation and Executive Orders will set new standards for operational efficiencies, energy and water conservation, use of renewable energy sources, and waste minimization in the Army and Army National Guard. Tools and Techniques for Sustainability presents a systems approach to meet those standards by integrating principles of sustainability into existing Army policies, procedures, and reporting systems. The course features the Framework for Sustainable Strategic Development as an organizing framework to analyze systems and develop strategic plans to move toward sustainability.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Global Sustainability Leadership certificate student; Pre-or co-requisite: SOS 501
SOS	503	Operationalizing Sustainability	Sustainability is a means to addressing the significant physical, statutory, and regulatory requirements that affect and can encumber the Army's ability to train Soldiers at ranges and maneuver areas across the United States. With hundreds of imperiled species proposed for federal protection in the next few years, threatened and endangered species and sensitive habitat will continue to be a concern. Participants in Operationalizing Sustainability will explore how innovative training practices, improved land and natural resource management practices, and enhanced community relationships can ensure continued access to the land and water assets needed to maintain readiness and can help to 'win hearts and minds.' Proactive approaches to promoting well-being for soldiers, families, civilians, neighbors, and communities, both at installations and downrange, are stressed.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Sustainability Leadership certificate student; SOS 501; SOS 502
SOS	504	Energy and the Built Environment	Provides practical approaches to applying sustainability principles and practices to public works activities, housing, facilities operations and management, military construction, master planning, and energy management. Presents approaches to implement high-performance sustainable building design, construction, operation and management, maintenance, and deconstruction. Also covers cost-effective, innovative strategies, such as highly reflective and vegetated roofs, to minimize consumption of energy, water, and materials.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Sustainability Leadership certificate student; SOS 501; SOS 502
SOS	505	Sustainable Military Acquisition and Logistics	Sustainable Military Acquisition and Logistics provides practical approaches to applying sustainability principles and practices to all areas of procurement, acquisition, and logistics. Through weapon systems acquisition or procurement of installation goods and services, the Army hopes to drive innovation and promote sustainability while reducing costs. The inclusions of energy and resource efficiency and other sustainability criteria in acquisition and procurement decisions can reduce long-term operation and maintenance costs, conserve resources, and continue to expand innovation throughout the supply chain. This course introduces the application of sustainability principles to procurement and acquisition, transportation, and materiel. The use of life cycle analysis and multicriteria assessment for all 10 classes of supply is also featured significantly in the course.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): Sustainability Leadership certificate student; SOS 501; SOS 502
SOS	510	Perspectives on Sustainability	University-wide course covering basic perspectives on sustainability. Uses case studies; faculty and students from engineering, architecture, social sciences, and natural sciences exchange ideas on the major challenges faced in forming a sustainable future at the local, national, and global levels.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): School of Sustainability graduate students
SOS	511	Transformational Sustainability Research	Enables students to describe, position, compare, and evaluate the key features, strengths, and weaknesses of sustainability research and problem-solving methods. Introduces an integrated methodological framework for sustainability research and problem solving that maps and structures families of methods from description/analysis to strategy building. Addresses all major families of sustainability methods, critically evaluating their specific function, structure, underlying assumptions, validity, reliability, strengths and weaknesses against this overall framework. The method families include not only scientific methods but also practical problem-solving techniques. Integrates two training programs, one on teamwork skills, the other on participatory collaboration with stakeholders.	N	LEC	Y	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): School of Sustainability graduate students

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SOS	512	Sustainable Resource Allocation	Microeconomic principles of resource allocation applied to environmental goods and services, external environmental effects and environmental public goods; decision making under uncertainty, adaptation to and mitigation of environmental change.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	513	Science for Sustainability	Key ideas, concepts and principles of sustainability science that focuses on the dynamic relationship between society and nature. Examines the structure, functioning and dynamics of coupled human-environment systems (CHESs) on local, regional and global scales with a systems perspective. Covers major sustainability science issues including: fundamentals of ecology, energy, agro-food systems, renewable and non-renewable resource systems, economic development and human well-being.	N	SEM	Y	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	514	Human Dimensions of Sustainability	Concepts and definitions of the human dimensions of sustainability; the role of attitudes and values in shaping sustainability goals, practices, and programs; the diversity of values and socio-cultural contexts relating to sustainability; bottom-up and top-down sustainable policy development, social data collection methodologies.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only GCU or SOS 514
SOS	515	Industrial Ecology and Design for Sustainability	The conceptual, ethical, and practical challenges in the design, manufacture, and life cycle performance of products; environmental evaluation via materials flow analysis and life cycle assessment; global economic, environmental, cultural, and social aspects of competitive and functional product development and manufacture.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		
SOS	516	Science, Technology and Public Affairs	Explores the political, economic, cultural, and moral foundations of science and technology policy and governance in democratic society.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 515 or GLG 547 or HSD 515 or PAF 547 or SOS 516
SOS	517	Sustainability and Enterprise	Examines the evolving interface between sustainability and human enterprise. Explores and reviews key fundamental concepts in the sustainability arena, including economic and scientific drivers and select historical and structural aspects that create the current context for the enterprise and sustainability interface found today.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SOS 517 or SOS 591 (Sustainability and Enterprise)
SOS	518	Uncertainty and Decision Making	Knowledge is always incomplete, yet decisions must be made. Explores uncertainty and its relation to decision making, with a particular focus on the ways that science and science-derived information is applied with the intent of improving decisions. Explores the many meanings and origins of uncertainty, using theoretical and case-based approaches. A central theme is the relation among uncertainty, scientific prediction, and decision making, especially in politically charged issues, for example as related to management of the environment. Ultimately understands how effective decisions can be made in the face of inevitable uncertainties and contested knowledge.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 517 or BIO 517 or BIO 591 (Uncertainty & Decision Making) or HSD 517 or POS 527 or SOS 518
SOS	520	Research Design and Methods for Sustainability	Provides skills and knowledge that help students design their own research and place it in the context of other disciplines or bodies of work. Not a "methods" class because no specific method is taught in depth. Instead, it is an initial introduction to the research design process and is intended as a platform through which students develop the skills to appreciate and contextualize the approaches taken (and methods used) by others, and during which they can identify the types of specific training they require as they define their own research.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Pre- or corequisite(s): SOS 510; Credit is allowed for only SOS 520 or SOS 598 (Intro Design/Mthds)
SOS	521	Landscape Ecology	Discusses how landscape heterogeneity interacts with ecological processes, and implications for biodiversity conservation, resource management, and landscape and urban planning.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only BIO 421 or BIO 521 or SOS 421 or SOS 521
SOS	525	Social-Ecological-Technical Systems (SETS): Domains and interfaces	Guide students in developing an integrated approach and framework for thinking about complex systems in a sustainability context. Presents overviews of content, theories and methods from each of the SETS domains (Social, Ecological and Technical Systems); primarily focuses on how to bring these domains together. Explores the SETS interfaces (intersections) from an integrated perspective and equips students to make those linkages in their research and in subsequent elective courses. Each semester students use a sustainability problem or theme to explore the concepts presented in the course.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	527	Environmental Ethics and Policy Goals	Advanced seminar in applied environmental ethics, focusing on the most influential and policy-relevant approaches in the field of environmental ethics. Core topics include the historical and philosophical foundations of alternative understandings of environmental responsibility; the debate over utility and preservation in environmental policy argument; and the interplay of ethical principles, scientific knowledge and societal priorities in environmental decision making. Consideration of the ethical and value dimensions of biodiversity conservation, wilderness protection, environmental valuation, environmental activism, climate change and sustainability, among other challenges.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only BIO 527 or SOS 527 or BIO 591 (Environ Ethics & Policy Goals)

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SOS	528	Human Impacts on Ecosystem Functioning	Explores our current understanding of how humans are impacting the functioning of ecosystems and how changes in ecosystems would affect provisioning of ecosystem services and ultimately human well-being. The two primary drivers of ecosystem change are growth of the human population and increased consumption per capita. These drivers affect the Earth's cycles of carbon, nitrogen and water, as well as regional and global-scale changes in biodiversity and climate. Includes an in-depth discussion of scenarios for the next 50 and 100 years, which articulate costs and benefits of alternative development pathways in terms of climate change, food production, clean water and biodiversity. Scenarios of change in biodiversity lead to the topic of the consequences of biodiversity change for the functioning of ecosystems from the point of view of their productivity and stability. Human activities have disrupted several biogeochemical cycles including nitrogen and carbon cycles.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only BIO 429, BIO 528, SOS 429, SOS 528, or SOS 494/598 (Human Impacts on Ecosystem Functioning), or BIO 494/598 (Human Impacts on Ecosystem Functioning)
SOS	530	International Development and Sustainability	Historical roots of the idea of development; economic theories of growth and their implications for sustainability; interrelationship among population growth, food security, poverty, inequality, urbanization, technological change, international trade, and environmental change at local, regional and global scale.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	531	Achieving Career Success in Sustainability	The need for sustainability-minded workers and leaders has never been more important than right now. Yet sustainability as a career track is still very new and means different things to different people. Students explore their own ambitions and "personal brands," to shape their work personas, to model the behaviors and competencies that build long-term career success, and to uncover the sustainability potential of any job, whether or not "sustainability" is in the job title.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	1		Prerequisite(s): SOS 510; Credit is allowed for only SOS 531 or SOS 598 (Achieving Career Success in Sustainability)
SOS	532	Sustainable Urban Dynamics	Human and physical processes shaping urban ecologies and environments; human-environment interactions in the context of an urban region; effect of the institution and regulatory framework on the ability of social and urban-ecological systems to be resilient and sustainable; urban design, materials, transport, planning, and regulation.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): (degree- or nondegree-seeking graduate student; Credit is allowed for only ASB 533 or SOS 532
SOS	533	Sustainable Water	Hydrological, legal, political, and ecological implications of alternative water management strategies; effect of institutional and regulatory frameworks; changes in water demand and supply due to human (population growth, economic changes) and natural (drought, climate change) factors	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	534	Sustainable Energy and Material Use	Sustainable engineering; overall energy needs and impacts; thermodynamics, heat transfer, and fluid mechanisms; atmospheric energy systems; field investigation; current and future urban energy systems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	535	Sustainable Ecosystems	How human activities and management practices alter biodiversity, ecosystem functioning and the provisioning of ecosystem services; use of economic and other social-science perspectives to estimate the value of ecosystem services; evaluation of options for achieving the sustainable flow of services from ecosystems.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ELS 535 or SOS 535
SOS	536	Food System Sustainability	Broad view of food systems and the sustainability of such systems. Concepts, theory, methods and empirical analyses from diverse disciplines, including agro-ecology, agronomy, political science, agricultural economics, geography, anthropology, and food and nutrition studies. Students choose a theme that is a core concern to food system sustainability and pursue that theme in diverse course activities and through engaging in the broader food system we are embedded in as residents in the Phoenix area. Culminates with a term paper/project that synthesizes experience and knowledge, providing a unique perspective on their role in food systems.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	540	Statistical Modeling for Sustainability	Equips students with sufficient knowledge of statistical theory and methods of applied data analysis to begin conducting empirical analyses in their domains of interest; bring students to a high level of competency in using a cutting-edge statistical software package (Stata) for data management and data analysis tasks; expose students to applications of statistical methods in the economics/policy/social science sustainability literatures in order to develop an understanding for how statistical tools are operationalized in the research world; and develop an appreciation for the careful synthesis of social and natural science theory, knowledge of data and its limitations and command of statistical tools that constitute quality empirical research.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	4		Prerequisite(s): degree- or non-degree-seeking graduate student; Credit allowed for only AML, ESS or SOS 540

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SOS	541	Mathematical Concepts and Tools in Sustainability	Explores various mathematical analysis and models pertinent to sustainability science drawn from both social and natural sciences and introduced in a problem-based context. Demonstrates basic concepts from game theory such as pure-strategy and mixed-strategy Nash equilibriums in such classic games as prisoner's dilemma, hawk-dove, coordination. Explores the evolutionary dynamics of these games through the replicator equations. Studies important concepts of stability and regime shift for selected problems. Also discusses some basic solution concepts in cooperative game theory (depending on interest and time).	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit allowed for only AML 494 (Math Concepts & Tools in Sustainability), AML 541, SOS 494 (Math Concepts & Tools in Sustainability), SOS 541 or SOS 598 (Math Concepts & Tools in Sustainability)
SOS	542	Sustainability Indicators	Measures of sustainability (or sustainable development), focusing on sustainability indicators and indices (SIs). Discusses key conceptual and methodological issues on gauging sustainability and examines a wide range of sustainability indicators and indices that have been commonly used at global, regional and local scales.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only SOS 442, 494 (Sustainability Indicators and Indices), 542 or 598 (Sustainability Indicators and Indices)
SOS	545	Organizations, Sustainability & Public Policy	Sustainability concerns are fast becoming a strategic issue for organizations in all sectors. In the last ten years, numerous organizations have completely redefined their business strategies in line with principles of sustainability by balancing the requirements for economic development, environmental quality and social justice, and governments worldwide are developing programs and policies that encourage these activities. Explores the connections between organization strategy--especially within the private sector, sustainability and public policy. Through a combination of practical cases, readings and lectures, class sessions engage students in discussions aimed at developing sustainability assessment models. Additionally, students apply new strategy tools that incorporate principles of proactive environmental management and social responsibility designed to enhance the public good.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate; Credit is allowed for only PAF or SOS 545
SOS	546	Life Cycle Assessment for Civil Systems	Covers fundamental and advanced concepts of the life cycle assessment framework exploring products, services, activities and infrastructure systems. Examines key concepts for system boundary selection, functional unit selection, inventorying, impact assessment and interpretation stages with a focus on energy and environmental assessment. Advanced concepts include allocation of effects, problem formulation for assessing footprints versus decisions or policies, and assessment of infrastructure interdependencies and supply chains. Exposes tools and data sources and presents approaches for evaluation of sensitivity and uncertainty of results. Encourages students with broad sustainability interests to enroll and explore how life cycle assessment can aid their work by shifting their views from direct to cradle-to-grave effects.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only CEE 506 or CEE 598 (Lifecycle Assessment) or SOS 546 or SOS 598 (Lifecycle Assessment)
SOS	547	Urban Infrastructure Anatomy and Sustainable Development	Understanding how built environment infrastructure systems interact with ecosystem services is critical for policies and decisions directing urban sustainability. Brings together students from several disciplines to develop a semester-long research project focused on a particular urban sustainability problem in Phoenix. During the semester, students are given background on how infrastructure systems work and are interdependent, and explore tools and methods for urban sustainability assessment with peers from several disciplines. As a class, students evaluate a particular urban sustainability problem for Phoenix, interact with local policy and decision makers in developing solutions, and present their findings at the end of the semester to the ASU community.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit for only CEE 507 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or PUP553 or 598(Urban Infrastruct Anatomy/Sustainable Dev) or SOS547 or SOS598 (Urban Infrastr Anatomy & Sustain Dev)
SOS	552	Advanced Earth Systems Engineering and Management	Advanced introduction to earth systems engineering and management, and the technological, economic and cultural systems underlying the terraformed Earth.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Credit is allowed for only CEE 581 or SOS 552
SOS	553	Ecological Anthropology	Focuses on the theories and methods that environmental anthropology (EA) can bring to bear on human-environmental questions across a variety of social-ecological systems. Explores how environmental anthropologists approach these complex challenges, and considers the role of EA within larger interdisciplinary approaches for understanding development, adaptation, vulnerability, and change.	N	LEC	N	OPT	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only ASB 530 or SOS 553

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SOS	555	US Energy: Pathways to Sustainability	Organized around four mores of energy and environmental policy: energy supply, technology for efficiency, environmental sustainability and infrastructure. Also incorporates the wider context of energy and the environment in the society in which we live, taking into account our historic past and future potential life experience with energy availability and use. Through critical examination and analysis of these mores, students apply knowledge to the creation of a comprehensive energy and environmental policy plan that addresses past conditions, present states and future possibilities.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit for only SOS 435, SOS 494 (Energy & Environ Policy) or SOS 494- US Energy: Pathways-to Sustain or SOS 555 or 594 (US Energy: Pathways to Sustainability) or SOS 594 (Energy & Environmtl
SOS	570	Fundamentals of CAS Science	Many phenomena of critical relevance to human society are dynamic systems that change over individual and evolutionary time scales, and are highly interactive, both within and between systems. That is, they are complex adaptive systems (CAS), and thus share isomorphic properties like near-decomposability, hierarchical organization, scale-free networks, self-organized criticality, and emergence. Fundamentals of CAS science explores the diverse, interdisciplinary applications of a complex adaptive systems across the social, behavioral, and life sciences.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only ASM, BIO, or SOS 570
SOS	577	Interdisciplinary Writing Seminar	If you want your work to make a difference in the world, you need to be able to communicate your ideas to diverse audiences in a way that is interesting and accessible. Teaches students to write clearly, persuasively, and ethically to people in your discipline, in other disciplines, and outside academia. Approaches writing as a way to think critically and refine ideas, as well as to communicate them to others.	N	SEM	Y	GNA	School of Sustainability	School of Sustainability	2		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is only allowed for ESS 577 or SOS 577 or SOS 598 (Interdisciplinary Writing) or SOS 598 (Writing Seminar)
SOS	578	Writing Papers for Publication	Students produce a draft of a research paper for submission to a peer-reviewed journal. Analysis of exemplary published papers and narrative strategies, along with peer review, support the writing process.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	2		Prerequisite(s): SOS 577 or SOS 598 (Interdisciplinary Writing Seminar). Credit is allowed for only SOS 578 or SOS 598 (Writing Papers for Publication)
SOS	579	Proposal Writing	Proposal writing and reviewing with a focus on the NSF dissertation improvement grant format. Discusses professional development.	N	SEM	N	OPT	School of Sustainability	School of Sustainability	3		
SOS	581	Synthesis for Sustainability Research	Aimed at students who have already gained training in content areas and are writing their research or projects for publication in peer-reviewed journals or other outlets. Challenges students to link their own research to other disciplines and the broader field of sustainability research.	N	RSC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): SOS 510; SOS 520; SOS 525; Corequisite(s): SOS 596 or 599
SOS	582	Project Management for Sustainability	Provides exposure to the tasks and challenges facing project managers, i.e., those people responsible for the vital function of managing complex projects in sustainability in today's environment. Successful project managers have the abilities and skills to simultaneously manage people, schedules, risks, and resources while delivering successful outcomes. This course is a prerequisite for the MSUS culminating experience.	N	LEC	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): Graduate Sustainability major; SOS 510. Pre- or corequisite: SOS 511
SOS	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	589	Community of Graduate Student Scholars	Provides the opportunity to develop new skills, to foster cohort bonding, to interact with other students and faculty, and to network and build support with the alumni network. Overseen by a faculty member but is primarily directed by the students. All MA or MS students take this course each semester. Although there is an overall structure as demonstrated in the course schedule, the specific content of the course varies each semester depending on the needs and interests of the students.	N	LEC	Y	YGB	School of Sustainability	School of Sustainability	1		Prerequisite(s): School of Sustainability graduate students
SOS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	School of Sustainability	School of Sustainability	1-12		
SOS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	STO	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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SOS	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	School of Sustainability	School of Sustainability	1		
SOS	596	Scientific Paper	MA/MS students are required to devote six hours to conducting research and writing a scientific paper of publishable quality based on the research. The paper topic, the research methodology, and the written format must be approved by the supervisory committee. Students must decide if they will complete the paper on their own or as a group.	N	RSC	Y	GNA	School of Sustainability	School of Sustainability	1-6		Prerequisite(s): Sustainability MA or MS student; SOS 510; SOS 579
SOS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-12		
SOS	656	Human Rights and Sustainability	Addresses the connections between human rights and environmental sustainability. Legal and scholarly approaches linking these areas present new perspectives for addressing some of the greatest challenges of our time, given the important resource dimensions of economic and social rights and the human dimensions of sustainability. Yet human rights demands and environmental concerns are not always in harmony. Explores these tensions and opportunities by examining three substantive areas: urban ecology and human rights, the human right to food, and the human rights implications of extractive industries such as oil and mining. Following an introduction to the key concepts of human rights and sustainability, explores the substantive areas through theoretical and empirical readings on each; grassroots accounts of struggles over environment-related human rights; and selections from literature and film that illustrate the environmental justice issues at stake.	N	SEM	N	GNA	School of Sustainability	School of Sustainability	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only JUS 656 or SOS 656 or JUS 691 (Human Rights & Sustainability)
SOS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	School of Sustainability	School of Sustainability	1-12		
SOS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	School of Sustainability	School of Sustainability	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SOS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		
SOS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	School of Sustainability	School of Sustainability	1		
SOS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	School of Sustainability	School of Sustainability	1-15		
SPA	101	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Students with credit for SPA 102, 111, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325 or 412 may not enroll in SPA 101
SPA	101	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Students with credit for SPA 102, 111, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325 or 412 may not enroll in SPA 101
SPA	101	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Students with credit for SPA 102, 111, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325 or 412 may not enroll in SPA 101
SPA	102	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Students with credit for SPA 111 or higher may not enroll in SPA 102
SPA	102	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Students with credit for SPA 111 or higher may not enroll in SPA 102

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SPA	102	Elementary Spanish	Fundamentals of the language. Emphasizes listening, speaking, reading, and writing.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4		Students with credit for SPA 111 or higher may not enroll in SPA 102
SPA	110	Intensive Spanish I	First-semester intensive course for students who (1) have never taken Spanish language courses before, or (2) have studied Spanish for one year at the high school level, or (3) have authorization from the Spanish section. This six-hour course meets on Mondays, Tuesdays, Wednesdays and Thursdays for 75 minutes in the classroom. To achieve the maximum level of proficiency, the course focuses on the development of speaking and written skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Credit is allowed for only SPA 101 or SPA 102 or SPA 110 or SPA 111
SPA	111	Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4		Students may not enroll in SPA 111 if credit earned in SPA101, 102, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	111	Fundamentals of Spanish	Primarily for students with two years of high school Spanish who need review to enter second-year study.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4		Students may not enroll in SPA101, 102, 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	118	Basic Spanish for Health Care Professionals	Introductory Spanish course that focuses on helping students develop basic oral Spanish skills that allows them to interact with patients in the health care settings. Health care-related vocabulary, simple medical scenarios and basic grammar form the majority of the course curriculum. Students are responsible for completing virtual oral dialogues with a partner each week.	N	LEL	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Students may not enroll in SPA 118 if credit earned in SPA 194 (Basic Spanish for Health Care Professionals), SPA 201, 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Pre-requisite: Maximum 25 hours
SPA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
SPA	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	201	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	G	Students may not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	201	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	201	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4	G	Students may not enroll in SPA 201 if credit received in SPA 202, 203, 204, 311, 312, 313, 314, 315, 316, 325, or 412
SPA	202	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	4	G	May not enroll in SPA 202 if received credit in SPA 204, 311-316, 325 or 412
SPA	202	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	May not enroll in SPA 202 if received credit in SPA 204, 311-316, 325 or 412
SPA	202	Intermediate Spanish	Continuation of fundamentals. Emphasizes the development of the skills of reading, listening comprehension, speaking, writing, and culture.	N	LEL	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	4	G	May not enroll in SPA 202 if received credit in SPA 204, 311-316, 325 or 412
SPA	203	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 201. Composition, literature, conversation, grammar fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	Students may not enroll in SPA 203 if they have received credit in SPA201, 202, 204, 311, 312,313,314,315,316,325, 412
SPA	204	Intermediate Spanish for Bilinguals	For Spanish-speaking students, in lieu of SPA 202. Composition, literature, conversation, grammar fundamentals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	4	G	May not enroll in SPA 204 if credit received in SPA 202, 311,312,313,314,315,316, 325, or 412

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SPA	210	Intensive Spanish II	Second-semester intensive course for students who have authorization from the Spanish section. This six-hour course that meets on Mondays, Tuesdays, Wednesdays and Thursdays for 75 minutes in the classroom. To achieve the maximum level of proficiency, the course is focused on the development of speaking and written skills.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	6-8	G	Prerequisite(s): SPA 102 or SPA 111 with B or better OR SPA 110 with C or better; Credit is allowed for only SPA 201 and SPA 202, or SPA 203 and SPA 204, or SPA 210
SPA	218	Intermediate Spanish for Health Care Providers	Intermediate Spanish course that focuses on helping students develop oral Spanish skills that allow them to interact with patients in the health care settings. Health care-related vocabulary, the impact of culture on health care, medical scenarios and intermediate grammar form the majority of the course curriculum. Students are responsible for completing virtual oral dialogues with a partner each week.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Students may not enroll in SPA 218 if credit earned in SPA 294 (Intermediate Spanish for Health Care Providers), SPA 311, 312, 313, 314, 315, 316, 325, or 412
SPA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
SPA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
SPA	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SPA	313	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	G	Pre-requisites: SPA 202 with C or better; May not enroll in SPA 313 if credit received in SPA 314, 315, 316, 325 or 412
SPA	313	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: SPA 202 with C or better; May not enroll in SPA 313 if credit received in SPA 314, 315, 316, 325 or 412
SPA	313	Spanish Conversation and Composition	Designed to develop skill and accuracy in spoken and written Spanish. Required of majors; SPA 313 and 314 must be taken in sequence.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G	Pre-requisites: SPA 202 with C or better; May not enroll in SPA 313 if credit received in SPA 314, 315, 316, 325 or 412
SPA	314	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	G	Prerequisite(s): SPA 313 or 315 with C or better; Students may not enroll in SPA 314 if they have received a C or better in SPA 412
SPA	314	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Prerequisite(s): SPA 313 or 315 with C or better; Students may not enroll in SPA 314 if they have received a C or better in SPA 412
SPA	314	Spanish Conversation and Composition	See SPA 313.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G	Prerequisite(s): SPA 313 or 315 with C or better; Students may not enroll in SPA 314 if they have received a C or better in SPA 412
SPA	315	Spanish Conversation and Composition for Bilinguals	Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	C	May not enroll in SPA 315 if credit received in SPA 313, 314, 316, or 412
SPA	315	Spanish Conversation and Composition for Bilinguals	Emphasizes comparing standard Spanish with regional Southwest Spanish. May be taken in lieu of SPA 313.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	C	May not enroll in SPA 315 if credit received in SPA 313, 314, 316, or 412
SPA	316	Spanish Conversation and Composition for Bilinguals	See SPA 315.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L & C	Pre-requisite: SPA 315; Students who have credit for SPA 314 or SPA 412 may not enroll in SPA 316
SPA	316	Spanish Conversation and Composition for Bilinguals	See SPA 315.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L & C	Pre-requisite: SPA 315; Students who have credit for SPA 314 or SPA 412 may not enroll in SPA 316
SPA	317	Spanish for the Professions	Advanced-level course that serves as an introduction to the Spanish for the Professions minor or certificate. Develops oral and written skills that prepares students to use their Spanish in their careers and/or professional fields of interest. Also covers several cultural points that facilitate effective interaction with Spanish speakers in the professional world and global community.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: SPA 314 or 316

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SPA	318	Advanced Spanish for Health Care Professionals	Advanced Spanish course that focuses on helping students develop oral Spanish skills that allow them to interact with patients in the health care settings. Health care-related vocabulary, the impact of culture on health care, medical scenarios and advanced grammatical structures form the majority of the course curriculum. Students are responsible for completing virtual oral dialogues with a partner each week.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Students may not enroll in SPA 318 if credit earned in SPA 394 (Advanced Spanish for Health Care Professionals)
SPA	319	Business Correspondence and Communication	Organization and presentation of clear, effective business communications; vocabulary applicable to modern business usage.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisite: SPA 314 or 316
SPA	325	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Pre-requisites: SPA 313, 314, 315, 316, 412 or 413 with C or better
SPA	325	Introduction to Hispanic Literature	Critical approach to and analysis of literary types, including poetry, drama, short story, and novel. Required of all majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Pre-requisites: SPA 313, 314, 315, 316, 412 or 413 with C or better
SPA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
SPA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
SPA	400	Introduction to Spanish Linguistics	Introduces the discipline and methods of linguistics through the study of Spanish data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre/co-requisite: SPA 412 or 413; Students who have credit for SPA 400 may not enroll in SPA 539
SPA	401	Spanish Oral Communication for the Professions	Students practice their Spanish oral communication skills in the context of serving U.S. Latino clients in the community (e.g., schools, government agencies, social work settings, medical settings) or reporting on issues of interest to the Hispanic community. Students gain practice in speaking varieties of Spanish that would assist their communication with monolingual Spanish-speaking Latino clients in formal (professional) and informal contexts in the public sector. Students gain experience in giving public talks, reporting on cultural events and issues in the Hispanic community, participating in simulated workplace exercises requiring the ability to carry out various language functions appropriately in different contexts.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Spanish Oral Comm. for Profes) may not enroll in SPA 401
SPA	402	Written Communication for the Professions	Students hone their Spanish literacy (reading and writing) skills in the context of serving U.S. Latino clients in the community (e.g., schools, government agencies, social work settings, medical settings) or reporting on issues of interest to the Hispanic community. Students read and understand documents in Spanish that they would come across in the process of assisting monolingual Spanish-speakers in the public sector or doing research on the Hispanic community (e.g., birth certificates, academic transcripts, medical reports, criminology documents, newspaper or magazine articles). Students gain practice in creating written documents in Spanish that would assist their communication with Latino clients in formal (professional) and informal contexts or that would allow them to report intelligently on issues of interest to the Hispanic community.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Spanish Written Communication) may not enroll in SPA 402
SPA	403	Spanish Grammar and Stylistics for the Professions	Students raise their level of awareness of appropriate grammatical, lexical and stylistic forms to use in their oral and written communication with U.S. Latino clients in formal (professional) and informal contexts in the community (e.g., schools, government agencies, social work settings, medical settings) or for reporting on issues of interest to the Hispanic community. Students enhance their analytical skills by analyzing and comparing Spanish oral and written discourse for genre-appropriate features (stylistics), grammaticality, mechanics, coherence and for a logical flow of ideas in public documents and oral discourses meant for a U.S. Latino audience.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Span Gram & Stylistics for Pro) may not enroll in SPA 403
SPA	404	Spanish in U. S. Professional Communities	Students investigate linguistic issues that impact the U.S. Latino community's interaction with professionals (e.g., interaction with service providers in schools, government agencies, social work settings, medical settings; language planning at state and local levels; Spanish spoken in different regions in the U.S.; Spanish language assessment of public sector employees; creation of Spanish for Professional Purposes courses). Students also learn to report on issues of interest to the Hispanic community.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	C	Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Spanish in the Community) may not enroll in SPA 404
SPA	405	Latino Cultural Perspectives for the Professions	Requires students to investigate the Latino cultural perspectives that underlie and affect communication in the professional world. Students come to understand the historical context that has affected the lives of Latino community in the U.S. and take a critical look at values traditionally associated with Latino culture (e.g., the importance of family ties, fatalism, honor, respecting elders, machismo or marianismo), which provide background information for professionals in the public sector who need to serve the needs of the Hispanic community.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	C	Pre-requisite: SPA 314 or 316; Students who have credit for SPA 494 (Latino/a Cultural Perspect Pro) may not enroll in SPA 405

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SPA	406	Introduction to Spanish/English Medical Interpretation	Provides an introduction to interpretation theory and practice with a specific focus on interpretation for medical fields. Constitutes an academic introduction to the field and does not certify students to be medical interpreters. Students who enroll in this course should have an advanced level of conversational Spanish.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): SPA 314, SPA 316, or SPA 394 (Introduction to Spanish for the Professions); Credit is allowed for only SPA 406 or SPA 494 (Interpretation for Medical/Law Enforcement Personnel) or SPA 494 (Intro to Spanish/English Medical & Legal Intern)
SPA	412	Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: SPA 314, 316 or 413 with C or better
SPA	412	Advanced Conversation and Composition	Oral and written Spanish communication skills, with particular attention given to developing fluency and facility. Required of majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G	Pre-requisites: SPA 314, 316 or 413 with C or better
SPA	413	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	G	Pre-requisites: SPA 314, 316 or 412 with C or better
SPA	413	Advanced Spanish Grammar	Intensive analysis of the Spanish language. Required of teaching majors.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	G	Pre-requisites: SPA 314, 316 or 412 with C or better
SPA	414	Spanish for Sustainability and Environmental Studies	Provides language skills to engage in meaningful communication and official transactions in sustainability and environmental studies with an intermediate to high level of Spanish speaking, reading and writing competence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 314 or SPA 316 with C or better; Credit is allowed for only SPA 394 (Spanish for Sustainability) or SPA 414
SPA	417	Spanish Phonetics and Phonology	Introduces the theory and practice of Spanish phonetics and phonology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: SPA 412 or 413 with C or better
SPA	418	Spanish Syntax	Introduces the syntax of the Spanish language by analyzing different word categories, their groupings in phrases, and the structure of both simple and complex sentences. Advanced course that requires some previous knowledge of basic structures of the language and their internal structure.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 412 or SPA 413 with C or better
SPA	419	Language Variations of Spanish	Spanish dialectology and variationist/quantitative sociolinguistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre- or corequisite(s): SPA 417 and 418 with C or better if completed; Credit is allowed for only SPA 419 or SPA 494 (Language Variations of Spanish)
SPA	420	Applied Spanish Linguistics	Applies linguistic principles to the teaching of Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L	Pre-requisites: SLC 201 or SPA 400 with C or better; SPA 413
SPA	421	Spanish in the Southwest	Discussion and linguistic analysis of Southwest Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	C	Pre-requisites: SPA 412 with C or better
SPA	422	Spanish Lexicology and Lexicography	Explores the linguistic theory and methodology related to the defining of meanings of words in Spanish dictionaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: SPA 412
SPA	425	Foundational Texts of Spain	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): SPA 325
SPA	425	Foundational Texts of Spain	Surveys Spanish literature from its beginning to 1700.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): SPA 325
SPA	426	Literature and Society in Modern Spain	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU	Prerequisite(s): SPA 325
SPA	426	Literature and Society in Modern Spain	Surveys Spanish literature from 1700 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): SPA 325
SPA	427	Colonial and Postcolonial Latin American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): SPA 325
SPA	427	Colonial and Postcolonial Latin American Literature	Surveys major works, figures, and movements from Colonial period to 1880.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	L or HU	Prerequisite(s): SPA 325
SPA	428	Foundational Texts of Latin American Literature Since Modernismo	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Prerequisite(s): SPA 325
SPA	428	Foundational Texts of Latin American Literature Since Modernismo	Surveys major works, figures, and movements from 1880 to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): SPA 325
SPA	429	Writing Mexico: Major Texts	Selected readings from pre-Columbian writers/poets (e.g., Macuilxochitl) through the novel of the Revolution to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Prerequisite(s): SPA 325
SPA	429	Writing Mexico: Major Texts	Selected readings from pre-Columbian writers/poets (e.g., Macuilxochitl) through the novel of the Revolution to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): SPA 325

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SPA	431	Prose of Golden Age	Focuses on a number of books of canonical prose of 16th- and 17th-century Spain. Spanish Golden Age prose is considered one of the most important bodies of literature both in the Spanish-speaking world and in early modern studies. An astonishing number of works of fiction and nonfiction were written in the period, inspiring artists and intellectuals all over Europe. All readings are representative of genres that, in addition to enjoying popularity in Spain, were extensively translated into other languages throughout Europe. Through a wide readership, <i>Carcel de Amor</i> , <i>el Lazarillo</i> , <i>La Celestina</i> , <i>El Abencerraje</i> , the <i>Novelas ejemplares</i> , and <i>Desenganos amorosos</i> , influenced the system of literary genres. They established a model for successful genres such as the sentimental novel, the picaresque and the Moorish novel, and promoted the <u>reacceptance of the Italian novella in Spain</u> .	N	LEC	N	OP6	Liberal Arts and Sciences	School of International Letters and Cultures	3	L or HU	Prerequisite(s): SPA 325
SPA	434	Drama of the Golden Age	Dramatic works of Lope de Vega, Calderon de la Barca, and their contemporaries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325
SPA	434	Drama of the Golden Age	Dramatic works of Lope de Vega, Calderon de la Barca, and their contemporaries.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): SPA 325
SPA	435	Cervantes-Don Quijote	Don Quijote and the development of the novel.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & H	Prerequisite(s): SPA 325
SPA	454	19th-Century Spanish American Narrative	Principal works in the novel, short story, narrative fiction, and narrative (Gauchesque) poetry.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325
SPA	456	20th-Century Spanish American Fiction	Major works and movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325
SPA	456	20th-Century Spanish American Fiction	Major works and movements.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): SPA 325
SPA	464	Jaitón Works in Chicano/a Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(HU or SB) & C	Prerequisite(s): SPA 325
SPA	464	Jaitón Works in Chicano/a Literature	Representative literature in Spanish and English by Mexican Americans, emphasizing sociocultural as well as literary values.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C	Prerequisite(s): SPA 325
SPA	471	Civilization of the Indohispanomexicano Southwest	Political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & C	Prerequisite(s): SPA 314 or 316
SPA	472	Latin American Society: Five Case Studies	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & H & G	Prerequisite(s): SPA 314 or 316
SPA	472	Latin American Society: Five Case Studies	Growth of the institutions and cultures of Spanish American people.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H & G	Prerequisite(s): SPA 314 or 316
SPA	473	Old and New Spaniards: Culture and Civilization of Spain	Political, intellectual, social, economic, and artistic development of the Spanish nation from its origin to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(HU or SB) & G	Prerequisite(s): SPA 314 or 316
SPA	473	Old and New Spaniards: Culture and Civilization of Spain	Political, intellectual, social, economic, and artistic development of the Spanish nation from its origin to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & G	Prerequisite(s): SPA 314 or 316
SPA	474	Revolutionary Mexico and Postmodern Revisions	Examines diverse aspects of Mexican culture since the 1910 Revolution.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	(L or HU) & G	Prerequisite(s): SPA 314 or 316
SPA	474	Revolutionary Mexico and Postmodern Revisions	Examines diverse aspects of Mexican culture since the 1910 Revolution.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or HU) & G	Prerequisite(s): SPA 314 or 316
SPA	475	Latin American Film	Examines the role of film in contemporary Latin American culture; films viewed and analyzed as casebook examples. Focuses on the aesthetics and generic conventions of contemporary Latin American films.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): ENG 102, ENG 105, ENG 108, FMS 100, or SLC 202 with C or better; Credit is allowed for only FMS 475 or SLC 475 or SPA 475 or THE 475 or FMS 494/SLC 494/SPA 494/THE 494 (Latin American Film)
SPA	481	Dictatorships and Dirty Wars: Latin American Cinema from Resistance to Reconciliation	Examines aspects of Latin American politics and culture of and through the optic of social unrest. Examines films focusing on the period(s) of recent Latin American history in which there have been social upheavals, dictatorships and state repression, "dirty wars": understood as clandestine wars waged on the citizenry by the government, social movements from below.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s) with C or better: LAS 205, 206, 330. Credit is allowed for only LAS 481 or SPA 481 or ENG 494 (Dictatorships/Dirty Wars:Lat Am Cinema) or SPA 494 (Dictatorships/Dirty Wars:Lat Am Cinema)
SPA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
SPA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
SPA	485	Chicano/a Short Story: Espanglish, Barrio y Xicanisma	Critical study of contemporary short stories by Mexican American authors, with emphasis on their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	L & C	Prerequisite(s): SPA 325
SPA	486	Mexican American Novel	Social and literary contexts of representative novelists, emphasizing their Spanish-language writings.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325

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SPA	487	Chicano/a Drama: Pachucos, Vendidos y Cerezitas	Representative dramatic works, with emphasis on the history and development of this genre from its regional origins to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): SPA 325
SPA	487	Chicano/a Drama: Pachucos, Vendidos y Cerezitas	Representative dramatic works, with emphasis on the history and development of this genre from its regional origins to the present.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): SPA 325
SPA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
SPA	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SPA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
SPA	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-6	L	Prerequisite(s): Barrett Honors student
SPA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
SPA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
SPA	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-6		Prerequisite(s): Barrett Honors student
SPA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-7		
SPA	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		
SPA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
SPA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
SPA	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
SPA	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	520	Preparing for Professional Careers	Professional training of graduate students who pursue an academic job. Guides these students through their career and provides the tools they need to navigate their new and demanding academic life, not only as current students but also as future faculty. Among others topics, covers the following: research, publishing, surfing the Internet and the library for articles and books, bibliographical matters, conferences and presentations, professional ethics, choosing a dissertation director, writing and publishing the dissertation, first job search, differences among institutions, cover letters, CVs, tenure issues, and balance of personal and professional life. Explores all the practicalities of the academic profession to direct students to the right track from the first day of graduate school.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SPA	534	Spanish Drama of the Golden Age	Analyzes principal works and figures of Golden Age Drama (Cervantes, Lope de Vega, Calderón, Tirso de Molina, Moreto, Ruiz de Alarcón) with current theater theory and comedia performance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	536	Generation of 1898	Works of Unamuno, Baroja, Azorín, and their contemporaries, studied against the ideological background of the turn of century in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	537	Women in Spanish Literature	Major female writers and their texts from Spanish literature (María de Zayas, Ángela Grassi, Concepción Arenal, Emilia Pardo Bazán, Carmen Laforet, Paloma Pedrero) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	538	Chicana Writers	Major female figures and works in Spanish or translation by contemporary writers (Zamora, Castillo, Corpi, Anzaldúa, L.D. Cervantes, D. Chávez, Duarte, Cisneros) interpreted via current feminist and other critical theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SPA	539	General Spanish Linguistics	Introductory course to the study of the linguistic structure of the Spanish language and its various sub fields, such as phonetics, phonology, syntax, morphology and the history of the language.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: graduate student; students who have credit for SPA 400, may not enroll in SPA 539
SPA	540	History of the Spanish Language	Analyzes and discusses the development of Spanish from Vulgar Latin to the present day.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	541	Spanish Language in America	Discusses and analyzes various regional and social varieties of Spanish in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	542	Studies in the Spanish of the Southwest	Examines bilingualism and the social and regional dialects of Spanish in the Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	543	Structure of Spanish	Analyzes and discusses data on selected topics in Spanish morphology, semantics, and syntax.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	544	Spanish Phonology	Surveys problems of Spanish phonology within the context of recent phonological theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	545	Concepts of Literary Criticism	Aims and methods of modern literary scholarship. Discusses major theories of literary analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	547	Spanish Pragmatics	Studies the theoretical aspects of pragmatics and their incorporation to the analysis of talk in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Pre-requisites: SPA 400 or SPA 539
SPA	550	Spanish for Reading Knowledge	Teaches nonspeakers of foreign language, or those with only basic notions of the language, how to read in a foreign language at an advanced level. Emphasizes developing reading and translation skills through exposure to a variety of texts (journalistic, historical, literary and scientific). Requires no previous knowledge of Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SPA 550 or SPA 598 (Spanish for Reading Knowledge)
SPA	552	Chicano/Chicana Film	Major figures and films by contemporary filmmakers (Sylvia Morales, Cheech Marin, Gregory Nava, Lourdes Portillo, Roberto Rodriguez, Evelina Fernández) interpreted via critical film theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPA	553	Latin American Feminist Film	Examines Latin American feminist films in the context of contemporary Latin American culture; films viewed analyzed as casework examples.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): Degree- or Nondegree-seeking graduate; Credit is allowed for only SPA 553 or 583 (Feminist Filmmaking)
SPA	555	Spanish American Modernism	Principal works and figures of literary modernism, 1880-1920, with emphasis on international literary context of the movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	557	Contemporary Spanish American Poetry	Major works and problems in contemporary poetry and poetics, with emphasis on Paz, Parra, Cardenal, and new poetry since 1960.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	560	Medieval Spanish Literature	Major figures and works of the Middle Ages in Spain.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	564	19th-Century Spanish Prose Fiction	Principal figures and works of realism in the 19th-century novel, with emphasis on Gald&ocute;s.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	565	20th-Century Spanish Drama	Principal figures and works of Spanish dramatic literature from the Generation of 1898 to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	566	Generation of 1927	Major poets of the Generation of 1927, with emphasis on works of Lorca, Guillen, Salinas, and Aleixandre.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	567	Contemporary Spanish Novel	Major works of post-Civil War Spanish fiction.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	568	Cervantes	Extensive analysis of the prose and theater of Cervantes as a key figure of the Spanish Golden Age.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	569	Studies in Spanish Film	Examines major figures and films in Spanish cinema. Critically interprets films through current film theory, history, and critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	572	Spanish American Drama	Major contributions of Spanish American drama, with emphasis on contemporary dramatists.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	573	Spanish American Essay	Major works of the essay, within the framework of intellectual history and literary movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	574	Spanish American Vanguard Poetry	Examines poetic developments, 1920-1940, with emphasis on Huidobro, Vallejo, Neruda, and the international context of their works.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	575	Contemporary Spanish American Novel	Principal novels of the <i>Nueva Narrativa Hispanoamericana,</i> within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	576	Contemporary Spanish American Short Story	Principal short stories of the <i>Nueva Narrativa Hispanoamericana,</i> within the context of contemporary theories of the narrative.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	577	Regional Spanish American Literature	Figures and works of major national (Peru, Argentina, Chile, and Mexico) and regional (Caribbean) literatures. Topics offered on a rotating basis. May be repeated when topics vary.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	582	Studies in Latin American Film	Examines the role of film in contemporary Latin American culture; films viewed and analyzed as casework examples.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	585	Chicano/Chicana Short Story	Major collections and figures in Spanish or translation by contemporary Chicano short story writers (Úlica, Suárez, Ulibarri, Soto, Aguilar, P. Martín, Alarcón, R. Sánchez, N. Cantú, J. Sagel, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SPA	586	Chicano/Chicana Short Novel	Major novels and figures in Spanish or translation by contemporary Chicano novelists (Hinojosa-S., Méndez, Morales, Cota-Cárdenas, Cisneros) interpreted via current narrative theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPA	587	Chicano/Chicana Drama	Major works of Chicano/a drama, with emphasis on contemporary playwrights (Valdez, Portillo-T., Morton, Moraga, Gómez-Peña) interpreted via current critical drama theory and other methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPA	588	Chicano/Chicana Essay	Major figures and essays in Spanish or translation by contemporary essayists (Rendón, Anzaldúa, Villanueva, Rodríguez, Mora, Stavans) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPA	589	Chicano/Chicana Poetry	Major figures and works in Spanish or translation by contemporary poets (Gonzales, Alurista, L.D. Cervantes, B. Zamora, R. Sánchez, Baca, G. Valdés, J. Montoya, G. Velázquez, T. Villanueva, J.F. Herrera, A. Villanueva) interpreted via current critical theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
SPA	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
SPA	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
SPA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
SPA	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
SPA	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	601	Latin American Feminist Cultural Production	Latin American feminist theory and studies as viewed through cultural production such as literature, film, photography, art.	N	SEM	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3		
SPA	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
SPA	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPA	791	Seminar		Y	LEC	Y	CNV	Liberal Arts and Sciences	School of International Letters and Cultures	1-12		
SPA	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
SPA	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of International Letters and Cultures	1		
SPA	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of International Letters and Cultures	1-15		
SPE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPE	222	Orientation to Education of Exceptional Children	Legal aspects of special education; legislation, education and community services to meet the needs of students with special education needs. Examines the nature and characteristics of students with developmental disabilities, autism, communication disorders, emotional or behavioral disorders, learning disabilities, sensory impairments, orthopedic impairments, other health impairments, and children with gifts and talents.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB & C	Credit is allowed for only SPE 222 or SPE 311
SPE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPE	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPE	310	Professional Practices and Foundations in Special Education	Foundational themes and issues in special education. Discusses each disability within the mild cross-categorical area in relation to foundational themes and issues relating to professional practices in special education.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	316	Introduction to Physical Disabilities and Other Health Impairments	Introduces various physical disabilities and other health impairments with an emphasis on service delivery in schools and communities.	N	LEC	N	OPT	Institute & Grad Sch Education	Division of Curriculum and Instruction	3		
SPE	317	Special Education for Culturally and Linguistically Diverse Children and Youth	General issues and practical applications regarding the education of culturally and linguistically diverse students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	320	Assessment and Evaluation of Children with Special Needs	Norm-referenced, criterion-referenced, and formative evaluation to determine eligibility, plan individualized programs, and monitor progress of students with disabilities.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Prerequisite(s): admission to the Professional Program
SPE	321	Classroom and SPE Assessment	Norm-referenced and criterion-referenced assessment and evaluation of student learning to determine eligibility, plan individualized programs and monitor progress of students with disabilities. Includes academic, language disorders and transition assessments. Emphasizes integration and adaptation of curriculum, instruction and evaluation for all students.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
SPE	322	Behavior Management and Consultation	Analysis, intervention, and consultatoin strategies for effective management of classroom and social behavior for students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	323	Behavioral Strategies for All Students	Focuses on behavior analysis and classroom management intervention and consultation strategies in general education and special education settings.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing
SPE	325	Language Literacy 1 in Elementary Schools	Theoretical knowledge and pedagogical skills for implementing a high-quality reading program. Course objectives and topics are aligned to standards for reading and research from the International Reading Association (IRA), Arizona College and Career Ready Standards (ACCRS), Interstate Teacher Assessment and Support Consortium (INTASC) standards, and the National Reading Panel Report (2000). Focuses on emergent literacy, phonemic awareness, phonics, fluency, vocabulary and comprehension. Presents strategies and assessments to support students of a variety of ability levels and cultural backgrounds with a specific focus on the struggling readers and English language learners. For education majors only.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only RDG 322 or SPE 325
SPE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		Prerequisite(s): minimum 45 hours
SPE	396	Clinical Experience I	Applies course content in special education classrooms grades K-12: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Prerequisite(s): admission to the Professional Program
SPE	404	Instructional Design for Culturally and Linguistically Diverse Students	Provides a foundation in instructional design to meet the academic and linguistic needs of culturally and linguistically diverse students, with a focus on English language learners.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only BLE 404 or ELL 504 or SPE 404

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SPE	410	Mathematics in Elementary Schools	Methods of teaching mathematics to all students at the K-8 level, instructional planning and assessment.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program; Credit is allowed for only EED 412 or MTE 412 or SPE 410
SPE	411	Parent Involvement and Regulatory Issues	Emphasizes parent and school relations through effective communication and state and federal regulations impacting services for the handicapped.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): minimum junior standing OR enrolled in Early Childhood minor
SPE	416	Quality Practices in the Collaborative Classroom	Develops skills, strategies, and a knowledge base for preservice teachers in building collaborative partnerships with special educators.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): admission to the Professional Program
SPE	417	Inclusion Practices at the Secondary Level	Applies curricular practice and how preservice teachers work with students with special needs in middle and secondary levels.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	422	Methods and Technology for High-Incidence Disabilities	Assessment and instructional methods for students with high-incidence disabilities including mild intellectual disabilities, learning disabilities, emotional disabilities, and physical/health impairments.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): senior standing
SPE	423	Methods of Cross-Categorical Special Education I	Focuses on implementing research-based strategies in reading, language arts, math and language for students with mild/moderate special needs. Includes using data from all stakeholders in the development of the IEP, making instructional decisions using assessment data, monitoring student progress and developing lesson plans.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	424	Methods of Cross-Categorical Special Education II	Emphasizing pedagogy, content knowledge and evidence-based strategies, focuses on assessment, curriculum development and instruction across content areas (e.g., reading, language, writing, mathematics, science, social studies) for students with low-incidence disabilities or intensive support needs (e.g., significant intellectual disabilities, multiple disabilities, orthopedic impairments [OI], and other health impairments [OHI]). Particular focus includes access to the general curriculum, inclusion, instructional and assistive technologies, communication and language development and disorders, and transition for this population.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	430	Professional Practices, Foundations, and Collaborative Teaching in Special Education	Foundations of special education; effective collaboration and communication skills and co-teaching models that promote inclusive practices.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	431	Collaborative Teaching Methods for General Education Classroom Environments	Methods and issues in cooperative teaching for special education students in general education classrooms.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
SPE	478	Student Teaching: Special Education (Grades K-8)	Student teaching in special education classrooms grades K-8: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	8		Prerequisite(s): admission to the Professional Program
SPE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		Prerequisite(s): admission to the Professional Program
SPE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
SPE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPE	495	Student Teaching in Early Childhood Special Education	Supervised teaching in the early childhood special education classroom setting. Synthesizes experience in curriculum, instruction, classroom organization, and guidance of young children.	N	PRA	N	YGB	MaryLouFulton Teachers College	Division of Teacher Preparation	6		Prerequisite(s): senior standing
SPE	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): admission to the Professional Program
SPE	501	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
SPE	502	Language Development and Communication Disorders	Theory and practice in phonology, syntax, semantics and pragmatics of language development for children with and without disabilities from infancy through adolescence. Emphasizes multiple models of assessment and intervention across multiple ecologies.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SPE	503	Collaboration, Consultation and Family-Centered Practices	Provides definitions, models, activities and exploration in the various roles in collaboration, consultation and teamwork in the field of special education. Explores connections in depth with families, professionals and support personnel across disciplines and agencies.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SPE 503 or SPE 540 or SPE 541
SPE	504	Elementary Methods in Content Areas	Advanced level of development of knowledge and skills of instructional planning and methods of teaching and evaluating in elementary schools.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only EED 550 or SPE 504
SPE	505	Collaborating w/Families for Effective Transition Planning for Students w/Intensive Support Needs	Provides an introduction to transition planning for students with disabilities, focusing on person-centered planning and collaborative practices with families and service providers. Emphasizes understanding employment, self-determination, community participation, collaborative practices, family systems and person-centered planning. Introduces and applies a family systems perspective to understanding of families of all children, including infants and toddlers, adolescents and adults with disabilities. Emphasizes understanding diversity in values, belief and traditions.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	506	Advanced Methods Assessment, Curriculum Planning and Instructional Strategies in Moderate/Severe	Prepares teachers with the skills to effectively work with children and young adults with moderate to severe/profound disabilities (i.e., intensive support needs). Topics focus on assessment, curriculum planning and instructional strategies using evidence-based practices. Activities include direct observation and assessment techniques in inclusive environments; designing curriculum within multiple contexts with a focus on access to the general education in inclusive environments; selecting and implementing behavioral, communicative and instructional strategies; collaborative practices; and supporting across the educational lifespan of students. Students participate in class sessions two hours per week and engage in field experiences 6 to 8 hours per week in educational environments with students with intensive support needs. Emphasizes current research-based evidence to support students with intensive support needs.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	507	Augmentative and Alternative Communication for Students with Intensive Support Needs	Focuses on issues and strategies for teaching communication to individuals with intensive support needs (i.e., students with moderate to severe/profound disabilities such as intellectual disability, autism or multiple disabilities). This terminology is reflective of a support-based model of disability rather than a deficits-based model. Discusses specific assessment and intervention strategies as they relate to augmentative and alternative communication systems.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	508	Educational Foundations of Serving Students with Severe Disabilities	Provides an overview of the etiological nature of individuals with moderate to severe disabilities (intellectual disabilities, multiple disabilities, sensory impairment and physical disabilities); characteristics of this population; and the associated support needs across the lifespan. Topics focus on the historical and legal contexts that influence services for this population; supports-based assessment and instruction; and key issues related to self-determination, person-centered planning in school contexts for children, youth and adults with moderate to severe disabilities.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	509	Individualized Positive Behavior Supports for Students with Intensive Support Needs	Knowledge and skills to assess, implement and evaluate positive behavior supports for students with intensive support needs (moderate to severe/profound intellectual disability, autism spectrum disorder, multiple disabilities), terminology reflective of a support-based model of disability rather than a deficits-based model. Students learn and apply the foundations of positive behavior supports, understanding the function of behavior and developing replacement behaviors, and implementing plans from a person-centered perspective that reflects the cultural needs of individuals and their families while drawing on interdisciplinary team members' expertise.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	510	Assistive Technology Supports for Students with Intensive Support Needs	Focuses on specialized health care needs, policies and procedures for working with students with intensive support needs (i.e., students with moderate to severe/profound disabilities such as intellectual disability, autism or multiple disabilities). This terminology is reflective of a support-based model of disability rather than a deficits-based model. Provides an overview of methods for accommodating students including task or environmental modifications, assistive technology and adaptive equipment options.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	512	Individuals with Intellectual Disability	Etiology, diagnosis and management of individuals with intellectual disability. Current trends in prevention, programming and teacher preparation.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking). Credit is allowed for only SPE 312 or SPE 512
SPE	520	Reading and Communication Strategies for Individuals with Autism	Understands and applies reading and communication strategies with individuals with autism and related disorders. Includes historical, diagnostic, and identification issues.	N	REC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SPE	521	Foundations of Autism Spectrum Disorders	Increases the understanding of characteristics of individuals with autism.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	524	Effective Classroom Behavior Management	Addresses behavioral management techniques for children with special needs, including the organization and delivery of instruction and functional behavioral analysis.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	531	Methods of Applied Behavior Analysis for Exceptional Populations	Methods based on the principles and concepts of applied behavior analysis. Students learn to operationally define problem behavior, conduct functional behavior assessment and generate recommendations for the development of behavior analytic interventions. Students gain knowledge and understanding of specific scientifically valid behavior change procedures. Discusses and applies their corresponding literature base.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	534	Assessment and Evaluation for Children with Special Needs	Norm-referenced and criterion-referenced assessment and evaluation of student learning to determine eligibility, plan individualized programs, and monitor progress of students with disabilities. Includes assessments in academic areas, language disorders and transition. Emphasizes integration and adaptation of curriculum, instruction and evaluation for all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	535	Curricula, Methods, Technology, and Adaptations in Special Education	Develops strategies for effective adaptation of special education and general education curriculum through use of technology. Includes methods for addressing special needs in reading, math and language disorders.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	536	Characteristics of Children with Behavioral Disorders	Variables contributing to behavior patterns of behaviorally disordered children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	538	Language and Literacy I	Focuses on the theoretical knowledge and pedagogical skills necessary to equip future teachers to plan and implement high-quality reading and writing instruction in a classroom setting. Course objectives and topics are aligned to standards for reading and research from the International Reading Association (IRA), Arizona College and Career Ready Standards (ACCRS), Interstate Teacher Assessment and Support Consortium (InTASC) standards, and the National Reading Panel Report (2000). Focuses on reading readiness, language development, phonemic awareness, phonics, fluency, vocabulary and comprehension. Presents strategies and assessments to support struggling readers as well as a variety of ability levels and cultural and linguistic backgrounds to include English language learners.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Teachers College graduate student; Credit is allowed for only RDG 531 or SPE 538
SPE	540	Family-Centered Practices	Provides definitions, models, activities and exploration in the various roles in collaboration, consultation and teamwork in the field of special education. In-depth exploration of connections with families, professionals and support personnel across disciplines and agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	541	Consultation Frameworks and Issues	Models, activities, and roles of educational consultants working with families, professionals, and support personnel across disciplines and agencies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	548	Cross-Categorical Foundations: LD, ED, MR, & PI/OHI	Foundations course compares cognitive, motor, and affective developmental and educational issues across LD, ED, MR, and PI/OHI.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	555	Inclusive Practices for Diverse Learners	Adapting instruction and assessment to meet the needs of all learners in inclusive settings. Includes the creation of plans to address challenging classroom behaviors.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	559	Methods for Teaching Diverse Learners	Apprentice teachers select a specific population, based on placement (mild to moderate or moderate to severe), for individualized investigation. Utilizes practical strategies for curriculum development and IEP implementation. Gains a deeper understanding of their practice by analyzing and reflecting for the purposes of monitoring and adjusting instruction.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: MEd Special Education (Teacher Certification) major
SPE	561	Characteristics/Diagnosis of Learning Disabilities	Theories related to learning disabilities, including identification and characteristics.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	565	Behavior Change Systems	Focuses on applied behavior analysis-based behavior change systems and procedures. Students learn to identify, implement, manage and supervise interventions based on fundamental elements of behavior change. Addresses behavior change considerations, including ethical use of behavior change systems and ongoing data collection for fidelity and progress monitoring.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): SPE 531; SPE 566; degree- or nondegree-seeking graduate
SPE	566	Applied Behavior Analysis in Inclusive Settings	Examines definitions, characteristics, assumptions and basic principles of applied behavior analysis. Describes and applies fundamental elements of behavior change, including reinforcement schedules, modeling, shaping, chaining and other behavior change procedures. Activities center on the design and delivery of social skill interventions with individuals with special needs in inclusive settings.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	567	Ethics of Applied Behavior Analysis	Addresses knowledge and application of the Behavior Analyst Certification Board Guidelines for Responsible Conduct for Behavior Analysts. Examines and resolves ethical dilemmas which may be encountered by behavior analysts. Addresses roles and responsibilities of members of a multidisciplinary treatment team comprised of educators, behavior analysts, parents, learners and other professionals. Students conduct risk-benefit analysis of evidence-based treatment approaches and develop declarations of professional practices and procedures for behavior analysts.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	568	Behavior Assessment	Focuses on critical aspects of applied behavior analysis, experimental design and the identification and implementation of effective assessment methodologies. Addresses client-centered responsibilities of the behavior analyst including problem identification, measurement, assessment, data collection and analysis. Students gain experience conducting functional behavior assessment and stimulus preference assessment to inform intervention design. Emphasizes measuring and ensuring treatment integrity.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): SPE 531; SPE 566; degree- or nondegree-seeking graduate. Credit is allowed for only SPE 568 or SPE 598 (Behavioral Assessment)
SPE	569	Research Methods in Applied Behavior Analysis	Students gain expertise and practical experience in the interpretation and application of experimental design to inform decision making. Focuses on evaluation of the effectiveness of interventions through use of behavior analytic technologies in clinical and applied settings. Students learn to interpret and describe behavior in behavior analytic terms and explain concepts and approaches in everyday language. Students research and evaluate skill assessment approaches through strategic review of the behavior analytic literature. Course addresses single-subject methodologies to inform design and delivery of effective instruction and clinical interventions.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Graduate student (degree seeking or nondegree seeking); SPE 531; SPE 566; Credit is allowed for only SPE 569 or SPE 598 (Research Methods Applied Behavioral Analysis)
SPE	572	Testing and Measurement in Gifted Education: Methods	Covers current and historical aspects of testing and measurement in the field of gifted education. Topics include: the history and purposes of IQ testing, definitions of various types of tests, purposes of testing for gifted education services, ability tests and achievement measures, how tests are used in Arizona in programs for gifted learners.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); II Credit is allowed for only SPE 572 or 591 (Testing&Measurement Gifted Ed)
SPE	573	Differentiating Instruction for Gifted Learners: Teaching Methods	Explores the design of differentiated curriculum and instruction for gifted learners in elementary and secondary education	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisite: Graduate student (degree seeking or nondegree seeking); Credit is allowed for only SPE 573 or 591 (Diff Curriculum Gifted Child)
SPE	575	Survey, Issues, and Foundations for the Exceptional Student	Explores the foundations of special education through characteristics and eligibility of exceptional students. Analyzes historical, political, social, and legal factors impacting special education services for exceptional students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	576	Clinical Experience	Applies course content in special education classrooms grades K-12: emphasizes observation, pupil management, planning and delivery of instruction, and assessment.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	578	Student Teaching: Special Education (Grades K-12)	Student teaching in special education classrooms grades K-12: synthesized experience in curriculum, instruction, assessment and classroom management.	N	PRA	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	579	Apprentice Teaching: Special Education (Grades K-12)	Apprentice teaching in special education setting. Synthesized experience in classroom management, curriculum, instruction and assessment. Must be taken four times for a total of 12 semester hours.	N	PRA	Y	YGB	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	585	Creativity: Foundations of Research and Development in Gifted Education	Explores nature of creativity in terms of philosophical underpinnings, empirical evidence, human development, self-actualization, and the ecology surrounding the creative event.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	586	Advising the Gifted Learner: Social and Emotional Needs	Focuses on educational planning and guidance, social and emotional development, and family problem solving regarding needs of gifted children.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	587	Special Populations in Gifted Education	In-depth analysis of major controversies in educating the gifted, including nature/nurture, the role of mental tests, and sex differences.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	588	The Gifted Learner: Foundations of Identification, Education and Development	Gifted children's characteristics, identification, needs, school and home environments, definitions, and misunderstandings. Research by Pressey, Stanley, Terman, and others.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	589	Teaching the Gifted Learner: Models, Methods, and Programs	Methods in teaching elementary and secondary school gifted children, including individualized and computer-assisted instruction, team teaching.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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SPE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Special Education Graduate student
SPE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: postbaccalaureate undergraduate or graduate student (degree seeking or nondegree seeking)
SPE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Special Education Graduate student
SPE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Special Education Graduate student
SPE	597	Capstone	Applies theoretical and practical information presented through coursework in a real-world setting.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Special Education Graduate student
SPE	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre-requisite: Special Education Graduate student
SPE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Special Education Graduate student
SPE	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SPE	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre-requisite: Special Education Doctoral student
SPE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre-requisite: Special Education Doctoral student
SPF	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
SPF	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPF	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPF	301	Culture and Schooling	For the professional teacher preparation program. Overview of the cultural, social, and political milieu in which formal schooling takes place in the United States.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L	Pre-requisites: ENG 102, 105 or 108 with C or better
SPF	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPF	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
SPF	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPF	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
SPF	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
SPF	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student
SPF	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
SPF	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SPF	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SPF	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate

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SPF	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SPF	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Pre Requisite: Must be Post Bacc UG, Non Degree Graduate or Degree Graduate
SSH	100	Introduction to Global Health	Current global health crises, challenges; tools for describing health and disease; ecological, cultural, social, historical, political-economic factors; comparative health systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G	Credit is allowed for only ASB or SSH 100
SSH	194	Covers topics of immediate or special interest to a faculty member and students.	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	201	Epidemics and Outbreaks	Covers epidemiologic methods for the control of conditions such as infectious and chronic diseases, mental disorders, community and environmental health hazards, and unintentional injuries. Other topics include quantitative aspects of epidemiology, including data sources, measures of morbidity and mortality, evaluation of association and causality, and study design. A background in basic biology and a basic understanding of the principles of human diseases helpful in succeeding in this course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Credit is allowed for only ASM 201, SSH 201 or 294 (Introduction to Epidemiology)
SSH	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	300	Food and Culture	Uses the case of food to explore how culture shapes human well-being, including the impact of political-economic systems on what we have and chose to eat.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & C	Pre-requisite: ENG 101, 105, 107, or ENG 111; Credit is allowed for only ASB or SSH 300
SSH	301	Global History of Health	Examines disease and health transitions in broadest context of human history, from primate ancestors to hunter-gatherers, to transcontinental contact, colonialism, industrialization, urbanization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & G & H	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 301 or HST 301 or SSH 301
SSH	305	Poverty and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	(L or SB) & G	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 305 or SSH 305 or WST 305
SSH	314	HIV/AIDS: Science, Behavior, and Society	Overview of the basic biological, behavioral, and psychosocial aspects of HIV disease and AIDS.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only MIC 314 or SSH 314
SSH	355	Traditional Medicine and Healing	In-depth study of world views, practices, and roles of shamans and traditional and contemporary healers.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	HU or SB	Credit is allowed for only ASB or SSH 355
SSH	370	Production, People, and Environments	Uses social scientific theories and principles to understand the political economy of production and pathways toward sustainable production. Production systems are systems of technology applied to the labor process. Examines the social shaping of production technologies, as well as the impacts of global, industrial production on the health of workers and communities and the natural environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	L or SB	Pre-requisites: ENG 102, 105 or 108 with C or better; ASB 100 (or 102), SOC 101, SOS 110, or SSH 100 with C or better; Credit is allowed for only ASB, SOC, SOS or SSH 370
SSH	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	401	Health and Human Biology	Health and biology in contexts of human evolutionary history, biological and cultural variation, lab-based health status assessments, core concepts of human variation.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-4		Pre-requisites: ASB 100 (or ASM 104); SSH 100; Credit is allowed for only ASM or SSH 401
SSH	402	Community Partnerships for Global Health	Supervised community-based activities relevant to a global perspective on contemporary U.S. health. Addresses community-identified issues using appropriate methodologies.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9	SB	Pre-requisites: Minimum 45 credit hours; SSH 100 or ASB 100; Credit is allowed for only ASB 452 or SSH 402
SSH	403	Cross-Cultural Studies in Global Health	Direct investigations of society, ecology, and health in international settings.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-6	(L or SB) & G	Pre-requisites: SSH 100 or ASB 100; Credit is allowed for only ASB 443 or SSH 403

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SSH	404	Medical Anthropology: Culture and Health	Role of culture in health, illness, and curing; health status, provider relations, and indigenous healing practices in United States ethnic groups.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB & C	Credit is allowed for only ASB 462 or SSH 404
SSH	405	Senior Seminar in Global Health	Students create health solutions, integrating theoretical, methodological, ethical, and experiential learning related to the global health major.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Pre-requisites: Global Health major; Minimum 87 hours; SSH 100 or ASB 100 and SSH 403 or ASB 443 with C or better; Credit is allowed for only ASB 455 or SSH 405
SSH	414	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3	SB	Prerequisite(s): ASB 100, 102, 222, 223, AML 100, ASM 104 or SSH 100 with C or better; minimum 45 hours; Credit is allowed for only ASM 414 or SOS 414 or SSH 414
SSH	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
SSH	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6		Prerequisite(s): Barrett Honors student
SSH	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-6	L	Prerequisite(s): Barrett Honors student
SSH	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-4		
SSH	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-7		
SSH	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-3		
SSH	502	Professional Seminar in Global Health	Focuses on skills, ideas, and practice related to the Global Health MA and PhD at Arizona State University. Seminar. Prerequisite: Must be a graduate student in the Global Health degree program.	N	SEM	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Pre-requisite: Must be a graduate student in the Global Health degree program
SSH	503	Medical Anthropology	Theory in medical anthropology and cross-cultural studies that illustrate particular theories.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	510	Health: Social and Biocultural Theories	Comparative and critical approaches to complexities of health, drawn from anthropology and related fields Focuses on theories that address how social and cultural factors shape human health.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	512	Social Science Applications in Community Health	Supervised community-based activities relevant to improvement of health through application of social science theory.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	3-9		Pre-requisites: ASB 511 or SSH 511; Graduate (degree or nondegree) student
SSH	514	Urban and Environmental Health	Integrates theory and practice of social sciences (including anthropology, demography, and human geography) to understand environmental contexts of health, particularly urban.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	4		
SSH	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		
SSH	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SSH	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	LEC	Y	Z3	Liberal Arts and Sciences	School of Human Evolution & Social Change	1		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SSH	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Human Evolution & Social Change	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
SST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		
SST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	220	Introduction to Social Transformation	Introduces key concepts in the study of social change, social innovation, and social transformation. Studies examples of social movements, social activism, community organizing, and coalition building and how such efforts have transformed society and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for only APA 220 or JUS 220 or SST 220
SST	235	Disability, Justice and Advocacy	Overarching history of the disability rights movement and how it is similar to and different from other civil and rights movements. Examines how policies and activism are interconnected within this movement, in addition to looking at other human categories related to disabilities such as gender, sexuality, race and socioeconomic status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only COM 235, JUS 235, SST 235, WST 235 or SST 294 (Disability Justice and Advocacy)
SST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
SST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	428	Critical Race Theory	In-depth analysis of the ways in which race has been historically utilized, constructed, and contested in American civil society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisite: ENG 102, 105 or 108 with C or better; Minimum 36 hours; Credit is allowed for only AFR, APA, JUS or SST 428
SST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
SST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7		
SST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-3		
SST	501	Foundations of Social Transformation	Introduces the foundations of social transformation and social change. Looks at social transformation through an interdisciplinary lens and explores the connections between the objective and subjective factors that enable or inhibit social transformation in different contexts.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SST	510	Social and Cultural Pedagogy: Theoretical and Practical Issues	Engages students with the academic literature and scholarly debates on social and cultural pedagogy, reviews practical lessons from the field, and provides an overview of different areas of intervention and professional practice. Considers the historical, local, and international dimensions of social and cultural pedagogy, illustrating them with selected case studies. Encourages the study of social and cultural pedagogy using a critical and interdisciplinary perspective.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
SST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		
SST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
SST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
SST	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
STC	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	505	Theories of Social Technology	Examines key theories of social technologies from social and behavioral perspectives. Examines the political dimensions of technologies; technology's role in constructing social structures; and how mobile technologies encourage, structure and delimit social interaction.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	510	Applied Social Technology	Provides participants with a foundation for understanding how technological systems, large and small, relate to organizational and social change. Case-based approach focuses on how to assess and recommend changes to a variety of types of organizations and communities.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	520	Advocacy and Social Technology	Examines the potential for social technology in advocating for social change.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	525	Politics and Social Technology	Concerns the political implications of social technology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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STC	530	Technology and Collaboration	Examines the analysis, design, implementation and implications of systems intended to support collaboration.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	535	Networked Social Technology	Surveys human and social behaviors from the perspective of networks, with an emphasis on social technology.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	537	Community Informatics	Examines the ways in which communities form, manage themselves, and improve through the use of networked technologies.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	540	Critical/Cultural Approaches to Social Technology	Examines critical and cultural studies approaches to social technologies. Explains a critical/cultural studies approach to social issues and the cultural and social dimensions of technologies. Explores how social technologies both shape and are shaped by power and how cultural understandings of technology contribute to the shaping of everyday life.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	545	Games as Social Technology	Explores how games as networked and collaborative technologies facilitate community formation, interaction and development.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	547	Political Economy of Social Technologies	Examines the economic, political and material structures of contemporary social and participatory media. Considers patterns of ownership, regulatory policy, corporate ideology and practice, intellectual property, the nature of labor in the information economy, and more, all with an eye toward understanding how social technologies are developed, distributed and deployed.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	REC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Social and Behavioral Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
STM	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
STM	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
STM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	PRA	Y	Z1	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
STM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
STM	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-12		
STP	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		Prerequisite: Freshman status; Maximum 25 earned hours
STP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
STP	220	Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
STP	220	Conceptual Statistics	Treats the concepts and vocabulary needed to evaluate statistical reports on health, technology, and society. Aggressively emphasizes understanding over computation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		
STP	226	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Prerequisite(s): MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better or completed the Mathematics Placement Test with a score of 50% or higher
STP	226	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Prerequisite(s): MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better or completed the Mathematics Placement Test with a score of 50% or higher
STP	226	Elements of Statistics	Basic concepts and methods of statistics, including descriptive statistics, significance tests, estimation, sampling, and correlation.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s): MAT 117 or MAT 142 or other course meeting General Studies MA requirement with C or better or completed the Mathematics Placement Test with a score of 50% or higher
STP	231	Statistics for Life Science	Concepts and methods of statistics; display and summary of data, interval estimation, hypothesis testing, correlation, regression. Applications to biological sciences.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Prerequisite(s): MAT 117 or 142 with C or better or completed the Mathematics Placement Test with a score of 50% or higher
STP	280	Probability and Statistics for Researchers	Methods for data summary, numerical summary measures, probability concepts, discrete and continuous probability distributions, expected values, statistics, sampling distributions, point estimation, and introduction to statistical inference for a single parameter.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisites: MAT 251, 265, or 270
STP	281	Statistical Analysis for Researchers	Confidence intervals, hypothesis testing, one- and two-factor analysis of variance, simple linear regression, multiple regression, chi-square tests, and introduction to statistical quality control.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 266 (or 271); STP 280
STP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
STP	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
STP	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
STP	310	Design and Analysis of Experiments	Factorial and nested designs, randomized designs, randomized complete block designs, Latin squares, fixed and random effects, expected mean squares, multiple comparisons, and analysis of covariance.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: MAT 266 (or MAT 271); STP 281
STP	311	Regression and Time Series Analyses	Simple linear regression, multiple linear regression, indicator variables, influence diagnostics, stepwise selection, logistic regression, introduction to time series models, autocorrelation, and some ARIMA models.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisites: MAT 266 (or 271); STP 281
STP	315	Statistical Computing	Statistical techniques using a professional statistical programming language (e.g., SAS, R). Emphasizes correct methods, writing and presentation of results	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: STP 281; STP 310 (or STP 311)
STP	326	Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only ACT 415 or STP 326
STP	326	Intermediate Probability	Probability models and computations, joint and conditional distributions, moments, and families of distributions. Topics in stochastic processes, simulation, and statistics.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Pre-requisites: MAT 210, MAT 251, MAT 265 or MAT 270 with C or better; Credit is allowed for only ACT 415 or STP 326
STP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
STP	420	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Prerequisite(s): MAT 210 (or MAT 251, 265 or 270) with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
STP	420	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Prerequisite(s): MAT 210 (or MAT 251, 265 or 270) with C or better
STP	420	Introductory Applied Statistics	Introductory probability, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, regression analysis, analysis of variance, and nonparametric tests.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3	CS	Prerequisite(s): MAT 210 (or MAT 251, 265 or 270) with C or better
STP	421	Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisites: MAT 272 or 267 with C or better
STP	421	Probability	Laws of probability, combinatorial analysis, random variables, probability distributions, expectations, moment-generating functions, transformations of random variables, and central limit theorem.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisites: MAT 272 or 267 with C or better
STP	425	Stochastic Processes	Markov chains, stationary distributions, pure jump processes, 2-D order processes, and other topics in stochastic processes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisites: MAT 342 (or 343); STP 421 with C or better.
STP	427	Mathematical Statistics	Limiting distributions, interval estimation, point estimation, sufficient statistics, and tests of hypotheses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with C or better: ACT 415 or STP 421; STP 281 or 420
STP	427	Mathematical Statistics	Limiting distributions, interval estimation, point estimation, sufficient statistics, and tests of hypotheses.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s) with C or better: ACT 415 or STP 421; STP 281 or 420
STP	429	Experimental Statistics	Statistical inference for controlled experimentation. Multiple regression, correlation, analysis of variance, multiple comparisons, and nonparametric procedures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3	CS	Pre-requisites: STP 420 with C or better
STP	450	Nonparametric Statistics	Rank- and order-based tests and estimation procedures for 1 sample and 2 or more related or independent samples, measures of correlation, and introduction to resampling methods, including bootstrap and randomization tests.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: STP 310
STP	451	Quality Improvement	In-depth concentration on statistical process control for attribute and variables data, process capability analysis and measurement systems analysis.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): STP 311
STP	452	Multivariate Statistics	Statistical analysis of multivariate data including methods for preparation and presentation of multivariate data, MANOVA, discriminant analysis, principal component analysis, factor analysis, cluster analysis, random forests and classification trees.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: STP 311; MAT 343
STP	460	Categorical Data Analysis	Statistical methods for the analysis of categorical (discrete, count) data. Topics include exact and approximate tests and confidence intervals for one- and two-binomial proportions, contingency tables, generalized linear models, logistic regression and loglinear models.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): STP 310, 311; MAT 272
STP	460	Categorical Data Analysis	Statistical methods for the analysis of categorical (discrete, count) data. Topics include exact and approximate tests and confidence intervals for one- and two-binomial proportions, contingency tables, generalized linear models, logistic regression and loglinear models.	N	LEC	N	GNA	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Prerequisite(s): STP 310, 311; MAT 272
STP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z2	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
STP	485	Statistics Capstone	Students work in a team and partner with a client to solve a real-world problem requiring statistical analyses. Emphasizes problem development, integration of technical skills, teamwork and communication among the students and with the client. Requires regular meetings and presentations with team, client and faculty advisor.	N	LEL	N	YGB	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	3		Pre-requisite: Senior standing; STP 310, 311, 6 additional hours of upper-division STP excluding STP 492, 493, 498, 499
STP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
STP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6		Prerequisite(s): Barrett Honors student
STP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6		Prerequisite(s): Barrett Honors student
STP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
STP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-6	L	Prerequisite(s): Barrett Honors student
STP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-6	L	Prerequisite(s): Barrett Honors student
STP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		
STP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		
STP	495	Undergraduate Research	Supervised research in statistical or probability studies.	N	RSC	Y	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): minimum 45 hours. Credit is allowed for only MAT 494 (UG Research in Math) or STP 495
STP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-7		

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STP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-7		
STP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
STP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-3		
STP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-3		
STP	501	Theory of Statistics I: Distribution Theory 3	Introduces rigorous probability theory, including distributions and expectations of random variables, transformations of random variables and order statistics, generating functions and basic limit concepts. Supplements the understanding of applied statistics with a firm grasp of the probabilistic underpinnings of theoretical statistics.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): graduate student (degree seeking or nondegree seeking); Credit is allowed for only STP 501 or STP 598, Theory of Statistics I
STP	502	Theory of Statistics II: Inference	Presents techniques and basic results of mathematical statistics at a rigorous level. Develops the structure of statistical inference procedures, including the principles of data reduction, theory of estimation, confidence sets, hypothesis testing, and prediction for common parametric models.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): STP 501 with B- or better; Credit is allowed for only STP 502 or STP 598, Theory of Statistics II
STP	526	Theory of Statistical Linear Models	Multinormal distribution, distribution of quadratic forms, full and nonfull rank models, generalized inverses, unbalanced data, variance components, and the large sample theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	527	Statistical Large Sample Theory	Types of convergence, central limit theorems, theory of maximum likelihood estimation, efficiency, robustness, influence functions, theory of bootstrap methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	530	Applied Regression Analysis	Method of least squares, simple and multiple linear regression, polynomial regression, analysis of residuals, dummy variables, and model building.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	531	Applied Analysis of Variance	Factorial designs, balanced and unbalanced data, fixed and random effects, randomized blocks, Latin squares, analysis of covariance, and multiple comparisons.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	532	Applied Nonparametric Statistics	One-sample test, tests of 2 or more related or independent samples, measures of correlation, and tests of trend and dependence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	533	Applied Multivariate Analysis	Discriminant analysis, principal components, factor analysis, cluster analysis, and canonical correlation.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	535	Applied Sampling Methodology	Simple random, stratified, cluster sampling; variance estimation in complex surveys; nonparametric superpopulation approaches; nonresponse models; computational methods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	581	Statistical Consulting Clinic	Provides practical experience in the application of statistical theory and methods to problems from a wide variety of disciplines, exposing students to a diverse range of data types and clients. Develops nontechnical consulting skills, for example explaining statistical concepts to non-statisticians, writing reports, and making oral presentations.	N	PRA	Y	GNA	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	3		Prerequisite(s) with B or better: STP 530, 531; Credit is allowed for only STP 581 or 598 (Statistical Consulting)
STP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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STP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-12		
STP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Mathematical and Natural Sciences	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
STP	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-12		
STP	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STP	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1		
STP	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Mathematical and Statistical Sciences	1-15		
STS	101	Introduction to Science, Technology, and Society	Overview of the basic issues, definitions, and literature involved in the study of science, technology, and human systems. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	110	Global Technology and Development	Introduces awareness and understanding of how technology, processes of globalization, and society influence one another. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Credit is allowed for only STS 110 or 317
STS	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
STS	202	Science, Technology, and Diversity	Examines the concept and meaning of the "technology gap" and its implications of the global impact of scientific and technological advances.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
STS	235	Technology and Urban Systems	Focuses on the relationship between technology and urbanization, especially on how technological innovation and change impact all aspects of urban systems, including urban social and economic development, sustainability, governance, environmental, and community change.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
STS	250	Science, Society, and Global Warming	Addresses global warming and its implications for society, including evidence and components of warming, measurement of warming and global change, and the social and political aspects of change.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisite: Students who have credit for STS 294 (Society and Global Warming) may not enroll in STS 250
STS	260	Politics of Science and Technology	Explores the relationship among government, politics, science, and technology, especially the interdependence of public policy and science and technological pursuits.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
STS	301	Research in Science and Technology Studies	Examines methods of inquiry in the social sciences with emphasis on STS, including both qualitative and quantitative approaches, philosophy of science, and scientific revolutions.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	302	Philosophy of Science and Technology	Focuses on the nature and implications of science as a body of knowledge, set of practices, specific methods, and how these differ from other human enterprises and activities.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
STS	303	History of Science and Technology	Examines the history of technology within social, cultural, political, and economic contexts and the critical relationship between society and technology.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	H	Prerequisite(s): minimum 45 hours
STS	304	Science, Technology, and Society	Overview of the major issues associated with the study of science, technology, and human systems, including theoretical approaches. Credit is given for only STS 304 or 101.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	

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STS	305	Science and Social Theory	Explores the different theoretical traditions that inform social interpretations of science, including awareness of the historical traditions that define these interpretations.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	306	Social Effects of Science and Technology	Examines the effects of science and technology on social life and the contexts in which those effects manifest.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	317	Science, Technology, and Global Engagement	Overview of international issues associated with both the development and deployment of technologies, including matters concerning international relations. Credit is given for only STS 317 or 110.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	Credit is allowed for only STS 110 or 317
STS	318	Science, Technology, and Government	Examines the foundations of the interrelationship of science, technology, and democratic governance, with emphasis on the American political system.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	325	Science, Technology, and Public Policy	Examines the interaction of science and technology with American domestic policy.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	328	Science, Technology, and Culture	Overview of technology and international cultures, including cultural definitions of science and technology. May intersect issues of culture and religion.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	329	Cultivating Technology in Newly Industrializing Countries	Covers specific issues relating to building technological capability in newly industrializing countries.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
STS	330	Information Technology and Globalization	Examines the intersection of advances in information technology and globalization and the impact of these processes on human systems.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & G	
STS	331	Ethical Issues in Science and Technology	Examines the interconnections between values and science and technology by examining such topics as computers and privacy, medical malpractice, reproductive technologies, patents, and hazardous facilities.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	332	Global Issues in Science and Technology	Examines contemporary international debates in science and technology and how those issues impact globalization.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	364	Science, Technology, and National Security	Examines how changing technologies impact all aspects of national security policy in the United States.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	Prerequisite(s): minimum 45 hours
STS	385	Technological Catastrophes	Interdisciplinary examination of the human, organizational, and technical factors contributing to the causes and impacts of major technological accidents.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
STS	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
STS	401	Statistics in Science and Technology Studies	Introduces statistical techniques for the social sciences, including the role and rationale of statistics, descriptive measures, associational measures, and inferential statistics.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	CS	Pre-requisites: MA general studies requirement satisfied
STS	425	Law, Values, Science, and Technology	Examines the interconnections of law, values, and science and technology with a view to establishing their reciprocal relationships.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB	
STS	480	Technology, Ethics, and Society	Technology in modern society; focuses on the relation between technology and personal, cultural, economic, and political values.	N	SEM	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		
STS	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
STS	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
STS	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-7		
STS	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		
SWG	501	Micro Human Behavior in the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre/Co-requisite: masters or doctoral in Social Work major
SWG	502	Macro Human Behavior in the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspective in a macro context.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite: MSW or DSW student
SWG	510	Foundation Practice I	Basic social work methods with emphasis on the problem-solving process as it pertains to individuals, families, and small groups.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Must be Master or Doctor Social Work student.
SWG	511	Foundation Practice II	Theory and methods of direct practice with groups and selected practice models.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Master or Doctor Social Work student; SWG 510 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SWG	514	Bridge Seminar I	Professional social work practice at the master's level.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major. Corequisite(s): SWG 516
SWG	515	Bridge Seminar II	Generalist practice problem-solving skills with diverse individuals, groups, families and systems at the master's level.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Adm and Community Practice) major. Corequisite(s): SWG 516. Pre- or corequisite(s): SWG 514. Credit is allowed for only SWG 515 or SWG 598 (Bridge Seminar II)
SWG	516	Social Work Skills Seminar	Focuses on the acquisition of practice skills for advanced interaction with individuals, families, groups and communities.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major. Corequisite(s): SWG 514, 515
SWG	519	Research Methods in Social Work	Conceptual foundations and methods of nomothetic research in social work. Includes problem identification, hypothesis formulation, measurement, sampling, and experimental design.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Master or Doctor Social Work student.
SWG	526	Mental Health for Sentencing	Helps justice system professionals understand existing mental health diagnoses, the DSM-5, and how specific DSM-5 categories are associated with specific types of crime.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	527	Mitigation of Death and Life Cases	Issues and skills for practicing as a mitigation specialist in cases of death and life without parole.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	528	Presentence Investigations	Examines the functions and objectives of presentence investigation reports and prepares students to perform different types of investigations for limited and general jurisdiction courts for local, state and federal courts.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	529	Alternatives Penal Sanctions	Prepares individuals to practice as sentencing advocates on defense teams, as consultants to problem-solving courts, or as private presentence investigators hired by the defense to advocate for alternatives to incarceration.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	531	Social Policy and Services	Conceptual, analytical, and historical perspectives on the social welfare institution. Emphasizes poverty and inequality. Principles of policy analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Masters or Doctoral of Social Work student
SWG	533	Diversity and Oppression in a Social Work Context	Explores issues of social inequality related to disability, ethnicity, gender, race, and sexual orientation. Emphasizes populations of the Southwest.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Masters or Doctoral Social Work student.
SWG	540	Professional Experience I: Introduction to the Profession	Explains the historical origins of the social work profession, discusses the values and ethics unique to the profession, and familiarizes students with resources available at the school and the university for students enrolled in the MSW online program.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Social Work - Standard Program MSW student; Credit is allowed for only SWG 540 or SWG 598 (Professional Seminar I)
SWG	541	Field Practicum I	With SWG 542, two consecutive semesters (480 hours) of supervised social work practice in an approved placement.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Master or Doctor Social Work student; Pre/Co-requisite: SWG 510 with C or better if completed
SWG	542	Field Practicum II	See SWG 541	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Master or Doctor of Social Work major; SWG 510 and 541 with C or better Pre- or corequisite(s): SWG 511 with C or better if completed
SWG	554	Overview of Addictions	Addictions and their impact upon society including alcohol, legal and illegal drugs, gambling, the Internet, sex and pornography. Focuses on the etiology of addictions that impact our society on a micro, mezzo and macro level. Provides an ecological perspective to view human behavior across the life span as it relates to addictive behaviors.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 554 or SWG 591 (Overview of Addictions) or SWU 454 or SWU 498 (Overview of Addictions)

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SWG	556	Immigrants and Refugees	Provides basic conceptual approach to understanding immigrant and refugee issues and how these factors influence social work practice with immigrant and refugee populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWU 456 or SWG 556 or SWG 591 (Immigrants and Refugees)
SWG	557	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Credit is allowed for only SWG 557 or SWU 457
SWG	558	Introduction to Behavioral Health Services	Explores mental health. Develops a basic understanding of mental health and co-occurring conditions. Gains an understanding of public- and employer-financed contemporary behavioral health services with a focus on Arizona models.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWU 458 or SWG 558 or SWG 591 (Introduction to Behavioral Health Services)
SWG	559	Spirituality and the Helping Professions	Provides a framework for spiritually and culturally competent practice with diverse populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWU 459 or SWG 559 or SWG 591 (Spirituality & Helping Profession) or SWG 598 (Spirituality and the Helping Professions)
SWG	560	Legal Issues in Social Work	How the law relates to social work practice, administration and policy.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWU 460 or SWG 560 or SWG 591 (Legal Issues in Social Work)
SWG	561	Lesbian, Gay, Bisexual, Transgender and Queer Issues	Historical, socio-cultural introduction to lesbian, gay, bisexual and transgender communities and their resilience to challenges and barriers.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWU 461 or SWG 561 or SWG 591 (Lesbian and Gay Issues)
SWG	562	Global Social Welfare	Analyzes social work's response to international social issues and human need from the perspectives of globalization, development and human rights.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 562 or SWG 591 (International Social Work) or SWU 462 or SWU 498 (International Social Work)
SWG	570	Aging: A Biopsychosocialspiritual Perspective	Biopsychosocialspiritual perspectives on aging, including intergenerational matters, international trends, policies, programs, services and issues unique to populations of the Southwest.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 570 or SWG 591 (Aging Soc Wk Perspective)
SWG	571	Mental Health Aspects of Aging	Older adult mental health assessment, treatment, planning, policy and service delivery from a cross-cultural, interprofessional, intergenerational, international and continuum-of-care perspective.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 571 or SWG 591 (Mental Health & Aging)
SWG	572	Interprofessional Approaches to Healthy Aging	In-depth examination of healthy aging, interprofessional practice and interprofessional practice approaches designed to foster healthy aging for older adults.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	573	Policies to Promote Healthy Aging	Age-based policy process and various social policies/programs that address financial, medical and psychosocial needs of older Americans.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	577	Traumatic Death: Theory, Counseling and Practice	Explores the various experiences of grief, trauma and bereavement through a phenomenological perspective and using creativity, art, literature, poetry, indigenous wisdom and evidence-based research. Practice techniques and psychosocial care to the traumatically bereaved. Examines the micro, mezzo and macro aspects of death and grief in contemporary society. Theory, philosophy and direct practice with individuals, families and groups experiencing traumatic death and grief.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only SWG 577, 591 (Trauma & Death Counseling) or 598 (Trauma&Death: Counseling, Theory, &Practice Issues)

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SWG	579	Critical Incident Stress Management	Theory and research behind coping strategies and mechanisms commonly experienced by Emergency Management Teams (EMT) and DHS. Explores topics of stress, trauma, vicarious trauma and mass trauma as experienced by the individual and large populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Masters or Doctoral Social Work student
SWG	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	585	Macro Social Work Practice	Examines communities and human service organizations as social systems. Introduces strategies for initiating planned change.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Masters or Doctoral Social Work student
SWG	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Col of Pub Serv & Comm Solutns	School of Social Work	1		Pre-requisite: Master or Doctor Social Work student.
SWG	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4		Pre-requisites: Master Social Work student
SWG	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		
SWG	600	Foundation for Advanced Practice	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisites: Master Social Work student.
SWG	603	Social Work Practice in Health/Behavioral Health Settings	Advanced social work practice in health and behavioral health settings, focusing on enhancement of client functioning and quality of life.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	604	Advanced Social Work Practice in Health	Addresses the crucial social work practice issues of health and healthcare in the new millennium.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 603 with C or better
SWG	606	Assessment of Mental Disorders	Theories and concepts of mental health and illness. Attention to classification systems and nomenclature used in assessing mental disorders.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 502 with C or better or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	608	Ecological Approach to Practice with Children, Youth, and Families	Provides a theoretical and practical orientation to working with children, youth, and families from an ecological strengths perspective.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 542 with Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	609	Advanced Social Work Practice with Child Welfare Families	Focuses on substance abuse, family violence, and serious mental illness in practice with families and children in the child welfare system.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 608 with C or better
SWG	610	Advanced Social Work Practice III	Assists students in advanced theoretical understanding and practice with families, groups, and communities.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: MSW or MSW Adv Standing student; Co-Requirement: SWG 693 and 645
SWG	611	Social Work with Families	Theory, concepts, and skills for working with diverse family populations. Emphasizes a systems and integrative approach.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major

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SWG	612	Social Work with Groups	Practices applications of knowledge and skill to social work with groups.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	613	Advanced Social Work Practice in Behavioral Health	Treatment of prevalent disorders encountered by social workers, selected from the following: anxiety disorders, personality disorders, depression, and schizophrenia.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 603 with C or better
SWG	614	Advanced Generalist Social Work Practice IV	Integrates a multilevel approach to practice with critical choice theories and interventions. Focus on groups, organizations, and communities and their impact on social work practice. Completion of the foundation courses or advance standing in the MSW program, or instructor approval, is required for all 600-level SWG courses.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Master or Doctor Social Work student; SWG611 with a grade of C or better
SWG	617	Advanced Social Work Practice with Children and Adolescents	Theory, research, and intervention that focus on children and adolescents.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 608 with C or better
SWG	618	Advanced Practice in Domestic Violence	Theory, research, intervention, and prevention strategies relevant to child maltreatment, partner abuse, and elder abuse.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	619	Practice-Oriented Research	Accelerated course in application of scholarly and scientific principles to field practice, problem formulation, interventional procedures, and impact assessment.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 519 with C or better or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	621	Integrative Seminar	Explores the fit between theoretical frameworks and practice with clients. Requires presentation of empirical studies with clients.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s) with C or better: SWG 603 or SWG 608, 619. Pre- or corequisite(s): SWG 604, 606, 609, 613, 617 with C or better if completed; SWG 641 with Y if completed
SWG	623	Program Evaluation	Research design techniques and data collection in human service agencies and communities. Analysis for program evaluation and needs assessment.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 519 with C or better, SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major. Corequisite(s): SWG 685
SWG	626	Crisis Intervention and Short-Term Treatment	Comprehensive analysis of crisis and solution-focused brief intervention strategies and approaches used in advanced social work practice.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	630	Brief Social Work Intervention	Concepts and techniques of solution-focused, systematic, and strategic approaches to therapy in the context of brief therapy.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major
SWG	632	Policy Practice	Develops advanced knowledge and skills in social welfare policy analysis, policy formulation, and advocacy and intervention for policy change.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 531 with C or better or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
SWG	633	Child Welfare Services	Examines, using ecological and system theories, services that supplement, support, and substitute for parental care of children.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	641	Advanced Practicum: Direct Practice I	With SWG 642, two consecutive semesters (480 hours) of supervised social work practice in an approved placement related to the student's career goal.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) major. Pre- or corequisite(s): SWG 603 (or SWG 608) with C or better if completed
SWG	642	Advanced Practicum: Direct Practice II	With SWG 641, two consecutive semesters (480 hours) of supervised social work practice in an approved placement related to the student's career goal.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 603 or 608 with C or better; SWG 641 with Y; Pre or Co-requisite: SWG 604, 609, 613 or 617 (with C or better if completed)
SWG	643	Advanced Practicum: Planning, Social Work Administration, and Community Practice I	With SWG 644, two consecutive semesters (480 hours) in social work practice in an approved placement related to the student's career goal.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Planning, Administration and Community Practice) major. Pre- or corequisite(s): SWG 623, 685 with C or better if completed
SWG	644	Advanced Practicum: Planning, Social Work Administration, and Community Practice II	See SWG 643.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Masters or Doctoral Social Work student; SWG 623 with C or better; Prerequisite(s): SWG 623, 685 with C or better, SWG 643 with grade of Y. Pre- or corequisite(s): SWG 681, 682 with C or better if completed
SWG	645	The Professional Experience III	240 hours of supervised social work practice. Provides opportunities to apply classroom learning in the field setting. Y/E grade only.	N	PRA	N	YGB	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: MSW student; SWG 542 with Y grade OR MSW Advanced Standing student; Co-requisite: SWG 610 and SWG 693
SWG	646	The Professional Experience IV	With SWG 645, two consecutive semesters (480 hours) of supervised social work practice in an approved placement related to the student's career goal.	N	PRA	N	YGB	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Standard MSW or MSW Adv Standing student; SWG 645 with Y grade; Co-requisite: SWG 614; SWG 693
SWG	654	Introduction to Sexual Abuse	Develops general knowledge and skills for working with persons who have been impacted by sexual abuse.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	655	Quality of Life	Addresses key elements of a healthy life style contributing to wellness and disease through experiential learning and evidenced-based research.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major or Assessment of Integrative Health Modalities certificate
SWG	656	Treating the Whole Person	Addresses treating the "whole person's" physical and behavioral health through interviewing, intervention, and treatment within the context of an interdisciplinary model.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major or Assessment of Integrative Health Modalities (certificate)

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SWG	657	Ancient Healing Traditions	Historical development and research of the ancient healing teachings of traditional Chinese medicine, Ayurvedic medicine, homeopathic, naturopathic, and indigenous medicine and how they are used in today's health systems.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y or MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major
SWG	660	Clinical Supervision in Social Work	Examines and practices the knowledge, skills, and values of becoming a social work supervisor in human service agencies.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		
SWG	661	Cognitive Behavior Therapy Across the Lifespan	Knowledge and skills to understand and apply cognitive-behavioral approaches to treatment (CBT), including diagnostic information and empirically supported interventions targeted to individuals, families and groups across the lifespan.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y OR MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major; Credit is allowed for only SWG 591 (Cognitive Behavior Therapy Across Lifespan) or 661
SWG	662	Social Work Practice With Adolescents	Advanced elective focuses on working with adolescents in a variety of intervention settings (e.g., mental health agencies and schools).	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y OR MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major; Credit is allowed for only SWG 591 (Social Work Practice With Adolescents) or 662
SWG	663	Clinical Trauma Treatment	Explores the assessment and treatment of PTSD in people throughout the lifespan.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y OR MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major; Credit is allowed for only SWG 591 (Clinical Trauma Treatment) or 663
SWG	664	Evidence-Based Approaches to Treatment of Substance Use Disorders	Knowledge and skills to understand substance abuse disorders, including diagnostic information and evidence-based interventions targeted to individuals, families and groups.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 542 with grade of Y OR MSW Social Work (Advanced Direct Practice) or Social Work (Planning, Administration and Community Practice) major; Credit is allowed for only SWG 591 (Treatment Substance Use Disorders) or 664
SWG	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	N	IND	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisites: Masters or Doctoral Social Work student; SWG 681 or SWG 682 with C or better; Pre/ Co-requisite: SWG 623 with C or better if completed
SWG	681	Social Work Administration	Administrative skill building and theory application within human service nonprofit social work settings.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: SWG 623 with C or better; SWG 685 with C or better; Co-requisite: SWG 682
SWG	682	Community Participation Strategies	Reviews strategies to involve citizens and the consumers of social and human services in community decision-making systems. Participation is viewed as a means to facilitate the empowerment of oppressed peoples.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWG 623 with C or better; SWG 685 with C or better; Co-requisite: SWG 681
SWG	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student
SWG	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student

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SWG	685	Program Planning in Social Services	Social services planning process; includes needs assessment, goals and objectives, program design, budgeting, management information systems, and program evaluation.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWG 542 with grade of Y; SWG 585 with C or better OR MSW Social Work (Advanced Direct Practice) or MSW Social Work (Planning, Administration and Community Practice) major; Corequisite(s): SWG 623
SWG	686	Developing Grants and Fund Raising	Identifies potential funding sources, technical and interpersonal/political aspects of proposal development and fund raising.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student
SWG	687	Public Policy and Advocacy	Covers public policy at the federal level, including administrative, legislative and judicial policy. Students understand how to develop congressional policy and methods to engage in advocacy at the federal level to impact macro social work practice.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only SWG 687 or SWG 591 (Advocacy and Public Policy)
SWG	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisites: MSW or MSW Advanced Standing student
SWG	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		
SWG	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	SEM	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		
SWG	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Col of Pub Serv & Comm Solutns	School of Social Work	1		Pre-requisites: MSW, MSW Adv Standing, or PhD student
SWG	700	Research Methods	Course on research methods in a specific discipline.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	718	Qualitative Research Methods	Provides comprehensive qualitative research methods training for doctoral students to complement their quantitative survey research methods knowledge.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Doctoral student; Credit is allowed for only SWG 718 or 791 (Qualitative Research Methods)
SWG	719	Quantitative Research Methods	Provides the tools for independently designing and conducting methodologically sound, ethical, quantitative research that advances social work and social welfare knowledge.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Doctoral student
SWG	720	Philosophy of Science Issues in Social Work	Critical examination of social science, social work practice, and policy in terms of philosophical assumptions and varying frames of reference.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Master or Doctor Social Work student.
SWG	721	Statistics	Logic and application of statistical methods for analyzing social welfare-based data pertaining to social work. Includes ethical issues concerning the appropriate application, interpretation and use of social research, as well as the potential limitations and biases of applications that fail to adequately consider issues of population diversity. Students learn to independently design a research project from start to finish employing statistical analysis of primary data.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: doctoral major
SWG	722	Pedagogy in Social Work	Prepares doctoral students to teach for the profession of social work. Provides an opportunity for students to develop or enhance their philosophy of teaching, their attitudes toward learning, teaching and students, and the knowledge and skills necessary to teach effectively. Explores teaching to the diverse students present in social work programs, the challenges that teaching presents and the responsibilities that come with social work education.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Doctoral student; Credit is allowed for only SWG 722 or SWG 791 (Pedagogy in Social Work)
SWG	723	Proposal Development	Provides an opportunity for doctoral students to formulate a dissertation proposal or a research plan for a three-paper option. Provides a forum for presenting ideas, receiving feedback and defending one's proposal.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Doctoral student; Credit is allowed for only SWG 723 or 791 (Proposal Development)
SWG	731	Welfare State	Examines the evolution of the welfare state as a problem of political economy.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Doctoral student; Credit is allowed for only SWG 731 or 791 (Welfare State)

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SWG	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-12		Pre-requisite: Master or Doctor Social Work student.
SWG	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWG	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Col of Pub Serv & Comm Solutns	School of Social Work	1		
SWG	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	IND	Y	Z2	Col of Pub Serv & Comm Solutns	School of Social Work	1-15		Pre-requisite: Master or Doctor Social Work student.
SWU	171	Introduction to Social Work	Descriptive and historical perspectives of social problems, social justice issues and society's response to them.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB & H	
SWU	180	Introduction to Lesbian, Gay, Bisexual and Transgender (LGBT) Studies	A historical, socio-cultural introduction to lesbian, gay, bisexual, transgender, transsexual, and intersexed communities and their resilience to challenges and barriers.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB & C	Credit is allowed for only SWU 180 or 194 (Introduction to LGBT Studies)
SWU	181	Economics: A Social Issues Perspective	Introduces economic principles through the lens of contemporary social issues for social work and related fields.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Credit is allowed for only SWU 181 or 194 (Economic and Social Issues in Perspective)
SWU	182	Social Services Perspective of Government	Explores levels of government and policy practice in advancing social and economic justice and effective social services within the Southwest.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB	Credit is allowed for only SWU 182 or 194 (AZ/National Government: Social Work Perspective)
SWU	183	Introductory Ethics: A Social Issues Perspectives	Introductory exploration of ethics from a historical and multicultural perspective viewed through the lens of contemporary social issues.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	HU	Credit is allowed for only SWU 183 or 194 (Intro Ethics: Social Issues Perspective)
SWU	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4		
SWU	250	Stress Management Tools I	Helps students develop an understanding and behaviors to create a healthy balance in their lives by studying the bio/psycho/social aspects of wellness.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB	
SWU	291	Social Service Delivery Systems	Federal, state, private not-for-profit and for-profit social service delivery system's purpose, structure, and professional roles. Includes 40 volunteer hours.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: PSY 100, PSY 101, SOC 101 or SOC 301; Pre/Co-requisites: SWU 171 with a C or better if completed
SWU	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4	SB	
SWU	295	Foundations of Social Work Practice	Theoretical foundation and skill base for effective culturally competent communication and interviewing with individuals, families, small groups, and larger systems.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB & C	Pre-requisites: PSY 101, SOC 101 or SOC 301; Pre/Co-requisites: SWU171 or 271 and SWU 291 with a C or better if completed
SWU	302	Human Biology for Social Workers	Overview of human anatomy and physiology, and the reciprocal relationship between physical and social environments. May be repeated for credit.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		
SWU	303	Micro Human Behavior and the Social Environment	Human behavior in the social environment throughout the life cycle, analyzing theories of human development within an integrative multidimensional framework.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	L or SB	Prerequisite(s): PSY 101; SOC 101 or 301; Pre- or corequisite(s): SWU 171, 291, 295 with C or better if completed, OR Community Advocacy and Social Policy major
SWU	306	Ethics in Social Services	Focuses on following the NASW Code of Ethics in making ethical decisions in social service settings.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; PHI 101 or 105 or 306 or SWU 183; SWU 291; lower-division (L) course

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SWU	310	Social Work Practice I	Introduces social work methods, emphasizing the following skills: relationship development, cross-cultural interviewing, communication patterns, and case-recording.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWU 171 or SWU 271 with C or better; SWU 291 with C or better; SWU 295 with C or better; Pre or Co-requisite: SWU 303 (with C or better if completed)
SWU	311	Integrative Social Work Practice	Social work practice skills emphasizing cross-cultural interviewing, assessment and professional recording.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWU 171; SWU 291; SWU 295; Corequisite(s): SWU 312; Pre- or corequisite(s): SWU 306
SWU	312	Integrative Social Work Practice Skills	Applies social work content from SWU 311 focusing on practice skills and professional behavior.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWU 171; SWU 291; SWU 295; Corequisite(s): SWU 311; Pre- or corequisite(s): SWU 306
SWU	320	Research Methods in Social Work	Applies scientific principles to field practice, problem formulation, intervention procedures, and impact assessment in social work.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre- or corequisite(s): SWU 310 with C or better if completed, or Community Advocacy and Social Policy major
SWU	321	Statistics for Social Workers	Teaches social work students how to use and interpret descriptive and inferential statistics in social work practice. May be repeated for credit.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	CS	Pre-requisites: MAT 142 or an MA general studies course
SWU	332	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Community Advocacy and Social Policy major; POS 110 or POS 310 or SWU 182
SWU	340	Macro Human Behavior and the Social Environment	Human behavior in the social environment, focusing on groups, organizations and communities and examining theoretical perspectives in a macro context	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	SB	Prerequisite(s): SWU 303 with C or better; Pre- or corequisite(s): SWU 310 with C or better if completed OR Community Advocacy and Social Policy major
SWU	349	Stress Management Tools II	Developing mindful strategies toward managing stress, developing instinct awareness; healthy decisions in nutrition, relationship with self, others and creating a personal carbon footprint.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Credit is allowed for only SWU 349 or SWU 294 (Stress Management Tools II)
SWU	350	Whole Person Health Across the Lifespan	Development of mindful strategies toward managing stress and identification, implementation and integration of skills and knowledge for well-being across the lifespan.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
SWU	351	Sustainable Living, Mindful Eating	Addresses issues related to foods we eat, how we eat, and impacts of choices on health, the environment, locally and globally.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): ENG 102, 105, or 108 with C or better
SWU	374	Diversity and Oppression in a Social Work Context	Issues of social inequality related to race, ethnicity, gender, sexual orientation, and disability. Emphasizes populations of the Southwest.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Pre- or corequisite(s): SWU 310 with C or better if completed, or Community Advocacy and Social Policy major
SWU	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4		Pre-requisite: Master of Social Work student
SWU	410	Social Work Practice II	Knowledge and skills in social work practice with individuals and families.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Social Work BSW major; SWU 310 with C or better; PHI 101 or PHI 105 or PHI 306 or SWU 183; Corequisite(s): SWU 412; SWU 413
SWU	411	Social Work Practice III	Knowledge and skills in social work practice with groups, communities, and organizations.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: SWU 410, 412, or 413 with C or better or Co-requisites: Social Work student with SWU 414; SWU 415
SWU	412	Field Instruction I	16 hours a week of supervised practice in an approved placement. "Y/E" grade only.	N	PRA	N	YGB	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Social Work student; SWU 310 with C or better; Co-requisite: SWU 410; SWU 413
SWU	413	Field Instruction Seminar	Field-focused seminar, including practice evaluation.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Social Work student; SWU 310 with C or better; Co-requisite: SWU 410; SWU 412

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SWU	414	Field Instruction II	16 hours a week of supervised practice in an approved placement. Y/E grade only.	N	PRA	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisites: Social Work student; SWU 410, SWU 412 or SWU 413 with C or better Co-requisites: SWU 411 and SWU 415
SWU	415	Integrative Field Seminar	Field-focused seminar to help students integrate practice and theory.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Social Work student; SWU 410, SWU 412 or SWU 413 with C or better; Corequisite(s): SWU 411 and SWU 414
SWU	432	Social Policy and Services	Contemporary social, political, and economic issues. Special emphasis on poverty and inequality in the Southwest. Analysis and development of social welfare policies and programs.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): ECN 211 (or SWU 181); POS 110 (or POS 310 or SWU 182); SWU 310 with C or better; Social Work major. Corequisite(s): SWU 410, 412, 413
SWU	442	Introduction to Practice with Children and Families in Child Welfare	Focuses on the characteristics, strengths, and service needs of families and children in the Child Welfare System.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre-requisite: Social Work student; SWU 410 with C or better; SWU 412 with C or better; SWU 413 with C or better
SWU	450	Mastering Mindfulness	Facilitates mastering mindfulness practice. Students teach a lesson and develop a training proposal that will be implemented and evaluated.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Pre- or corequisite(s): SWU 350; SWU 351
SWU	454	Overview of Addictions	Addictions and their impact upon society including alcohol, legal and illegal drugs, gambling, the Internet, sex and pornography. Focuses on the etiology of addictions that impact our society on a micro, mezzo and macro level. Provides an ecological perspective to view human behavior across the life span as it relates to addictive behaviors.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): minimum junior standing; Credit is allowed for only SWU 454 or SWU 498 (Overview of Addictions) or SWG 554
SWU	456	Immigrants and Refugees	Provides basic conceptual approach to understanding immigrant and refugee issues and how these factors influence social work practice with immigrant and refugee populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Prerequisite(s): minimum junior standing; Credit is allowed for only SWU 456 or SWU 498 (Immigrants & Refugees) or SWG 556
SWU	457	Southwest Borderland Immigration Issues	Reviews immigration history, trends, policies, and legislation. Focuses on immigrant experience from economic, educational, social, political, familial perspectives in Southwestern U.S.	N	SEM	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Pre-requisite: Credit is allowed for only SWG 557 or SWU 457
SWU	458	Behavioral Health Services	Behavioral health conditions; their impact on the individual, family and community; and historical and contemporary service models.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): minimum junior standing; Credit is allowed for only SWU 458 or SWU 498 (Behavioral Health Services) or SWG 558
SWU	459	Spirituality and the Helping Professions	Provides a framework for spiritually and culturally competent practice with diverse populations.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): minimum junior standing; Credit is allowed for only SWU 459 or SWU 494 (Spirituality and the Helping Professions) or SWU 498 (Spirituality & Helping Profession) or SWG 559
SWU	460	Legal Issues in Social Work	How the law relates to social work practice, administration and policy.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): minimum junior standing; Credit is allowed for only SWU 460 or SWU 498 (Legal Issues in Social Work) or SWG 560
SWU	461	Lesbian, Gay, Bisexual, Transgender, and Queer Issues	Historical, socio-cultural introduction to lesbian, gay, bisexual and transgender communities and their resilience to challenges and barriers.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Prerequisite(s): minimum junior standing; Credit is allowed for only SWU 461 or SWU 498 (Lesbian/Gay Issues) or SWG 561
SWU	462	Global Social Welfare	Analyzes social work's response to international social issues and human need from the perspectives of globalization, development and human rights.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): Junior standing; Credit is allowed for only SWG 562 or SWU 462 or SWU 498 (International Social Work)
SWU	474	Ethnic/Cultural Variables in Social Work	Basic conceptual approach to understanding ethnic and cultural variables of southwestern ethnic minorities and how these factors influence social work practice.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	3	C	Pre-requisite: SWU 310 with C or better
SWU	488	Advocacy Strategies	Comprehensive advocacy approach that spans administrative, legislative and community strategies.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Social Work	3		Prerequisite(s): SWU 320; SWU 332; SWU 340; SWU 374; senior standing
SWU	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-6		Prerequisite(s): Barrett Honors student

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SWU	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	IND	N	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-6	L	Prerequisite(s): Barrett Honors student
SWU	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-4		
SWU	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Social Work	1-7	L	
SWU	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Col of Pub Serv & Comm Solutns	School of Social Work	1-3		Pre-requisite: Bachelor of Social Work student
TCL	101	Introduction to Transborder Chicana/o and Latina/o Studies	Historical and contemporary issues in Chicana/o and Latina/o communities; focuses on the diverse economic, sociological, cultural, and political status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	111	Introduction to Transborder Chicana/o and Latina/o Culture	Interdisciplinary analysis of customs, values, belief systems, and cultural symbols; special attention is given to cultural continuity and change.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-3		
TCL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	201	Transborder Society and Culture I: Interdisciplinary Approaches	Intensive overview of Mexican origin and Latina/o populations through various sociological, historical, anthropological, economic, political, cultural, literary, and analytical lenses.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	202	Transborder Society and Culture II: Contemporary Issues	Examines contemporary transborder belief systems, ideologies of health, gender, familial structures, and community development within a transnational context.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	
TCL	210	Introduction to Ethnic Studies in the U.S.	Covers diversity of experiences and relations among racial and ethnic groups in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	C	Credit is allowed for only AFR 212 (or AFS 210) or APA 210 or JUS 210 or TCL 210
TCL	211	Transborder Chicano/a and Latino/a Poetry	Writing seminar on Chicana and Chicano poetics and intensive creative writing workshop.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	220	Transborder Latina/o Expressive Culture	Examines media, literature, performance, and visual art grounded in the historical experiences of transborder Latina/o communities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU or SB) & C	Prerequisite(s): ENG 101, ENG 105, or ENG 107 with C or better
TCL	230	The Expressive Culture of Latin America and the Caribbean: A Transborder Perspective	Interdisciplinary social science introduction to various forms of cultural expressions found throughout Latin America and the Caribbean region and in Latina/o communities within the United States. Uses a transborder perspective to examine how migration, race, ethnicity, gender, power, history and identity shape and influence different aspects of Latina/o culture and identity. Focuses on the study of a wide array of expressive practices including music, dance, verbal arts, myths and folktales, festivals, sports and food in Mexico, the Spanish Caribbean and their counterpart Latina/o communities in the United States. Class lectures and readings introduce basic concepts such as ethnography, ethno-musicology, culture, representation and globalization.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU or SB) & C	Credit is allowed for only ASB 220 or TCL 230
TCL	270	Race and Gender in American Film	Explores how Hollywood shapes perceptions of race and gender in American society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	Credit is allowed for only FMS 270 or TCL 270
TCL	275	Culture, Language and Learning	Examines the dynamic and complex interplay of language, culture and learning within and across individuals, groups, institutions and cultures in diverse multicultural, multilingual and transborder contexts.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	Credit is allowed for only ASB 275 or TCL 275
TCL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	303	Transborder Theory	Studies historical, cultural, and economic theories contributing to understanding the emergence of Mexican and Latina/o origin populations in the Americas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB	
TCL	304	Transborder Research Methods	Emphasizes critical skills: quantitative/qualitative, spatial, archival, and reflexive methodologies, including ethnographic, biographical, historical, and mapping.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	
TCL	305	Transborder Practicum and Field Research.	Field work with faculty incorporating practical experience while honing research skills and ability.	N	PRA	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Pre or Co-requisites: TCL 303 and TCL 304 with C or better if completed
TCL	310	Transborder Chicano/a and Latino/a Folklore of Southwest North America	Analyzes Chicana and Chicano folk beliefs, traditions, and practices.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	314	Transborder Latin American Migration to the U.S.	Historical/contemporary overview of Mexican and other Latin American migration into and within the U.S.; factors affecting population movement, settlement patterns and migrants' incorporation into society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or SB) & H & C	Prerequisite(s): minimum 45 hours
TCL	315	Chicana/o and Latina/o Family Structures	Traditional and changing family relationships; emphasis on gender and intergenerational relations and impact of modern society on traditional family values.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB	

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TCL	321	Transborder Community Development and Health	Emphasizes core concepts and practices relevant to regional community development and health, including demographic health indicators, individual, and community models.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	323	Latino Health Issues	Health issues among Chicanos and other U.S. Latinos; interplay among political economy, health, family, culture, and community.	N	LEL	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	4	SB & C	
TCL	326	Health of Chicanas and Latinas	Examines gender, ethnicity, and health; critical issues affecting health status of Chicanas and Latinas.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	327	Health and Migration	Focuses on health status among various immigrants; health trajectories following migrations, adaptive behaviors, health practices, and the role of policy.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB	Pre-requisites: ENG 102, 105, or 108 with C or better
TCL	328	U.S. Latino Religion and Culture	U.S. Latino and Latin American religious history with special attention to what have become Hispanic mestizo hybrid cultures.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	Pre-requisites: Minimum 24 earned hours; ENG 102, 105, or 108 with C or better; Credit allowed for only REL 326 or TCL 328
TCL	331	Mexican American History to 1900	Mexican American history from pre-Hispanic origins to frontier journeys north through 19th-century life in the U.S. Southwest.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & H & C	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST or TCL 331
TCL	332	Mexican American History Since 1900	Traces the formation of Mexican American communities across the rural and urban U.S. and examines 20th-century immigration from Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & H & C	Pre-requisite: ENG 102, 105 or 108 with a C or better; Minimum 30 hours; Credit is allowed for only HST or TCL 332
TCL	335	Historical Studies in Race, Crime, and the Law	Studies the historical relationship between the criminal justice system in the United States and a segment of society that has traditionally faced official and unofficial discrimination: American racial minorities. Focuses on the experiences of Mexican Americans and Africans Americans with the criminal justice system.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Pre-requisite(s): ENG 101 with C or better; ENG 102 with C or better; Credit is allowed for only AFR 335 or HST 323 or TCL 335
TCL	340	Chicana/o and Latina/o Politics and Policy	Historical/contemporary analysis of Chicana and Chicano political ideologies, attitudes, strategies, and movements; relations with governmental agencies; and public policy issues.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L & C	
TCL	341	Policy Issues in Chicana/o and Latina/o Urban Settings	Historical, demographic, and sociological overview of the status of Chicanas and Chicanos in urban settings as well as the public policy relevance.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	C	
TCL	342	Social Demographics of Latino Populations	Provides an introduction to social demography of Latinos in the U.S. from the 19th century to the present.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	
TCL	350	Transborder Mexican and Chicano/a Artistic Production	Overview of Mexican and Mexican American artistic production from colonial times to present; emphasis on religious and folk art.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C & G	
TCL	351	Transborder Chicano/a and Latino/a Art	Intensive analysis of contemporary Chicana and Chicano art movement as appraised within the context of contemporary American art and the art of Mexico.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	352	Chicana/o Film	Explores how Chicano and Chicana filmmakers have interpreted the Chicano experience through the medium of film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	C	
TCL	353	Race, Space and the Production of Inequality	Explores how the relationship between race and space has been important to the development of broad patterns of social inequality in the United States. Through a variety of readings, films and other material, examines how ideas of race and space have been important to the making and maintenance of national boundaries, citizenship, regional histories and spatial typologies such as border, ghetto, suburb and prison.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	Prerequisite(s): APA 200 or 210; minimum 45 hours; Credit is allowed for only AFR 352 (or AFS 352) or APA 352 or JUS 353 or TCL 353 or APA 394 (Race, Space and the Production of Inequality)
TCL	360	Inequality and Diversity in Education	Advanced exploration of various dimensions of diversity in relation to educational systems and outcomes. Through sociological and psychological research, case studies and films, students examine how educational inequality is created and reproduced through individual actions and institutional constraints. Also considers the connection between schooling and human rights and ways in which educational inequality may be addressed.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L & C	Prerequisite(s): APA 200, AFR 212 (or AFS 210), APA 210, CDE 232, JUS 210, TCL 210 or minimum 30 hours; Credit allowed for only AFR 350 (or AFS 350), APA 350, CDE 350, JUS 365, SOC 350, TCL 360 or AFS/APA/CED/TCL 394 (Inequality & Diversity in Education)
TCL	363	Transborder Mexican and Chicano/a Literature of Southwest North America	Development of Chicana and Chicano literature; study of genres and themes; attention to literary antecedents.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU) & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only ENG 363 or TCL 363
TCL	364	Transborder Mexican Literature Before 1917	Offers a historical panoramic view of the political, intellectual, social, economic, and artistic development of the Spanish-speaking people of the Southwest. May be taught in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L	Prerequisite(s): minimum 45 hours
TCL	370	Signs of Aliens: Semiotics of Film and Popular Culture	Introduces semiotics and cultural studies; looks at various meanings ascribed to the sign of the alien.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU	Credit is allowed for only FMS 370 or TCL 370

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TCL	373	Latina/Chicana Issues	Critical examination of the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States and along the border.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 30 hours. Credit is allowed for only TCL 373 or WST 373
TCL	377	Arizona, Immigration, Latinos and Politics	Contemporary immigration and its related issues have generated significant debates, reforms and responses by government officials, businesses and private citizens, to name but a few in this country. This course provides a much-needed framework for understanding some of the immigration issues in Arizona and the country generally. It also focuses on some of the political responses by Latinos and their significant mobilization at the local, state and federal levels.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only JUS 377 or POS 377 or SGS 377 or TCL 377 or JUS/HST/POS/SGS/TCL 394 (Arizona, Immigration, Latinos and Politics)
TCL	378	McGlobalization: Migration, Mass Media and McDonald's	Explores the impact of globalization on local societies and cultures by focusing on the international migration of peoples, the global expansion of capitalism and global mass media and popular culture. Examines both the socioeconomic causes and consequences of globalization, as well as how local peoples around the world have been affected by, participated in and resisted the forces of globalization.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or SB) & C	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 378 or TCL 378
TCL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	410	Race, Medicine, and the Body	Explores how body and embodiment and race and ethnicity are constructed within and by biomedical sciences and technology development.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L	Prerequisite(s): ENG 101, 105 or 107 with C or better; minimum 45 hours
TCL	422	U.S.-Mexico Border Health	Focuses on identifying health issues affecting Latino/Mexican families in the U.S.-Mexico borderlands using basic epidemiological techniques to analyze regional data.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Pre-requisites: TCL 321 with C or better
TCL	424	Theory and Practice of Community Development and Health	Foundations of methodology of community mapping and establishment of community diagnosis, media literacy and advocacy applications for community-based public health.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB	Pre-requisites: TCL 321 with C or better
TCL	443	Political Ecology of the Border	Examines the political ecology of the human-environment relationship in Mexico and on the U.S.-Mexican border. Through case studies, students learn about the most pressing environmental issues facing human populations and their communities on both sides of the U.S.-Mexican border and the various ways in which these issues are dealt with.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 463 or SOS 463 or TCL 443
TCL	444	The Ethnography of Mexico and the Borderlands	Students learn basic principles of ethnographic research and obtain a better understanding of the social, ecological, cultural, political and economic processes affecting people in Mexico and in the U.S.-Mexico borderlands. Through case studies, students become aware of the variety of issues shaping the lives of those living in these regions. Focuses on contemporary issues such as migration, economy, gender, labor, health and the environment.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	SB & G	Prerequisite(s): minimum 45 hours; Credit is allowed for only ASB 464 or TCL 444 or TCL 598 (The Ethnography of Mexico and the Borderlands)
TCL	445	Transborder Latin American Short Story	Studies the modern Latin American short story, with primary focus on the development of its literary and cultural tradition. Taught in Spanish.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L or HU	Prerequisite(s): SPA 202 (or SPA 204); minimum 45 hours
TCL	446	Comparative Bilingual Latina/o Poetics	Comparative study of contemporary bilingual Latina/o poetry. Focuses on two specific U.S. ethnic minority groups--Mexican- (or Chicanos) and Puerto Rican-Americans (or nuyorican)--who have long and strong literary traditions of bilingual poetry. The significant feature of both bodies of poetry is the interactive mixture of their base languages: Spanish and English.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU) & C	Credit is allowed for only TCL 446 or 598 (Comparative Bilingual Latina/o Poetics)
TCL	447	Gender, Culture, and Development	In-depth analysis of gender roles related to health, family, work, education and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or SB) & G	Prerequisite(s): WST 100 or 300 or minimum 45 hours; Credit is allowed for only SGS 454 or SOS 447 or TCL 447 or WST 447 or TCL 598 (Gender, Culture & Development)
TCL	448	Teaching Chicana and Chicano Studies in the Schools	Approaches/techniques for infusion of transborder studies content into elementary and secondary curriculum; designed for teachers who work with Mexican and Latino origin students.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): minimum 45 hours
TCL	464	Latina/o Literature	Development of Latina/o literature. Study of genres and themes; attention to literary antecedents of the new U.S.-based Latina literature.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU) & C	Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours; Credit is allowed for only ENG 458 or FMS 464 or TCL 464
TCL	465	Chicana/o and Latina/o History on Film	Explore history on film; the processes, developing critical perspectives about historiography, and film in relation to U.S.-Mexican borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	Pre-requisites: ENG 102, 105 or ENG 108 with C or better. Credit is allowed for only FMS or TCL 465
TCL	466	Constructing the Border on Film	Explores the U.S.-Mexico border on film, examining how border images have been constructed and shaped over time.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	C	Credit is allowed for only FMS or TCL 466

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TCL	470	Race, Sex, and Identity Online	Relying on critical and cultural theory, addresses the relationship between race, sex, and social identity online.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU	Pre-requisites: ENG 102, 105 or 108 with C or better; Credit is allowed for only FMS or TCL 470
TCL	471	Latinos In Hollywood	Studies representations of Latinos in film; stereotyping, politics of metaphor, allegory, star discourse, self-representation, resistance, and independent film.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	
TCL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		
TCL	485	Chicana and Latina Writers	Critical reading of Mexican American women authors; emphasis on contemporary (post-1970) poetry, novels, short stories, and essays.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	(L or HU) & C	
TCL	488	Border Global Narratives	Studies four general and different border areas through literature. Through literary-cultural texts, looks into peoples' experiences of migration to and from the homelands of Mexico, Haiti, the Dominican Republic, Cuba, and the Puerto Rican isle to the U.S. These experiences are never uni-directional but are characterized by constant back-and-forth movement.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	L & C	Credit is allowed for only TCL 488 or 598 (Border Global Narratives)
TCL	490	Transborder Queer Performativity	Explores a rich and diverse body of border-crossing performative expression created by queer and/or Latina/o artists. Course readings and discussions include solo and collaborative works with an emphasis on solo autobiographical performance scripts as well as performer interviews and performance scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3	HU & C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 45 credit hours; Credit is allowed for only TCL or WST 490
TCL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-6		Prerequisite(s): Barrett Honors student
TCL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-6	L	Prerequisite(s): Barrett Honors student
TCL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		
TCL	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-7		Prerequisite(s): Transborder Chicana/o and Latina/o Studies (Media and Expressive Culture or Transborder Community Development and Health or U.S. and Mexican Regional Immigration Policy and Economy) major; minimum 56 hours
TCL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	N	LEC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-3		
TCL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		Pre-requisite: Maximum 25 hours; Credit is allowed for only CRD, PRM or TDM 191
TDM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
TDM	205	Introduction to Travel and Tourism	Examines the components of the travel and tourism industry at the state, national, and global levels.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	G	
TDM	225	Introduction to Resort and Hotel Management	Introduces local, national and international lodging and food service industries.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
TDM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
TDM	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student

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TDM	301	Sustainable Communities	Analyzes community as concept and as an organizing system for promoting sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre/Co-requisite: PRM 120 or NLM 160 with C or better if completed; Credit is allowed for only CRD, NLM, PRM, SOS or TDM 301
TDM	302	Inclusive Community Development	Examines the characteristics of diverse populations across the lifespan to effectively develop inclusive community programs and services.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	C	Pre-requisites: ENG 102; MAT 142; NLM 160 (or PRM 120) with a C or better; 2.50 GPA; 45 earned hours; Credit is allowed for only CRD, NLM, PRM or TDM 302
TDM	345	Meeting and Convention Planning	Basic aspects and skills in planning meetings and conventions. Industry and market overview of certified meeting planners.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	350	Tourism, Recreation and Sports Marketing	Critical examination of marketing principles in leisure and related industries in diverse settings, including local, national, and international.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 210 or CSM 201 or TDM 205; ENG 102 with C or better; MAT 142 or higher with C or better; minimum 45 hours; Credit is allowed for only CSM 350 or PRM 350 or TDM 350
TDM	372	Tourism Planning	Applies economic and regional development concepts and theories to destination product development.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	L	Pre-requisites: Tourism Development & Mgmt or Recreation (Tourism) students; Minimum 2.50 gpa; Minimum 45 hours; TDM 205 or RTM 373 with C or better; ENG 102 with C or better; MAT 142 or higher with C or better
TDM	386	Convention Sales and Management	The role of convention and visitors bureaus or resort managers, including economic impacts of markets, structure, governance, membership, and advertising.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		
TDM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
TDM	401	Tourism Management	Basic principles of administration and their application in successful administrative situations. Analyzes administrative function, structure, and policies.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): CRD 201 or PRM 210 or TDM 210 with C or better; CRD 301 or PRM 301 or TDM 301 or TDM 301 with C or better; PRM 303 or TDM 372 with C or better
TDM	402	Assessment and Evaluation of Community Services	Introduces applied leisure research with emphasis on program evaluation, research design, data collection techniques, and data analysis.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre- or corequisite(s): CSM 401, NLM 410, PRM 401, or TDM 401 with C or better if completed; Credit is allowed for only CSM 402 or NLM 402 or PRM 402 or TDM 402
TDM	403	Leadership and Professional Development	Examines leadership theory and strategies, current professional issues, and refinement of professional philosophy and competencies that enable transition from student to professional.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: NLM, PRM or TDM 210 with C or better; NLM, PRM or TDM 301 with C or better; Senior standing; 2.50 GPA. Credit is allowed for only CRD, NLM, PRM or TDM 402
TDM	415	Tourism Transportation Systems	Examines the role of various modes of transportation in domestic and international tourism development.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: TDM 205 or RTM 373 with C or better
TDM	448	Heritage and Cultural Tourism	Provides a solid conceptual understanding of the issues, problems, and management implications associated with heritage and cultural tourism.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: TDM 205 with C or better; Credit is allowed for only TDM 448 or CRD 598 Heritage and Cultural Tourism)
TDM	458	International Tourism	Global examination of international tourism and its significance as a vehicle for social and economic development.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3	G	

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TDM	463	Senior Internship	Supervised guided experience in selected agencies.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	6-12		Prerequisite(s) with C or better: CRD 403 or PRM 413; CSM 402 or NLM 402 or PRM 402 or TDM 402. Credit is allowed for only CSM 463 or NLM 463 or PRM 463 or TDM 463
TDM	475	Entrepreneurial Recreation and Tourism	Explores basic business principles and innovative processes involved in starting a small business in the commercial recreation and tourism industry.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Minimum 60 hours; Credit is allowed for only PRM or TDM 475
TDM	480	Sustainable Tourism	Tourism has a multitude of impacts, both positive and negative, on people's lives and on the environment. Critically analyzes the environmental, economic, and socio-cultural aspects of tourism development, and strategies to attain balance among these three dimensions to guarantee its long-term sustainability.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: PRM 120 or TDM 205 or 60 minimum hours
TDM	481	Sustainable Food Management in Tourism	Focuses on the fundamentals of sustainability, sustainable food systems, relationships between food and tourism, and the applications of sustainable food practices in different types of global tourism. Defines sustainable development, explains the importance of sustainable food systems, recognizes the relationship between local food systems and global food challenges. Connects the challenges of creating and maintaining sustainable food systems with the needs of tourists and tourism destinations; defines leakage in reference to tourism and food. Creates and applies sustainability assessment criteria to food systems in a variety of different tourism spaces.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: Junior standing; Minimum 60 hours
TDM	482	Sustainable Revenue Management	Introduces the fundamental economic principles that underlie revenue management and the practical application of new analytical technological services in the hotel and resort industry. Uses experienced revenue managers from local resorts and hotels as regular guest speakers and IdeaS system (a revenue management analytics subsidiary of SAS).	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisites: MAT 142 or higher; Minimum 72 hours
TDM	483	Sports Tourism	Examines the relationship between sports and tourism, and the role of recreation and amateur sports as an economic and community development strategy. Also considers the motives, behaviors and experiences of sport tourists; the impacts of sport tourism; and trends in sports tourism.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): Minimum 45 hours. Credit is allowed for only CSM 483 or TDM 483
TDM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Pre-requisites: TDM 205 or NLM 220 or PRM 210; 72 minimum hours; 2.50 GPA or higher; Non SCRD majors
TDM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
TDM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6	L	Prerequisite(s): Barrett Honors student
TDM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		
TDM	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-6		Prerequisite(s): Barrett Honors student
TDM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-7	L	
TDM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-3		
TDM	520	Sustainable Thinking in Tourism	First in a series of two courses introducing students to the basic concepts of sustainability and their application and implications for tourism.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	521	Sustainable Thinking in Tourism II	Second in a series of two courses focusing on how to measure, assess, and plan for sustainability in the tourism industry.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Pre-requisite: TDM 520 with C or better
TDM	530	Sustainable Tourism Destination Planning and Management I	Applies sustainable economic and regional development concepts and theories to destination planning and management. Students learn the fundamentals of sustainable planning, including stakeholder involvement and meeting community needs.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	531	Sustainable Tourism Destination Planning and Management II	Applies sustainable economic and regional development concepts and theories to destination planning and management. Students learn the fundamentals of sustainable planning, including stakeholder involvement and meeting community needs.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): TDM 530

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TDM	540	Sustainable Food Management in Tourism	Focuses on the fundamentals of sustainability, sustainable food systems, relationships between food and tourism, and the applications of sustainable food practices in different types of global tourism. Students learn to define sustainable development; explain the importance of sustainable food systems, recognize the relationship between local food systems and global food challenges; connect the challenges of creating and maintaining sustainable food systems with the needs of tourists and tourism destinations; define leakage in reference to tourism and food; and create and apply sustainability assessment criteria to food systems in a variety of different tourism spaces.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	550	Managing the Sustainable Tourism Business	Through case study analysis, students learn how sustainability impacts business operations, how successful sustainable businesses identify and assess alternative resource management techniques, and evaluate operational models for embedding sustainability practices into their business models.	N	LEC	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s) TDM 570; Credit is allowed for only TDM 550 or CRD 598 (Managing the Sustainable Tourism Business)
TDM	561	Best Practices Workshop Preparation	First in a series of two courses investigating and sharing best practices in sustainable tourism. Provides an overview of best practices and innovative actions in tourism. A destination or business is identified to be used as a case study.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Pre/co-requisite: TDM 521 with C or better
TDM	562	Best Practices Workshop Presentation	Second in a series of two courses investigating and sharing best practices in sustainable tourism. Provides an overview of best practices and innovative actions in tourism. A presentation of a best practices case study is conducted for the class.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1		Pre-requisite: TDM 561 with C or better
TDM	570	Sustainable Tourism	Critically examines the environmental, economic, and socio-cultural aspects of tourism development, and strategies to attain balance among these three dimensions to guarantee its long-term sustainability.	N	SEM	N	GNA	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TDM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Community Resources and Development	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	101	The Teachers College Experience	Introduces all new first-time ASU students to the unique elements, culture, challenges, and opportunities of their university. Mary Lou Fulton Teachers College sections relate specifically to future educators. Covers several core college success topics.	N	SEM	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	2		Prerequisite(s): Mary Lou Fulton Teachers College freshmen
TEL	111	Exploration of Education	Education as an instrument in the development of the individual and society and its significance as an American Institution.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	
TEL	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
TEL	200	Social Embeddedness of Educational Endeavors	Serves as a pathway toward self discovery and professional identity. Course readings, reflections and self assessments help students develop personal and professional goals and goal-setting strategies. Course assignments provide students with a greater level of understanding regarding the reciprocal influences among community and culture and the student's life experiences. Students have an opportunity to clearly define themselves and share topics they are passionate about, as well as locate how they might fit into and contribute to their community.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		
TEL	212	Understanding the Culturally Diverse Child	Surveys cultural and linguistic diversity in American education, including education equity, pluralism, learning styles, and roles of schools in a multiethnic society.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	C	Credit is allowed for only MCE 230 or TEL 212
TEL	215	Introduction to Child and Adolescent Development	Emphasizes the cognitive, social-emotional, and physical domains of child and adolescent development. From a knowledge base of theory, research, and current issues, students apply learning to developmentally appropriate principles and practices that guide relationships and learning experiences for all children. Uses available technologies; emphasizes the complex ecosystem of culture, ethnicity, family, and school.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	SB	
TEL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
TEL	300	Community, Family, and Education	Addresses education in a community and family context. Analyzes education and identifies education-focused community challenges in a broad variety of settings and across multiple times and places.	N	LEC	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): TEL 200
TEL	311	Instruction and Management in the Inclusive Classroom	Planning and delivering instruction, organizing and managing classrooms, and making adaptations for English language learners and students with special needs.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
TEL	313	Technology in an Educational Setting	Focuses on using technology in an education setting and addresses the integration of technology in curricular areas for all students. Students receive a broad-based introduction to using and integrating technology into many different educational settings.	N	LEL	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): General Studies CS course
TEL	314	Classroom Assessment	Assessment and evaluation of student learning; emphasizes integration and adaptation of curriculum, instruction, and evaluation of all students.	N	LEC	N	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program

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TEL	315	Child and Adolescent Development	Physical, cognitive, social, and emotional development during childhood and adolescence; developmentally appropriate principles and practices to facilitate development for all students.	N	LEC	N	OPT	MaryLouFulton College	Teachers Division of Teacher Preparation	3	L or SB	
TEL	316	Teaching, Imagination, and Creativity	Engages students in critical thinking and the complex terrain of aesthetic theory and intellectual, academic work and teaching practice. Students apply aesthetic consciousness teaching by teachers developing imagination, creativity, and intuition as tools to use every day in their classrooms. Emphasis on how teachers can integrate the arts into the curriculum, use the arts to support academic content, and develop aesthetic consciousness as a way of becoming attuned to the teaching environment as well as to learners' diverse cultures, talents, and needs. The arts will also be studied as multi-cultural and socio-cultural phenomena, aiding teachers to become consciously attuned to the culturally diverse learner within the larger society. consciousness as a way of becoming attuned to the teaching environment as well as to learners' diverse cultures, talents, and needs. Also studies the arts as multicultural and sociocultural phenomena in support of these ends, aiding teachers to become consciously attuned to the culturally diverse learner within the larger society.	N	LEC	N	OPT	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Pre-requisites: Education majors; Minimum junior standing
TEL	320	Introduction to Gifted Education	Overview of a variety of issues related to gifted students from preschool through high school. Provides background in order to create an optimal experience for students, parents and teachers when working with gifted students.	N	LEC	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
TEL	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton College	Teachers Division of Teacher Preparation	1-4		
TEL	400	Innovation in Educational Endeavors	Pursues innovative solutions to social problems with the courage and ability to impact change in individuals, communities and organizations. Reviews community problems, challenges or areas of improvement; learns underlying principles of social enterprise; and develops innovative methods that empower individuals and support educational initiatives.	N	LEC	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Prerequisite(s): TEL 200, 300
TEL	404	Current Issues in Education and Policy Reform in the United States	Specialized topics related to current issues in education with a focus on education reform efforts from the late 20th century into the 21st century. Explores current reform efforts in education as part of the larger public policy agenda in the United States, analyzing how external influences shape present education systems.	N	LEC	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Pre-reqs for TEL 404
TEL	405	History of Education and Policy Reform in the United States	Specialized topics in education history with a focus on education reform efforts from pre-Revolutionary War time to the end of the 20th century. Explores the past reform efforts in education as part of what was happening historically in the United States, analyzing how those efforts have shaped the present education systems.	N	LEC	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only TEL 405 or TEL 494 (History of Education & Policy Reform in the US)
TEL	410	Leadership and Advocacy in Educational Endeavors	Educators who take an active stance through advocacy and leadership are well-equipped to create societal change. Students learn about styles of leadership that are fitting for this need, study advocacy techniques, then position themselves as advocates and leaders as they create a plan, with goals, to address an identified community problem, challenge or area of improvement.	N	LEC	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Prerequisite(s): TEL 200; 300; 400
TEL	420	Curriculum Strategies for Gifted Learners	Overview of a variety of ways in which to create and adapt curriculum for gifted students from preschool through high school. Provides a broad range of resources for classroom teachers to use in order to help gifted students work to their full potential in a heterogeneously grouped classroom.	N	LEC	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Prerequisite(s): admission to the Professional Program
TEL	430	Learning Outside of School	Studies and methods from a variety of nonschool environments for learning and development. Teaches knowledge and skills such as methods of identifying and evaluating free-choice learning that occurs through museum going, hobbies, family learning, media, community programs, sports, public health campaigns, and more. Covers career opportunities for educators in key creative environments besides classrooms.	N	LEC	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only TEL 430 or 494 (Learning Outside of School)
TEL	431	Learning in Workplaces	School isn't the only place where people learn! Once you get a job, most of what you learn will occur as you do your job, and that kind of learning is crucial to the development of competence and expertise. Surprisingly, seventy to eighty percent of this important learning takes place outside of formal training. Studying learning in workplaces illuminates how learning happens universally, and helps teachers and trainers design effective educational programs.	N	LEC	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Pre-requisite: Minimum 45 hours; Credit is allowed for only TEL 431 or 494 (Learning in Workplaces)
TEL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	MaryLouFulton College	Teachers Division of Teacher Preparation	1		
TEL	489	Undergraduate Projects and Research in Education	Topics include history of educational research, literature reviews, research methodology, resources, individual project ideas and the creation of a research prospectus. Students may also work in teams to complete theses or projects if their interests intersect. Open to all students; however, Honors and Scholar's Academy students will be planning and/or implementing theses or creative projects.	N	LEC	N	GNA	MaryLouFulton College	Teachers Division of Teacher Preparation	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only TEL 489 or TEL 494 (Undergrad Projects & Research in ED)
TEL	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	MaryLouFulton College	Teachers Division of Teacher Preparation	1-6		Prerequisite(s): Barrett Honors student

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TEL	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-6	L	Prerequisite(s): Barrett Honors student
TEL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
TEL	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-3		
TEL	501	Introduction to Research and Evaluation in Education	Overview of educational inquiry from controlled, quantitative to qualitative, naturalistic. Emphasizes locating and critically interpreting published research.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only COE 501 or ECD 503 or PPE 501 or SPE 501 or TEL 501
TEL	504	Learning and Instruction	Introduces psychology of learning and instruction. Includes the foundations of learning theories and their application to educational practice.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	505	American Education System	Political, social, historical, and philosophical analyses of American education at all levels. Examines primary sources, legal findings, and case studies.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	N	LEC	N	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	607	Critical Social Theory and Education	Seminar exploring education through the lens of critical social theory originating in the Frankfurt School. Marxian theory is updated to confront current situations through the ideas of alienation, base and superstructure, hegemony, ideology, and culture theory as well as a vision of human consciousness. Includes Pierre Bourdieu's theory of habitus, social or cultural capital, and field. Studies various critical education scholars as applications of critical social theory. Examines critiques of critical theory.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Credit is allowed for only DCI 691 (Critical Social Theory) or TEL 607
TEL	683	Field Work	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		
TEL	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	GRD	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	701	Advanced Quantitative Methods	Data collection, analysis, interpretation in studies using quantitative methods of inquiry situated in action research, evaluation and data-informed decision making.	N	LEL	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Leadership and Innovation EdD student; Credit is allowed for only EDA 701 or TEL 701
TEL	702	Dynamic Contexts of Education	Explores current ethical issues influencing leadership decisions with a focus on real problems in the educational setting.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Leadership and Innovation EdD student; Credit is allowed for only EDA 702 or TEL 702
TEL	703	Innovation in Teaching and Learning	Development and psychological processes of human cognition, motivation, and performance applied to cognitively diverse, English language learners, adult professional development.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Leadership and Innovation EdD student; Credit is allowed for only EDA 703 or TEL 703

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TEL	704	Leadership for Organizational Change	Develops understanding of dynamic and systemic nature of organizations, with emphasis on leadership for building organizational capacity and learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Leadership and Innovation EdD student; Credit is allowed for only EDA 704 or TEL 704
TEL	705	Systems Change and Leadership	Focuses on theoretical foundations of systems literature with a focus on education. Examines literature and scholarship that builds knowledge of educational theory on systems, and applies important related concepts to real-world problems of practice as they appear in students' current work context.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Leadership and Innovation EdD student
TEL	706	Introduction to Doctoral Studies	Prepares doctoral students for success, focusing on balance and identity, communities of practice, leadership and innovation, action research, and organization systems.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Pre-requisites: Leadership and Innovation EdD major; Credit is allowed for only TEL 598 (Introduction to Doctoral Studies) or 706
TEL	707	Reading the Research	Interprets and analyzes qualitative and quantitative research literature, as well as how to integrate information in professional scientific writing.	N	LEC	N	GNA	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Leadership and Innovation EdD student
TEL	711	Strategies for Inquiry	Develops knowledge and skills for research and program evaluation that foster innovation in education that leads to improved student learning.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Leadership and Innovation EdD student
TEL	712	Mixed Methods of Inquiry	Methods for combining qualitative and quantitative inquiry in action research, evaluation, and data-based decision making.	N	SEM	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Leadership and Innovation EdD student
TEL	713	Advanced Qualitative Methods	Data collection, analysis, interpretation in studies using qualitative methods of inquiry, situated in action research, evaluation and data-informed decision making.	N	LEC	N	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	3		Prerequisite(s): Leadership and Innovation EdD student
TEL	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	793	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	N	LEC	Y	OPT	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	795	Continuing Registration		N	LEC	Y	Z3	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1		Prerequisite(s): degree- or nondegree-seeking graduate student
TEL	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	MaryLouFulton Teachers College	Educational Leadership & Innovation, Division	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
TEM	100	Seminar in Entrepreneurship	Exposes students to careers in entrepreneurship by inviting diverse entrepreneurs to discuss their businesses and backgrounds and share their stories on starting and growing their ventures.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1		Credit is allowed for only TEM 100, TEM 194 (Entrepreneurship) or OMT 191 (Entrepreneurship)
TEM	191	First-Year Seminar	Small course emphasizing student-faculty discussion/interaction. Strongly recommended for first-year students. Must have taken 25 or fewer semester hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
TEM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TEM	200	My Technology Venture	Introduces the concept of entrepreneurship through venture practice and self-reflection to help students understand their potential roles in a technology-driven marketplace.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 110; Pre- or corequisite(s): TEM 100; Credit is allowed for only TEM 200 or TEM 294 (My Technology Venture) or TMC 294 (My Technology Venture)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TEM	230	Creativity and Business Innovation	Introduces concepts, models and techniques of creativity and innovation. Exposes processes related to developing creative skills and habits with an emphasis on problem solving and design.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; TEM 100; TMC 110; minimum sophomore standing; Credit is allowed for only TEM 230 or TEM 394 (Technology Entrepreneurship) or TMC 394 (Technology Entrepreneurship)
TEM	250	Design Methodology	Outlines product design method and provides opportunity to apply it to a design project including identifying needs, setting target specifications, generating and selecting concepts, prototyping and testing.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; MAT 211; Credit is allowed for only OMT 294 (Design Methodology) or TEM 250
TEM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TEM	311	Opportunity Analysis	The key to making sound business decisions involves the careful analysis of the situation, intelligent use of research, and successful practice. Entails the research and implementation of strategy to determine consumer expectations utilizing the skills especially important in today's competitive and turbulent market.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 310
TEM	330	Systems Innovation	Systems thinking course that investigates how innovators can incorporate the knowledge of complex systems into the processes of technology development, product/service innovation and venture development.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: ENG 102, 105 or 108 with C or better; TEM 200 or 45 earned hours; Credit is allowed for only TEM 330 or TEM 394 (System Innovation)
TEM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TEM	400	Technology Entrepreneurship	Introduces opportunities and challenges that accompany starting and operating an entrepreneurial venture by exploring the fundamentals and principles of entrepreneurship suitable for undergraduate business and technology students. Provides real-world, hands-on learning on what it's like to successfully transfer knowledge into products and processes that benefit society. Engages students with industry, talking to customers, partners and competitors, as the team encounters the chaos and uncertainty of transferring knowledge into products and processes that benefit society.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre- or corequisite(s): Technological Entrepreneurship & Mgmt BS major; ENG 102, 105, or 108 with C or better if completed; TEM 250 OR Business (Technology) BA major; Credit is allowed for only OMT 494/TEM 394 (Technology Entrepreneurship) or TEM 400
TEM	420	Statistics for Industry	Covers topics such as probability theory, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, and simple linear regression analysis. Provides a fundamental understanding of probability theory and statistics as used in typical industrial applications. Presents and discusses illustrative problems. Where possible, explores problems from the students' disciplines to insure that the principles of statistics and probability are studied in the context of the students' chosen field.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: MAT 117 or any MA General Studies course
TEM	431	Innovation Management	Focuses on execution challenges that innovation initiatives face, including: (a) Resources: Where do the resources for innovation initiatives come from? (b) Organization: How should innovation initiatives be organized? (c) Planning: How should plans for innovation initiatives be written and through what kind of process should they be revised? Explores the processes of innovation management for various sizes of companies utilizing smaller scale, local processes to large scale, globally dispersed innovation processes and teams.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: ENG 102, 105 or 108 with C or better; TEM 200 or 45 earned hours; Credit is allowed for only TEM 431 or TEM 494 (Innovation Management)
TEM	450	Design for the Developing World	Learn the product design process; improve the lives of poor residents in communities at the base of the economic pyramid who earn less than \$2/day. Help improve health, energy and clean water issues among others by joining with GlobalResolve, an ASU program in the College of Technology and Innovation whose goal is to help reduce poverty through technological innovation and entrepreneurship.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: Junior, Senior or Graduate standing; Credit is allowed for only TEM 450 or TEM 494 (Design for the Developing World)
TEM	455	Global Impact Entrepreneurship	Increases awareness and understanding of the complex nature of global poverty. Students think comprehensively about sustainable ways to address by focusing on business ventures and product design, which take advantage of local resources, networks and institutions. Students design and refine technologies and services that address the needs of communities in the developing world. Examines piloted technological innovations by ASU students in the west African nation of Ghana, India, and Latin American countries such as Mexico and Peru. Analyzes technological initiatives that have been piloted in Ghana and Peru, and attempts to create sustainable business ventures for them.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; TMC 320; minimum junior standing; Credit is allowed for only OMT 494 (Global Impact Entrepreneurship) or TEM 455

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TEM	460	Lean Six Sigma Green Belt Certification	Six Sigma and Lean are fast becoming required knowledge for professionals involved in helping their companies streamline productivity and improve performance. Provides a focused and measurable management discipline, structured to reduce product and service failure rates to near perfection. Explores how Six Sigma and Lean strategies and tactics fit into a larger management systems and how to apply these techniques to solve and prevent critical business process problems.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisites: ENG 102, 105 or 108 with C or better; TEM 200 or 45 earned hours; Credit is allowed for only TEM 460 or OMT 494 (Lean Six Sigma Green Belt Certification)
TEM	480	Focus Area Project	Student research project that synthesizes knowledge across the core and the student's selected focus area. Examines a practical challenge that demonstrates technical competence related to technological entrepreneurship and management. Enhances the student's ability to focus on a topic, conduct research and present findings.	N	LEC	Y	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 430; senior standing
TEM	481	Consulting Project	Students learn about technology entrepreneurship through consulting with leaders and owners of businesses, not-for-profit organizations and government agencies. Requires both out-of-class consulting projects and in-class instructional sessions focused on technology entrepreneurship and business strategy, including financing, promoting, leading and growing the venture and consulting skills.	N	PRA	Y	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): senior standing; Pre- or corequisite(s): TMC 430 or BAS major
TEM	482	Startup Workshop	Students launch their own technology-based ventures with collaboration and mentorship from colleagues and faculty. Explores the fundamentals and principles of entrepreneurship suitable for undergraduate technology entrepreneurship. Provides real-world, hands-on learning on what ifs to successfully transfer knowledge into products, processes and services that benefit society. Engages with industry, talking to customers, partners and competitors, as the team encounters the chaos and uncertainty of transferring knowledge into products and processes that benefit society.	N	PRA	Y	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 430; senior standing
TEM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		
TEM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-6		Prerequisite(s): Barrett Honors student
TEM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-6	L	Prerequisite(s): Barrett Honors student
TEM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TEM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		
TEM	505	Lean Process Improvement	Develops an understanding of individual and group decisions and responsibilities for process design and improvement in work settings. Covers common problems and success stories and qualitative and quantitative techniques to measure progress toward organizational goals for a variety of industrial business situations.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEM	530	Statistics Bootcamp for Industry	Provides foundational coverage of topics such as probability theory, descriptive statistics, sampling distributions, parameter estimation, tests of hypotheses, chi-square tests, and simple linear regression analysis, appropriate for first-year graduate students. Additionally, provides a fundamental understanding of probability theory and statistics as used in typical industrial applications. Presents and discusses illustrative problems from technology, entrepreneurship, aviation and psychology. Where possible, explores problems from the student's discipline to insure that the principles of statistics and probability are studied in the context of the student's chosen field.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Pre-requisite: Degree- or Nondegree-seeking graduate; Credit is allowed for only TEM 530 or 598 (Statistics Bootcamp for Industry)
TEM	531	Disruptive Innovation and Technological Evolution	Focuses on the processes of innovation management of various sizes of companies utilizing smaller scale, local processes to large scale, globally dispersed innovation processes and teams, with an emphasis on disruptive innovation and the evolution and forecasting of technology. Provides a survey of innovation management concepts and various technological forecasting and prediction approaches, both mathematical and nonmathematical, in conjunction with a study of the evolution of selected technologies and the management problems associated with emerging technologies.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student

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TEM	532	Advanced Analysis of Systems	Introductory course in systems analysis and modeling. Develops basic competence in formulating and solving models of systems to aid decision making. Topics include: introduction to systems and systems modeling; a simple what-if analysis; overview and review of linear algebra and matrices; problem formulation and model development in optimization; linear programming (LP), economic interpretation and sensitivity analysis; introduction to integer programming (IP); special linear programs; project schedule network development and computations; overview of heuristic algorithms. Uses selected software in examples, short problems and in a project.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TEM	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TGM	101	Principles of Global Management	Provides the basic concepts of management with particular emphasis on the functions of management in a global environment. Examines the antecedents of globalization; the role of global environments in shaping organization structure, strategy and processes, as well as the basic principles of managing in complex cross-cultural settings. Emphasizes global institutional arrangements and macroeconomic issues. Serves as an introductory course that provides a quick snapshot of key issues facing global corporations today with each of the major themes explored more fully in the set of advanced courses that follow. Applies global business concepts in understanding global political economics, legal systems and socio-cultural environments.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3	G	
TGM	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): Maximum 25 hours
TGM	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	200	Principles of Accounting for Global Organizations	Focuses on financial and managerial accounting and examines how outsiders evaluate businesses, nonprofits and governmental operations and how economic events are reflected in a firm's financial statements, including balance sheets and cash flow statements. Examines key accounting methods that impact a company's financial statements and how they are used by shareholders, creditors, employees and customers to make credit decisions and/or value a firm's equity securities.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	204	Principles of Marketing for Global Organizations	Explores the ways in which global marketing strategies reflect a deep understanding of markets and create valuable offerings for customers globally. Broadly speaking, marketing strategy making is comprised of segmentation, targeting and positioning. Segmentation is the process by which we segregate a relatively heterogeneous mass market into relatively homogeneous market segments. Targeting is the process by which we analyze opportunities and identify those customers where our business has the greatest prospects for success. Positioning is the process of assembling the "total offering" (product, service, distribution and price) and communicating the benefits of this "total offering" to the members of our target market. Challenges students to think critically about global competition. As such, rote learning of terms and concepts is not sufficient to prepare students to manage a business in global markets.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	268	Intercultural Communication for Global Management	In a dynamic and interactive format, this course presents a framework of models and skills for building communication performance in competitive global business settings. Assists in implementing strategies for mastering interpersonal encounters, including conflict resolution, in multicultural environments. Examines theories of communication (the basic concepts, principles and skills vital for understanding and improving communication across racial, ethnic and cultural differences). Places students in experiential situations in order to develop valuable global management skills. Using cases, self-assessment questionnaires, multicultural team exercises and simulations, equips the global manager with the ability to solve problems and take advantage of opportunities in a multicultural world. Explores in depth intercultural theories from the TGM three regional areas--China, Latin America and the Middle East.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	300	Principles of Finance for Global Organizations	Equips students with the tools necessary to make strategic financing and investment decisions for value creation in a competitive global environment. Topics addressed include financial analysis and projections; working capital management; and investment management (derivation of cash flows, cost of capital, discounted cash flow valuation and capital budgeting decisions).	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student

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TGM	310	Supply Chain Operations for Global Organizations	Studies the major elements of supply chain management. Students learn how to design an integrated supply chain and evaluate the fit with the business strategy.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student; minimum 60 hours
TGM	312	Big Data in the Global Economy	Understands how multinational organizations make strategic use of Big Data to gain a competitive advantage in the global economy. Covers the important aspects of Big Data from a managerial viewpoint. Delves into the understanding of global data and how this data must be standardized to account for differences in collection methods, legal constraints and cultural interpretation to create a reliable platform for evaluation.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student; minimum 60 hours; Pre- or corequisite(s): STP 226 with C or better
TGM	353	Regional Management Environment	Provides future global managers with the analytical tools and frameworks for understanding the political, social, cultural and economic contexts within which business activities take place in various countries and regions throughout the world.	N	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student; minimum 60 hours
TGM	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	400	Advanced Topics in Global Management	Focuses on advanced topics in global management designed to synthesize knowledge acquired from global business, language and cultural coursework.	N	LEC	Y	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student; minimum 60 hours
TGM	430	International Trade and Regional Economic Agreements	Explores recent trends in global finance and trade and in regional trade agreements (GFTAREAs), especially as they pertain to national business environments and the global political economy. Also explores how globalization and regionalism impact business decision making and policy making at the national level and in the global political economy.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate; minimum 60 hours
TGM	460	Global Risk Assessment and Management	Covers concept of regional and country risk as it affects foreign businesses and investors, and develops participants' abilities to identify, analyze and design management strategies for mitigating such risk.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate; minimum 60 hours; Pre- or corequisite(s): TGM 468 with C or better if completed
TGM	468	States and Markets	Global managers operate in an international economy that presents tremendous opportunities as well as risks. Globalization has dramatically expanded opportunities for international trade, investment and economic development. At the same time, global managers have to deal with the prospect of trade wars, international financial crises and intensified competition over markets and resources. In addition, international organizations such as the International Monetary Fund, World Trade Organization and World Bank Group have a direct impact on international business operations. Develops analytical tools for understanding the rapidly changing and dynamic global political. With these tools, managers are better prepared to anticipate the risks and take advantage of opportunities in the global economy.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	489	Multinational Organizational Leadership	Explores multinational organizational management strategies, organizational practices/systems, and related managerial skills which are an essential part of global competitiveness. Develops skills to understand the application of analytical tools and frameworks, executes complex strategy, and builds and leads competitive teams and people.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): Thunderbird School of Global Management undergraduate student
TGM	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-6		Prerequisite(s): Barrett Honors student
TGM	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-6	L	Prerequisite(s): Barrett Honors student
TGM	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-7	L	
TGM	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization, on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course. This course may be taken only by outstanding senior students who have completed at least one semester in residence and who have a cumulative GPA of 3.00 or higher in the major or field of specialization. A special class fee may be required.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		

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TGM	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	501	Global Accounting	Focuses on two aspects of accounting: financial and managerial accounting. Financial accounting is about how outsiders view and evaluate an organization such as a business, a not-for-profit entity or a governmental operation. It focuses on how economic events are reflected in a firm's financial statements including a balance sheet, an income statement and a statement of cash flows. It also focuses on how financial statement information is used by various stakeholders such as shareholders, creditors, employees and customers in making decisions with regard to the firm, including credit decisions and/or valuing a firm's equity securities. Analysis and equity management accounting involves providing information, both financial and non-financial, to management and employees to aid in planning, organizing activities, and monitoring and controlling business performance.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	502	Financial Management for Global Value Creation	Equips students with the tools necessary to make strategic financing and investment decisions for value creation in a competitive global environment. Topics addressed include financial analysis and projections; working capital management; and investment management (derivation of cash flows, cost of capital, discounted cash flow valuation, and capital budgeting decisions).	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	503	Global Marketing	Provides a managerial orientation to the topic of global marketing in today's complex, rapidly changing international business environment. A key focus is developing competitive advantage by creating customer value. Course participants gain a fundamental understanding of marketing strategy and marketing analysis (i.e., customer, competitor and company analysis) as well as an appreciation of the basic strategic issues involved in market segmentation, market targeting and market positioning in the international arena. Also examines the major tactics/tools used by global marketers to facilitate the management of their international marketing plans (i.e., product development, pricing strategies, marketing communications, distribution management). Emphasizes developing skills for entering new markets and sustaining or growing current markets.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	504	Managing Organizations from a Global Perspective	Covers two key aspects of successfully managing an organization in a global environment. The first component covers the strategic direction of the organization, and the second component discusses how to harness the power of people in the organization to build teams and lead people to execute the strategy.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	505	States and Markets in a Global Economy	Global managers operate in an international economy that presents tremendous opportunities as well as risks. Globalization has dramatically expanded opportunities for international trade, investment and economic development. At the same time, global managers have to deal with the prospect of trade wars, international financial crises and intensified competition over markets and resources. In addition, international organizations such as the International Monetary Fund, World Trade Organization and World Bank Group have a direct impact on international business operations. Develops analytical tools for understanding the rapidly changing and dynamic global political. With these tools, managers are better prepared to anticipate the risks and take advantage of the opportunities they will encounter in the global economy.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	506	Communicating and Negotiating Across Cultures	This dynamic and interactive course provides managers with an effective framework for achieving their goals in global management settings. Assists students to prepare for and execute time-tested strategies for achieving communication competence with persons from different cultures. Also covers negotiating in the global context. Not only examines theories of culture and communications, but also places students in an experiential situation to gain valuable skills for overcoming obstacles in global management environments. Through use of cases, multicultural team exercises, student negotiation exercises and simulations, equips the global manager with tools to solve problems and take advantage of opportunities in a multicultural world.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	507	Global Organizational Consulting: Basics	Consulting course provides an overview of the field of consulting and the role of the management consultant. Familiarizes students with the tools and techniques used during a consulting engagement, including project entry, problem definition, intervention planning, data collection, problem solving, alternative generation, feedback, project exit, client relations skills and project management. Requires students to work in project teams to solve business problems in organizations through the application and expansion of technical skills acquired in other classes.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	508	Regional Business Environment I: Emerging Markets	As an extension of states and markets in a global economy, provides an analysis of contextual factors that influence dynamic business environments by employing frameworks that integrate political, economic, geographic, and sociocultural factors in a specific regional area.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 505

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TGM	509	Regional Business Environment II: Developed Economies	Provides future global managers with the analytical tools and frameworks for understanding the European business environment. Also provides a broad understanding of the region in order to be successful therein. Deals with the political, social and economic context within which business activities take place in Europe. In order to succeed as managers in the environment, requires knowledge of political, social, cultural, economic, business and regional economic factors, both across the European landscape and within individual countries.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 508
TGM	510	Strategies in Global Development	The nuances and challenges of development in the less-developed countries (LDCs) and in the transition economies of the world. Analyzes the economic, social, political, cultural and other challenges that LDCs and transition economies face, and the strategies they are employing in their quest for development.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 505
TGM	511	Global Financial Accounting	Accrual accounting concepts, teaching students how to prepare and understand the content of traditional financial statements. Topics include the recognition and measurement of accounting events; preparation and analysis of income statements, balance sheets and statements of cash flows; and the measurement of revenue, expenses, assets, liabilities and stockholders' equity, including both U.S. and international principles.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	512	Managerial Accounting and Decision Making in a Global Environment	Covers the development and use of managerial accounting information, including both financial and nonfinancial performance measures, in making long- and short-run decisions. Topics include cost-profit-volume analysis, cost behavior, relevant costs, job-order and processes costing, activity-based cost management and the analysis of customer profitability.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-2		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 501 or 511
TGM	519	Global Financial Engineering	Develops (1) an understanding of the pricing of derivative securities such as options, futures, forwards and swaps; (2) an understanding of derivative strategies, such as straddles, spreads, synthetics; (3) the ability to use these derivative assets and strategies to manage diverse sources of risk, including market risk, interest rate risk, foreign exchange risk and commodity price risk; (4) the ability to manage the interest rate and default risk in fixed-income securities (requires an understanding of duration, convexity, credit default swaps); (5) a broad understanding of the role played by hedge funds, arbitrage and liquidity in financial markets.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 502 or 552
TGM	521	Managing for Global Value Creation	Equips students with the tools necessary to make strategic financing and investment decisions for value creation in a competitive global environment. Topics addressed include financial analysis and projections; working capital management and investment management (derivation of cash flows, cost of capital, discounted cash flow valuation, and capital budgeting decisions).	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	522	Global Financial Decisions	Covers modern practices of financial decision-making and management in a market-oriented multinational framework. Topics addressed include capital structure decisions, risk management involving financial derivatives and currency hedging, cross-border investment decisions, subsidiary management, and cross-border merger and acquisitions.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 521
TGM	523	Global Investments	Surveys the investment management landscape and delivers the theory and technology attendant to intellectual and/or career pursuit in this domain. Topics explored include the domestic and international aspects of portfolio optimization; emerging markets and global asset allocation; security analysis and selection; stock sorting and screening algorithms; mutual fund performance decomposition and benchmarking; fixed income analytics and metrics; earnings quality; the franchise factor; distress prediction and credit scoring models; the behavioral finance salient; and financial derivatives from a portfolio management perspective, inter alia. A respectable floor of numeracy is advisable; a CFA® emphasis prevails.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 502 or 552
TGM	524	Valuation of the Private Firm	Provides a practical and theoretical understanding of the valuation of non-trading private enterprises. Basic theory, methodology and application of modern financial concepts as they relate to the valuation of these types of business organizations.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 502 OR TGM 521 and 522
TGM	525	Global Financing and Forecasting for the Private Firm	Focuses on finance concepts as applied in the real work by entrepreneurs. From the firm perspective, covers topics relevant to entrepreneurial finance, including financial statements, funding plans and venture capital. Prepares prospective general managers of entrepreneurial companies on how to make the financial decisions involved with building high-risk, high-growth new enterprises. Prepares business-minded students for careers focused on entrepreneurship and corporate entrepreneurship. Through the use of excel-based modeling, combined with lectures and readings from assigned sources, students understand aspects in finance that are critical to the entrepreneurial venture. Prepares students to deal with the various financing resources available to these same enterprises, including venture capitalists, angel investors, investment bankers and other financial stakeholders.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 502, OR TGM 521 and 522

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TGM	526	Global Portfolio Management	Develops (1) an understanding of the pricing of derivative securities such as options, futures, forwards and swaps; (2) an understanding of derivative strategies, such as straddles, spreads, synthetics; (3) the ability to use these derivative assets and strategies to manage diverse sources of risk, including market risk, interest rate risk, foreign exchange risk and commodity price risk; (4) the ability to manage the interest rate and default risk in fixed-income securities (requires an understanding of duration, convexity, credit default swaps); (5) a broad understanding of the role played by hedge funds, arbitrage and liquidity in financial markets.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 502 or 522
TGM	527	Global Private Equity	Overview of the private equity industry globally, its role in economy, its participants, its operations and its recent development. Covers different phases of the private equity investment process and the players involved at each stage. Phases include: setting up a fund, selection and screening of investments, exploring valuation techniques, managing and exiting investments. Emphasizes the practical aspects of private equity transactions through case studies and interactions with private equity professionals. Recommended for students interested in private equity investing, investment management, investment banking, entrepreneurship and entrepreneurial finance. Does not require previous experience in private equity or financial skills beyond those taught in the finance core classes.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 502 OR TGM 521 and 522
TGM	528	Business Intelligence	Examines the role that business intelligence—the systematic collection, synthesis and analysis of information on the external operating environment—should play in strengthening corporate strategies and decision making. Through lectures and client-sponsored competitive assessment projects, the course has two goals: to help students understand this management tool and to train them to be able to utilize it for competitive advantage. Also addresses the related issues of corporate/industrial espionage and information security.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 504 or 540; TGM 541
TGM	529	Multinational Corporate Finance (FORAD)	Applies the theories of managerial and international finance to the problems of multinational treasury management. Topics include issues and techniques in multinational funds transfers; identifying and measuring foreign exchange and interest rate risk; multinational tax planning; managing foreign exchange and interest rate risk; hedging instruments, including forward contracts, options and swaps; and financially engineered synthetics. Students also manage the financial functions of a computer-simulated multinational corporation, construct a biennial report summarizing their management results and present oral reports to a board of directors consisting of professors and invited business professionals.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 502 or 552
TGM	530	Big Data in the Age of the Global Economy	Creating a sustainable IT-dependent competitive advantage is a major goal for forward-thinking multinational organizations. Understands how multinational organizations make strategic use of Big Data to gain a competitive advantage in the global economy. Covers the important technological aspects of big data from a managerial viewpoint. Delves into the understanding of global data and how this data must be standardized to account for differences in collection methods, legal constraints and cultural interpretation to create a reliable platform for evaluation.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	531	Multinational Value Chain	Exposes students to the strategies and challenges associated with moving goods, services, information and associated payments across complex, globally dispersed value chains to end customers. Topics include value-chain structures, supplier partnerships, cross-cultural issues, technology, data networks, global logistics, risk management and value-chain mapping. A field project provides students with an opportunity to work in teams applying the course concepts to increase customer value in a real value chain.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	532	Leading Global Projects	Provides an overview of the global context of project leadership. Global project leaders work at the intersection of project management, leadership in a project context and cross-cultural effectiveness. Exposes students to key project leadership approaches including stakeholder management, methods for increasing inclusion on global project teams and building high-performing global project teams. Uses case studies, a simulation, several exercises and interactive discussions.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	536	Global Trade Risk Assessment and Mitigation	Firms of all kinds are attempting to improve their competitive positions by strategically managing the flow of services, raw materials, work-in-process inventories and finished goods on a global basis. Global managers must be concerned with the ever-increasing number of diverse risks to their businesses posed by political, social, physical and financial forces at work globally and in specific regions and countries. Centered on state-of-the-art assessment models used by businesses and foreign investors. Issues include methods of measuring, assessing and forecasting risk, and methods of mitigating risk.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 505

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TGM	537	Global Finance, Trade and Regional Economic Agreements	Explores recent trends in global finance and trade and in regional trade agreements (GFTAREAs), especially as they appertain to national business environments and the global political economy. Also explores how globalization and regionalism impact business decision making and policy making at the national level and in the global political economy.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 505
TGM	540	Managing People from a Global Perspective	Explores the mix of organizational practices and people that can be the basis of sustainable competitive advantage in the contemporary global business environment. Topics covered include cross-cultural issues in managing people, traditional and emerging models of organizations, organizational culture, leadership, employee skills and motivation, reward systems and change management.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	541	Competitive Strategy from a Global Perspective	Focuses on choices that impact the performance of the entire organization. Examines central questions: Why are some industries and firms more profitable than others? How do firms create competitive advantage? How does the choice of strategy drive organizational performance? How do firms manage scarce resources in the pursuit of strategic objectives? How do firms create unique and sustainable industry positions?	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	546	Regional Industrial Analysis	Builds on concepts introduced in competitive strategy, global strategy and regional business environment. Focuses on the analysis of the strategies adopted by competing players and their impact on the global strategies pursued by the parent organization in the context of regional industry dynamics. Covers a spectrum of topics ranging from industry cluster formation, country-specific advantage, industry versus industry ecosystem analysis, the government's role in industry and regional development including national innovation systems, demand and supply chains in regions, and emerging market challengers. Applies multiple decision-making tools and frameworks to understand the Information and Communications Technology (ICT) industry in Asia Pacific--the fastest growing region in the world. Tools and frameworks learned in this course are applicable to other regions and other industries.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2-3		Prerequisite(s): TGM 540 and 541 OR TGM 504
TGM	547	Leading Change and Transformation in a Global Environment	Increases understanding of the nature of organizational change (through conceptual frameworks, readings and discussions). Specifies skills needed for managing change. Enhances sensitivity to the contribution and consequences of the human element as related to change. Helps student's own capacity to "thrive on change."	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 540
TGM	548	Global Strategy	Focuses on how global firms create value. Covers topics ranging from country-specific competitive advantage and the notion of distance to alternative global strategy archetypes and sources of competitive advantage for emerging market multinationals. The approach applies multiple decision-making tools and frameworks to untangle the complexities of managing in a global corporation.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): TGM 504 OR TGM 540 and 541
TGM	549	Global Leadership	Explores the concept of effective leadership within and across a variety of organizations and global contexts. Definitions of "leadership" and strategies for becoming an accomplished leader abound. Rather than attempt to narrowly focus our attention on definitions, leadership styles, and supposedly "definitive" theories of leadership, focuses on the demands of and competencies associated with excellent leadership. Most importantly, examines how leaders sense the need for and then manage organizational change. Given the increasingly complex world we live in and the ongoing and rapid rate of change, change management has become one of the most critical of leadership skills.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 504 or 540
TGM	551	Global Marketing Strategy	Covers the major concepts involved in creating and sustaining customer value, analyzing the firm's macro environment, choosing whether or not to enter a foreign market, how to evaluate different foreign markets, the best methods for entering different markets, the market research design process, understanding consumer and B2B customer behavior, and ethical issues encountered in global marketing.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	552	Global Marketing Management	Covers the functional aspects of marketing including decisions relating to segmentation, targeting, branding, product development, pricing, distribution and advertising/promotion. Students integrate their knowledge of these topics through the creation of an international marketing plan based on a product or service and in a country approved by the instructor.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	553	Global Customer Decision Making	Both theoretical and applied, the backbone and foundation of the course draws heavily from behavioral economics, consumer psychology and consumer information processing. Equips students with a comprehensive understanding of how and why consumers make decisions the way they do in the market (B2C). Although consumers desire to make rational decisions that maximize their utility, in reality, more often than not, they tend to make irrational and suboptimal choices. Offers why such phenomena occur and how consumers can improve their quality of decision making. Offers a richer appreciation of the heuristics and decision-making rules that consumers use and biases that affect consumer decision making.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 503 OR TGM 551 and 552

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TGM	554	Global Marketing Research	Focuses on the use of marketing research techniques for competitive advantage in a global business context. Develops the necessary skills to plan a research project, collect data, analyze the data and report findings.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 503 OR TGM 551 and 552
TGM	556	Global Strategic Services Marketing	Services have come to dominate our economy. Yet there remains a naïve belief that service production, marketing and management is a simple adaptation of goods production, marketing and management. Unlike physical goods, services are co-produced with customers at a time, and in a place, of the customer's choosing. This co-production directly involves an organization's front-line employees. As a result, it is more difficult for services to be inventoried and checked for quality assurance. Provides a thorough understanding of the management and continuous improvement of service operations, including a thorough understanding of the role of customers in service operations such that service firms can design effective service experience so as to minimize service failure.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 503 OR TGM 551 and 552
TGM	558	Global Data Analysis for Strategic Marketing	Provides an understanding of the key marketing issues through an examination of various marketing decisions. Course complements other marketing courses by adopting a more hands-on and practical approach to strategic market planning. A combination of lectures and discussions, analyses of cases, software demonstrations, and a simulation game facilitate understanding of the material. Requires a solid understanding of marketing planning, statistics and quantitative methods.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 503 OR TGM 551 and TGM 552
TGM	559	Global Brand Management	Provides a managerial orientation to the topic of global brand management. Prepares participants for a career either in the role of the "traditional brand manager" or in the role of a "manager with brand-related responsibilities." A major portion of the course is working on a global brand field project to develop a brand management/marketing plan for a brand and brand challenge of student (and team) choosing. Emphasizes the ethical dimension of global brand management; focuses on an individual brand ethics project.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	3		Prerequisite(s): TGM 503 or 552
TGM	579	Communicating in a Global Context	In a dynamic and interactive format, presents a framework of models and skills for building communication performance in competitive global business settings. Assists in implementing strategies for mastering interpersonal encounters, including conflict resolution, in multicultural environments. Not only examines theories of communication, but places students in experiential situations in which they develop valuable global management skills. Using cases, self-assessment questionnaires, multicultural team exercises and simulations, equips the global manager with the ability to solve problems and take advantage of opportunities in a multicultural world.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-2		Prerequisite(s): graduate Thunderbird School of Global Management student
TGM	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	581	Negotiating in a Global Context	Provide students with knowledge, skills, insights and experience necessary to be a competent negotiator. Covers theories of cross-cultural negotiation and how these impact business interactions. Students gain insight into personal and cultural underpinnings that influences cognitive, affective and negotiation behavioral processes. Expands skills in achieving communication and negotiating competence through the understanding and practice of increased appropriateness, flexibility and adaptability.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	2-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 579
TGM	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	584	Internship	Structured practical experience that follows a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	585	Corporate Social Responsibility in a Global Context	Provides knowledge, skills, insights and experience necessary to be a competent negotiator. Covers theories of cross-cultural negotiation and how these impact business interactions. Students gain insight into personal and cultural underpinnings that influences cognitive, affective and negotiation behavioral processes. Expands skills in achieving communication and negotiating competence through the understanding and practice of increased appropriateness, flexibility and adaptability. Corporate Social Responsibility (CSR) has become essential for corporations seeking to succeed in an intensely competitive global economy. Provides an in-depth understanding of what CSR is, how to apply it effectively in an international context and how to manage it well. Using a case-based approach, focuses on actual experiences of corporations that have used CSR strategies successfully--and unsuccessfully--to draw practical lessons for international managers. Incorporates several guest lectures from executives who share their firsthand experiences with CSR in various regions of the world.	N	LEC	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-3		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 505
TGM	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic or writing a literature review of a topic.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		

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TGM	591	Seminar	A small class emphasizing discussion, presentations by students and written research papers.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	592	Research	Independent study that is expected to lead to a specific project such as a thesis or dissertation, report or publication, in which a student conducts research under the supervision of a faculty member. Assignments might include data collection, experimental work, data analysis or preparation of a manuscript.	Y	RSC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
TGM	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded and no grade is assigned.	Y	RSC	Y	Z3	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1		
TGM	596	Thunderbird Experiential Practicum	Capstone course offering students an opportunity to apply the full range of professional skills they have acquired during graduate business and management studies. Consists of participation in a consulting project for a client system in an emerging market country, including Central America, Latin America, the Middle East, Africa, central and eastern Europe, and the whole of Asia apart from Hong Kong, Japan, Singapore, Australia and New Zealand. Serves all sectors: public/governmental, private and NGO/nonprofit.	Y	PRA	Y	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-6		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 501 or 512; TGM 502 or 522; TGM 503 or 552; TGM 505 or POS 586; TGM 506 or 581, OR Master of Arts in Global Affairs and Management major; TGM 507
TGM	597	Thunderbird Integrative Experience	Provides a capstone experience that integrates content from several business areas including strategy, finance, cross-cultural communication, supply chains, leadership, operations and accounting. May take the form of an integrative business computer simulation or a seminar drawing on faculty from a variety of business areas to highlight key issues in those areas.	N	LEL	N	GNA	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1		Prerequisite(s): graduate Thunderbird School of Global Management student; TGM 505; TGM 512; TGM 522; TGM 530; TGM 541; TGM 552; Corequisite(s): TGM 548
TGM	598	Special Topics	Topical courses not offered in regular course rotation (e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand).	Y	LEC	Y	OPT	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-4		
TGM	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Thunderbird Sch of Global Mgmt	Thunderbird School of Global Management	1-12		
THA	101	Elementary Thai I	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose readings in Thai script.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		
THA	102	Elementary Thai II	Basic communication, reading, and writing skills. Intensive oral/aural classroom drill supplemented by prose reading.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5		Pre-requisites:THA 101 with a grade of C or better
THA	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		Prerequisite: Freshman with minimum 25 hours
THA	201	Intermediate Thai I	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites:THA 102 with C or better
THA	202	Intermediate Thai II	Systematic review of grammar. Continued development of communication skills with increased emphasis on reading and writing.	N	LEL	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites:THA 201 with C or better
THE	100	Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisite(s): non-Theatre and non-Film students only
THE	100	Introduction to Theatre	Surveys theatre production from the Greeks to contemporary theatre.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
THE	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
THE	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THE	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THE	320	History of the Theatre I	Centers on the historiography of world theatre as art, as a medium of cultural expression and as a social institution. Involves, along with the reading of plays, advanced methodological approaches to studying the creation of theatre within cultural and political contexts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & H	Prerequisite(s): Theatre major: THF 220 (or THE 220) OR New College student: junior or senior standing
THE	320	History of the Theatre I	Centers on the historiography of world theatre as art, as a medium of cultural expression and as a social institution. Involves, along with the reading of plays, advanced methodological approaches to studying the creation of theatre within cultural and political contexts.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Prerequisite(s): Theatre major: THF 220 (or THE 220) OR New College student: junior or senior standing

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THE	321	History of the Theatre II	Traces major developments in theatre production from the 17th century to modern times.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & H	Prerequisite(s): Theatre major: THF 220 with C or better; THE 320 with C or better OR New College student: junior or senior standing
THE	321	History of the Theatre II	Traces major developments in theatre production from the 17th century to modern times.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & H	Prerequisite(s): Theatre major: THF 220 with C or better; THE 320 with C or better OR New College student: junior or senior standing
THE	322	Theatre History and Culture	Critically examines major developments in theatre history, historiography, and dramatic literature.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & H	Prerequisites: Must NOT be a Theatre student
THE	325	Play Reading for Educational Theatre	Assigned independent readings in plays for secondary school play production.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisites: Theatre student
THE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THE	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
THE	403	Independent Film	Examines the independent film movement from the French New Wave to contemporary independent filmmakers.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisites: ENG 102, 105 or 108 with C or better
THE	404	World Cinema	Films and filmmakers from Europe, Asia, Australia, the Far East, South America, and the Caribbean. Emphasizes cultural content and filmmaking philosophies.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	G	Prerequisites: ENG 102, 105 or 108 with C or better
THE	405	Film: Great Performers and Directors	Examines processes and influences of one or more great film performers and/or directors.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Pre-requisites: ENG102, 105 or 108 with C or better
THE	406	American Multicultural Film	Examines Native, African, Asian, and Latina and Latino American films and film artists in cinema history and production.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & C	Pre-requisites: ENG102, 105 or 108 with C or better
THE	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
THE	420	Theatre in America	Examines the major movements and pivotal moments in the history of American theatre from the 1700s to its current state, particularly its efforts to establish an identity that reflects the unique and changing citizenry of the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	Prerequisite(s): minimum 40 hours. Credit is allowed for only AMS 420 or IAP 420 or THE 420
THE	421	Shakespeare: Stage and Film	Examines Shakespeare's plays as written texts, stage performances, and film productions. Focuses on play reading, performance analysis, and film critique. Online course.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Pre-requisites: ENG 102, 105 or 108 with C or better
THE	422	Latina and Latino Theatre and Film	Explores issues of cultural identity through critical analysis of theatre and film by Latina and Latino artists in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	HU & C	Pre-requisites: ENG 102, 105 or 108 with C or better OR Theatre Masters students
THE	423	African American Theatre	Readings, discussion, video of the history and dramatic literature of African American playwrights and theatre companies in the United States.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	C	Pre-requisites: ENG 102, 105 or 108 with C or better, or Masters student
THE	424	Trends in Theatre for Youth	Surveys the history, literature, and contemporary practices in theatre for youth.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		
THE	425	Chekhov and Russian Drama	An in-depth study of Chekhov's major works, representative short stories and major plays, including "The Cherry Orchard" and "Three Sisters". Taught in English.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Pre-requisite: ENG 102, 105 or 108 with C or better; Credit is allowed for only RUS or THE 425
THE	426	Pre-Columbian Theatre of the Americas	Selected studies in pre-Columbian theatre forms and texts of the Aztecs, Mayans, Caribbean islands, and North American Indians.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: ENG102, 105 or 108 with C or better, or Masters Theatre student
THE	429	Studies in European Literature and Culture	Literary, cultural, and historical issues.	N	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): ENG 200 with C or better; one ENG 200- or 300-level literature course with C or better OR minimum 45 hours; Credit is allowed for only ENG, SLC or THE 429
THE	430	History of Fashion	Fashion is rarely set but rather evolves with eras of upheaval between one generation and the next. Clothes express the personality and rank of the individual creating an instantaneous and lasting impression. Introduces over 400 years of Western fashion history drawing parallels between the fashion and the period in which it existed.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): sophomore standing or higher
THE	440	Experimental Theatre and Performance	Explores 20th-century modernist theatrical forms and movements and development of alternative strategies for analyzing contemporary theatre and performance.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L	Prerequisite(s): Theatre undergraduate student; THF 220 (THE 220) with C or better; THE 320 with C or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
THE	475	Latin American Film	Examines the role of film in contemporary Latin American culture; films viewed and analyzed as casebook examples. Focuses on the aesthetics and generic conventions of contemporary Latin American films.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): ENG 102, ENG 105, ENG 108, FMS 100, or SLC 202 with C or better; Credit is allowed for only FMS 475 or SLC 475 or SPA 475 or THE 475 or FMS 494/SLC 494/SPA 494/THE 494 (Latin American Film)
THE	480	Methods of Teaching Theatre	Applies materials, techniques and theories for theatre with students, grades 6 through 12. Emphasizes curriculum development and praxis.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): minimum junior standing; Credit is allowed for only THE 480 or THE 581
THE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THE	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Pre-requisites: Barrett Honors Theatre or Film student
THE	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Pre-requisites: Barrett Honors Theatre or Film student
THE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THE	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
THE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-7		
THE	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7		
THE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
THE	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
THE	500	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): graduate School of Film, Dance and Theatre major
THE	504	Studies in Dramatic Theory and Criticism	Surveys dramatic theory, criticism, and aesthetics as they relate to contemporary performance.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre student
THE	505	Critical Theory and Performance	Surveys contemporary theories of culture as they apply to theatre and performance studies.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre graduate student
THE	510	Studies in Literature	Assigned individual reading program in standard sources and masterpieces in theatre literature. May be repeated for credit.	N	RSC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite: Must be a Theatre Education or Theatre for Youth student
THE	520	Theatre History and Literature	Surveys historiographical issues and dramatic literature related to key periods in theatre history.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre student
THE	524	Advanced Studies in Theatre for Youth	In-depth study of the history, literature, and contemporary practice of theatre for young audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Theatre Education or Theatre for Youth student
THE	525	Advanced Studies in Theatre for Youth II	Project-oriented explorations of theory and practice of contemporary theatre for youth audiences.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite: THE 524 with B or better
THE	562	Literary Management Workshop	Advanced literary management for the contemporary theatre, including trends in new play development, festivals and productions throughout the United States. Participation in Arizona Playwriting Competition.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite: THP 560 with B or better
THE	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THE	581	Methods of Teaching Theatre	Applies materials, techniques and theories for theatre with students, grades 6 through 12. Emphasizes curriculum development and praxis.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only THE 480 or THE 581

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THE	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	RSC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THE	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		
THE	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
THE	598	Special Topics	Topical courses not offered in regular course rotation—e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
THE	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Master of Art Theatre student
THE	600	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		
THE	700	Research Methods	Course on research methods in a specific discipline.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Pre-requisite: Must be a Theatre Education or Theatre for Youth student or have instructor approval.
THE	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THE	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre student
THE	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-15		
THE	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-15		
THF	101	Acting Introduction	Introduces basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Must not be a Theatre student

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THF	125	Orientation to Film, Dance and Theatre	Orientation to university and school resources and procedures. Academic success strategies, mentorship, goal setting. Community-building exercises.	N	REC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): BA Film (Film and Media Production or Filmmaking Practices) or BA Performance and Movement or BA Theatre (Acting or Design and Production or Theatre Exploratory) major; freshman standing
THF	126	School of Film, Dance and Theatre: First-Year Experience	Community building within the School of Film, Dance and Theatre; connections with faculty; foundations of creative process; attendance and written response to performance and media events.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2		Prerequisite(s): BA Film (Film and Media Production or Filmmaking Practices) or BA Performance and Movement or BA Theatre (Acting or Design and Production or Theatre Exploratory) major
THF	160	Introduction to Storytelling	Introduces the nature, structure, and operations of story, as well as the functions of narrative in societies and cultures. Several modules introduce a different mode of storytelling. Students learn to create their own stories utilizing several of the approaches introduced in the modules.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): BA Film or BA Performance and Movement or BA Theatre major
THF	215	Design and Composition for Theatre and Film	Introduces the aesthetic principles and practices employed by designers/artists of the stage and screen, including: basic knowledge of the elements and principles of design; conceptualization of design for theatre and film; director/designer collaboration models; methods and modes of visual communication for theatre and film (storyboards, renderings, models, etc.).	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): BA Digital Culture (Theatre) or BA The Arts (Entertainment Design) or BA The Arts (Fashion Design) major OR School of Theatre and Film major
THF	220	Principles of Dramatic Analysis	Analysis, evaluation, and interpretation of dramatic literature for theatrical production. Emphasizes the traditional canon of dramatic literature and traditional structures and forms of drama.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L or HU	Pre-requisites: School of Theatre and Film major or Theatre Exploratory major with minimum sophomore level; ENG 101, 105 or 107 with C or better; Pre- or Co-requisite: THF 126 with C or better
THF	370	Seminar: Acting Concentration for Stage and Screen	Designed for a student's continued growth as a preprofessional acting student. Provides a series of master workshops focused on craft. In addition, under the guidance of the faculty facilitator, students receive career guidance and information to strengthen connections to the institute, the school and the university.	N	SEM	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Prerequisite(s): admitted to Theatre (Acting) BA concentration; Credit is allowed for only THF 370 or THP 394 (Acting Concentration Seminar)
THF	397	Professional Development Seminar	Preparatory course for senior projects. Students research and create senior project proposals while formalizing faculty mentorships.	Y	SEM	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisites: Film BA or Performance and Movement BA or Theatre BA major; Minimum 56 hours
THF	497	Senior Project	Mentored practicum for culminating capstone projects.	N	PRA	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): THF 397 with C or better; Film BA or Performance and Movement BA or Theatre BA major; Minimum 56 hours
THP	102	Acting I: Fundamentals	Explores and applies basic principles of acting. Topics include terminology, scene and character analysis, exercises and improvisation, audition preparation.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Performance and Movement or Theatre major
THP	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THP	201	Theatre Production Crew	Participation in university mainstage theatre production backstage and board operations.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		
THP	202	Acting II: Intermediate Techniques	Rehearsal techniques and application of action to dramatic text.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 101 or THP 102 with B or better; THP 272, 277 with B- or better. Pre- or corequisite(s): THF 220 (THE 220) with C or better if completed
THP	212	Puppetry with Children	Construction and manipulation of puppets; practice in performance skills. Emphasizes educational and recreational uses of puppetry by and with children.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		
THP	213	Introduction to Technical Theatre	Procedures of technical theatre production and demonstration. Topics include design and construction of scenery, lighting, and properties.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	4		Pre-requisites: Theatre or Digital Culture (Theatre) student

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THP	214	Introduction to Costuming	Basic principles of costume design, construction, and survey of selected historical periods including makeup styles. Costume design project and production experience.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	4		Prerequisite(s): Digital Culture (Theatre) or The Arts (Entertainment Design) or The Arts (Fashion Design) or Theatre major
THP	218	Directing I: Introduction to Directing	Overview of emergence and practice of the director's craft. Explores director's role and responsibilities, play selection, conceptualizing, ground plans, blocking.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre student; THF 220 with C or better; THP 102 with C or better
THP	251	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
THP	260	Introduction to Playwriting	Basic skills of playwriting including exercises in monologues, scenes, and conflict and resolution, leading to completion of a one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: ENG101,105 or 107 with C or better
THP	272	Acting: Introduction to Movement	Movement vocabulary and physical training in relaxation, alignment, conditioning, and stage presence. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THF101 or THP102 with B- or better
THP	277	Acting: Introduction to Voice	Exercises and techniques to free the voice and improve quality and projection. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THF101 or THP102 with B- or better
THP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THP	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
THP	301	Theatre Production	Participation in university mainstage theatre productions (e.g., acting, construction, stage management).	Y	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-2		Prerequisites: THP 213 or THP 214 with C or better
THP	302	Acting III: Advanced Techniques	Advanced practice in methods, skills, and research for rehearsal and performance.	Y	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 101 or THP 102 with C or better; THF 220 (or THE 220) with C or better; THP 202 with C or better; THP 272 with C or better; THP 277 with C or better; minimum junior standing
THP	307	Acting: Research and Performance	Acting in theatre projects, productions, or collaborative performances in directing classes.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		Prerequisite: THF 101 (or THP 101 or THP 102) with C or better
THP	311	Creative Drama with Youth	Theories, materials, and techniques for facilitating improvisational drama with children and youth in classroom and community settings.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	L	Prerequisite(s): ENG 101 (or ENG 105 or 107) with C or better; minimum 25 hours
THP	313	Fundamentals of Design	Art and practice of scenic, costume, and lighting design for the theatre and the media.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: THP 213 or THP 214 with C or better or Digital Culture (Theatre) major
THP	317	Stage Management	Readings in stage management and participation as a stage manager in a university theatre production.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre undergraduate student; Corequisite: THP 301
THP	318	Directing II: Intermediate Directing	Explores approaches to staging and composition. Studio work culminates in presentation of a fully rehearsed ten-minute play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP218 with C or better; THP213 or THP214 with C or better
THP	330	Costume Design	Explores the elements of design, taking abstract ideas and formulating them into concrete forms. Encourages the student to experiment with different ideas and mediums. Emphasizes design basics, research, figure drawing, and beginning rendering techniques. Uses projects that involve complex script and character analysis to promote the student's ability to effectively communicate.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THF 215 or THP 313 with C or better
THP	331	Costume Construction	Uses of materials and techniques for stage costumes with actual construction of period apparel. May be repeated for credit.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 214 with C or better
THP	332	Makeup	Practical guide to the theory and practice of theatrical makeup. Basic principles of stage makeup design and application. Develops and increases skills in the application and design of the medium through a combination of reading assignments, lecture, demonstration and supervised practice sessions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Theatre (Design and Production) major or minimum 45 hours; Credit is allowed for only THP 332 or 494 (Makeup/Advanced Makeup)
THP	335	Advanced Stagecraft	Advanced construction techniques through applicable projects in carpentry and steel fabrication for theatre production in scenery and properties.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Minimum sophomore standing; THP 213 (or THP 301 Production) with B or better; Credit is allowed for only THP 335 or 394 (Advanced Stagecraft)
THP	340	Scene Design	Studio projects in designing scenery for contemporary stages.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 220 with C or better; THP 213 with C or better OR Digital Culture (Theatre) major

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THP	345	Lighting Design	Principles and theories of stage lighting design, including design process and execution, advanced exploration of design implementation and equipment; course includes drafting and drawing.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Minimum Junior standing or Design & Production student with minimum sophomore standing
THP	350	Sound Design	Introduces the equipment, process, and recording techniques used in sound design for the theatre.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre or Film student or Digital Culture (Theatre) student; THF 215 or THP 313 with B- or better
THP	351	Arts Management	Management, organizational behavior, and human behavior in the arts; marketing, financing, and budgeting for the arts.	N	LEC	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: BA The Arts major or minimum 45 hours; Credit is allowed for only THP 351 or 394 (Management and the Arts)
THP	355	Media Design for Performance	Introduces the fundamental skills, practices and theories for media and projection design for live performance, building on traditional areas of design for the theatre.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Theatre and Film or Digital Culture (Theatre) student; THF 215 or THP 313 with B- or better
THP	360	Intermediate Playwriting	Continued development of skills in playwriting through specific exercises and completion of a full-length play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre- or Co-requisite: THP 260 (with C or better if completed) or Pre-requisite: ENG 210
THP	372	Acting: Advanced Movement	Movement techniques for the classical and nonrealistic theatre.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 272 with B or better; Minimum junior standing
THP	377	Acting: Voice and Speech	Introduces phonetic alphabet, exercises, and techniques for voice and speech improvement. Application to performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 277 with B or better; Minimum junior standing
THP	385	Acting: Classical and Poetic Drama	Rehearsal and performance of Shakespeare and other classical playwrights. Emphasizes understanding poetic language, vocal and physical skills.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 101 (or THP 102) with B- or better; THP 277 with B- or better
THP	386	Acting: the Meisner Approach	Improvisations and exercises developed by Sanford Meisner applied to scene work.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 101 or THP 102 with B or better
THP	387	Acting: TV and Film	Professional television and film acting techniques, terminology, and on-camera experience.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre major, Theatre minor or Filmmaking Practices major; THF101 (THP 101) or THP102 with B or better, or Film and Media Production student
THP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THP	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEL	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
THP	401	Theatre Practicum	Production assignments for advanced students of technical production, stage and business management, and design.	N	LAB	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-2		Prerequisite(s): THP 301 with C or better or Master of Arts or Master of Fine Arts student
THP	406	Advanced Scenography	Process of production collaboration among scenographers, directors, and playwrights. Taught in conjunction with THP 519.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master in Fine Arts student; THP 340 plus one of the following: THP 214, THP 313, or THP 345 with C or better
THP	411	Methods of Teaching Drama	Applies materials, techniques and theories with youth, grades pre-K-5. Emphasizes curriculum development and praxis. Regular participation with children.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THP 311 with A- or better or graduate student; Credit is allowed for only THP 411 or THP 511
THP	418	Directing III: Advanced Directing	Studio work building on skills learned in intermediate directing, culminating in the presentation of a fully rehearsed one-act play.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: THP 318 with C or better or Herberger Master of Art or Master of Fine Arts student
THP	420	Acting: Solo and Collaborative Performance	Creation and development of original performance art works combining text, movement, multimedia, visual art; the actor as writer, designer, performer.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THF 101 or THP 102; minimum junior standing
THP	428	Theatre and the Future	Senior projects course that includes a culminating creative synthesis of student's knowledge.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre student; THP 201 or THP 301 with C or better; THE 440 with C or better

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THP	431	Advanced Costume Construction	Specialized training in costume construction problems and crafts with projects in tailoring, millinery, and period accessories.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Theatre Design & Production or Digital Culture (Theatre) students; THP 214 and 331with C or better or Theatre Performance Design student.
THP	435	Technical Direction	Seminar in fundamental principles and practices of technical directors as managers, engineers and artisans in theatre production.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Minimum junior standing; THP 213 and 301 (Theatrical Construction) OR THP 301 (Production) with B or better; Credit is allowed for only THP 435 or 494 (Technical Direction)
THP	440	Advanced Scene Design	Advanced studio projects in designing scenery for a variety of stage forms.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 340 with C or better, or must be a Theatre Scenography or Performance Design student
THP	441	Scene Painting	Studio projects in painting stage scenery.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 340 with C or better, or Theatre Scenography or Performance Design student
THP	442	Drawing	Techniques in drawing and rendering for scenic, costume, and lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Digital Culture (Theatre) or The Arts (Entertainment Design) or The Arts (Fashion Design) or Theatre major
THP	444	Drafting for the Stage	Fundamentals of and practice in graphic techniques for the stage. Introduces computer-aided design for the stage.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP 213 with C or better, or Theatre Performance Design or Digital Culture (Theatre) student
THP	445	Advanced Lighting Design	Specialized techniques in stage lighting. Advanced application of design process, graphic techniques of design presentation, and use of qualities of light.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: THP345 C or better, or Theatre Scenography or Performance Design student AND THP444 with B or better
THP	448	AutoCAD for Live Entertainment	Comprehension and practice of two-dimensional drafting techniques in AutoCAD. Focuses on applications in live entertainment.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: THF 215 or THP 313 with C or better or Theatre Design and Production major; Credit is allowed for only THP 448 or 494 (AUTOCAD)
THP	449	AutoCAD 3D for Live Entertainment	Comprehension and practice of 3D drafting and rendering techniques in AutoCAD. Focuses on applications in live entertainment.	N	LEL	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: THP 448 with C or better; Credit is allowed for only THP 449 or 494 (AutoCAD 3D)
THP	450	Theatre Organization and Management	Overview of nonprofit arts: organizational design, strategic planning, financial management, and leadership.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Herberger Institute for Design and the Arts student
THP	451	Student Production Board	Performing arts entrepreneurship taught through the experience of operating a student-produced theatre company.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre/Co-requisite:THP 450
THP	452	Arts Entrepreneurship Seminar	Challenges students to learn how individuals have used their creative skills to create new arts business models. Case studies examine how creativity can spur new opportunities in the arts industry. Students complete their own project proposals.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: THP 352 with C or better
THP	455	Advanced Media Design	Explores advanced skills, practices and theories for media and projection design for live performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Dance, Film or Theatre major; THP 355 with C or better; Credit is allowed for only THP 455 or THP 494 (Advanced Media Design)
THP	457	Digital Portfolio	Cross-disciplinary exploration of methods, technologies and aesthetics of portfolio presentation for professional designers and artists.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): The Arts (Fashion Design) or Theatre (Design and Production) major; minimum 56 hours; Credit is allowed for only THP 457 or THP 494 (Digital Portfolio)

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THP	482	Theatre for Social Change	Interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3	C	Prerequisite: Minimum sophomore standing
THP	483	Acting: Viewpoints and Composition	Training in Anne Bogart's viewpoints and composition techniques; application to rehearsal and performance, and creating new work.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THP 202 with C or better (or BA Performance and Movement major), junior standing or higher or MFA major
THP	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): Theatre or Film student
THP	489	Acting: Audition Techniques and Career Development	Familiarization with the business of performance; preparation and techniques for auditioning; self-promotion and marketing strategies; grant resources, interviews, and unions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): THP 102 or THF 101 with B or better; THF 220 (THE 220) with B or better; minimum junior standing
THP	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6		Prerequisite(s): Barrett Honors student
THP	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-6	L	Prerequisite(s): Barrett Honors student
THP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		
THP	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	SEM	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
THP	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-7		Prerequisites: Theatre Design & Production student
THP	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		
THP	500	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
THP	501	Performance: Solo Performance	Students begin to define their mission in art. Emphasizes the actor as a solo storyteller, speaking as herself or himself.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-8		Prerequisites: Master of Arts or Master of Fine Arts Theatre student
THP	505	Graduate Colloquium	Orientation to graduate study of theatrical practice; cohort development, introduction to the advanced literature and media in the art form.	N	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1		Pre-requisites: Master of Fine Art Theatre student
THP	506	Design Collaboration	Process of production collaboration. Taught in conjunction with THP 519. May be repeated for credit.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Arts or Master of Fine Arts Theatre student;
THP	511	Methods of Teaching Drama	Applies materials, techniques and theories with youth, grades pre-K-5. Emphasizes curriculum development and praxis. Regular participation with children.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only THP 411 or THP 511
THP	512	Puppetry Workshop	Surveys puppetry in education, puppetry as an art form in design and performance.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate student
THP	513	Touring Theatre	Provides an understanding of the theories and aesthetics of touring theatre and a practice in its conceptualization, creation, administration, and production. Examines a variety of styles and methods of creating "movable" theatrical material, focusing on forms that require minimal scenic and design support. Focuses on process and working toward a quality product.	N	LEL	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Fine Arts Graduate student; Credit is allowed for only THP 513 or 598 (Touring Theatre)
THP	514	Projects in Community-Based Theatre	Theories and techniques of improvisational theatre with emphasis on youth. Stresses professional development through projects combining research, theory, and practice.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite: Master in Arts, Master in Fine Arts or PHD Theatre major
THP	517	Stage Management	Advanced study of the principles and practices of stage management in the professional theatre.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate student in the Herberger Institute for Design and the Arts, the School of Community Resources and Development, or the W.P. Carey School of Business
THP	518	Advanced Directing Lab	Active discovery of directing concepts through practical exercises and collaboration; deconstruction of contemporary/classic literature. Explores director as primary artist.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	519	Directing: Works in Progress	Advanced projects in directing concentrating on a collaborative process among director, playwright, actors, and designers. Focuses primarily on new scripts or adaptations of literature.	N	STO	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Arts, Master of Fine Arts, or PhD Theatre student

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THP	520	Directing the New Play	Advanced methods and studies in directing, focusing on new play development.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	521	Performance I: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination; emphasizes physical diagnostics and development.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	522	Performance I: Acting and Voice	Advanced studio work in the performer's voice; emphasizes physical awareness, vocal anatomy, training, and interpretation of texts.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	523	Performance II: Acting and Movement	Advanced studio work in the performer's body, voice, emotion, and imagination.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	524	Performance II: Acting and Voice	Advanced studio work in the performer's voice.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	525	Design I: Conceptualization and Collaboration	Conceptual structures of the design process in theatre; development of creativity, flexibility, and communication in the collaborative process.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	526	Design I: Drawing and Rendering	Development of drawing and rendering skills, techniques, and evaluation in the presentation, realization, and communication of performance design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	527	Design II: Conceptualization and Collaboration	Offers students the chance to develop advanced skills in creating fully realized design ideas, particularly in working with new and experimental forms. Through the coursework, readings, and projects, students develop new methods and systems of thought for dealing with challenging dramatic works.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisite(s): Master of Fine Arts Theatre major
THP	528	Design II: Visualization and Presentation	Advanced skills and techniques in rendering, visualizing and presenting design ideas and materials for performance.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	529	Viewpoints and Composition		N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		
THP	540	Scene Design Applications	Conceptual and practical application of the design process including graphic and sculptural projects. Practical design problems investigated in a lab.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Art or Master of Fine Art Theatre student
THP	545	Lighting Design Applications	Advanced studio projects in stage lighting design.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Fine Arts Theatre student
THP	550	Theatre Organization and Management	Overview of nonprofit arts: organizational design, strategic planning, financial management, and leadership.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: MFA Theatre student
THP	551	Arts Management	Advanced study of the principles and practices of arts management in the nonprofit and for-profit sectors.	N	SEM	N	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate student in the Herberger Institute for Design and the Arts, the School of Community Resources and Development, or the W.P. Carey School of Business
THP	552	Arts Entrepreneurship	Project-based course in new venture creation for the arts.	N	SEM	Y	GNA	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Graduate student in the Herberger Institute for Design and the Arts, the School of Community Resources and Development, or the W.P. Carey School of Business
THP	555	Media Design Applications	Advanced applications for skills and practices in media design for live performance, including content creation, systems design, and playback.	N	STO	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Master of Fine Arts Theatre student
THP	556	Performance Technology	Examines issues surrounding the integration of live performance and digital media. Students study the work of contemporary practitioners and theorists and experiment with creating their own works of digital art.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Graduate Theatre major
THP	557	The Digital Portfolio	Crossdisciplinary exploration of methods, technologies, and aesthetics for portfolio presentation for professional designers and artists.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisites: Herberger Institute of Design and the Arts Graduate student
THP	560	Dramatic Writer's Workshop	Practice and study of creating characters, dialogue, scenes, plays, and monologues for the stage.	N	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre Master of Arts or Master of Fine Arts student
THP	561	Scripts in Progress	Studio work with the instructor centered on revisions of original plays.	N	IND	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Theatre student
THP	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	582	Theatre for Social Change	Advanced, interactive theatre techniques (e.g., Boal, drama therapy, playback theatre) to examine and combat institutional, social, cultural, interpersonal, and personal oppressions.	N	LEL	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Pre-requisite: Graduate or Doctoral student
THP	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Pre-requisites: Theatre student
THP	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		

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THP	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Theatre Master of Arts or Master of Fine Arts student
THP	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
THP	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Pre-requisites: Fine Arts Graduate student
THP	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEL	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-4		Prerequisite(s): Fine Arts graduate student
THP	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Master of Art or Dramatic Writing Theatre student
THP	611	Research in Drama Education	Current research practices in drama education. Development and execution of research projects in ethnographic and arts-based models.	N	SEM	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	3		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	618	Theatre for Youth Practicum	Practical experience in theatre for youth projects: improvisation, education, production.	N	PRA	N	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	2-3		Prerequisites: Master of Fine Arts or PhD Theatre for Youth student
THP	649	Design Studio	Projects include design of scenery, costume, lighting, or sound for lab or mainstage productions.	N	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-3		Prerequisites: Master of Fine Arts Theatre student
THP	680	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisites: Master of Fine Arts or PhD Theatre student
THP	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		
THP	693	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	RSC	Y	Z1	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite: Master of Arts, Master of Fine Arts, or PhD Theatre student
THP	700	Research Methods	Course on research methods in a specific discipline.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
THP	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	RSC	Y	OPT	Herberger Inst Design & Arts	School of Film, Dance and Theatre	1-12		Prerequisite: Master of Arts, Master of Fine Arts, or PhD Theatre student
TMC	110	Understanding the Enterprise	Introduces essential functions required in technology-based and innovative enterprises and viewed in the context of their relationship to each other; examines the enterprise's role in society.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Credit is allowed for only TMC 110 or TEM 194 (Introduction to Technology Development)
TMC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TMC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TMC	300	Career Management	Provides professional program business administration students with information on ASU business-related courses, business careers, interviewing, job hunting, and résumé skills.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1		Prerequisite(s): minimum 56 hours
TMC	310	Promotion of the Enterprise	Building and maintaining customers with an emphasis on developing a market identity and sales for technology-based and innovative enterprises.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; TMC 110 OR minimum 56 hours
TMC	320	Funding the Enterprise	Focuses on financial resource management techniques utilized by U.S. domestic companies and covers the unique aspects of revenue accounting and its application to company operations. Concepts covered include: data capture of requisite information from various computer systems; determination of revenues generated from sales of products and services to customers; in-depth analysis of operational expenses; preparation of accounting and financial data; monthly accounting requirements; account reconciliation; monthly/quarterly/annual reporting; development and analysis of financial reports and billing. Emphasizes accounting, planning and valuation concerns, as well as financial trends and industry prospects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): MAT 170 or higher; TMC 110

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TMC	330	Leading the Enterprise	Essential practices for managers, including planning, organizing, leading and controlling the enterprise. Studies current issues affecting managers such as sustainability, environmental protection, work groups, globalization, technology management, entrepreneurship, diversity and continuous improvement.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; TMC 110 (TEM majors only)
TMC	331	Quality Assurance	Instrumentation and methodologies for materials testing and quality control in various manufacturing processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): ABS 350, ABS 401, AGB 360, ECN 221, ECN 231, EGR 280, PSY 230, STP 226, STP 420, or STS 401
TMC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TMC	396	Professional Orientation	Senior advising, industry presentations, and career counseling.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1		Prerequisite(s): Fulton Polytechnic School undergraduate; minimum junior standing; Credit is allowed for only TMC 396 or GIT 396
TMC	410	Enterprise Operations	Emphasizes basic principles of enterprise operations management, including productivity, strategic management, global environment, forecasting, capacity planning, new technologies, location and layout strategies, supply-chain management, inventory control and scheduling. Uses common decision-making issues and related qualitative and quantitative techniques.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 330; ABS 350, ABS 401, AGB 360, ECN 221, ECN 231, EGR 280, PSY 230, STP 226, STP 420, or STS 401
TMC	430	Enterprise Strategy and Innovation	Enterprise strategic plan development and implementation, concepts of open innovation; vision, mission, steps of strategic plan development; strategic goals, objectives, tasks, schedule, resource considerations; organization's strengths and weaknesses; environmental opportunities and threats; strategy implementation, impact assessment and refinement, organizational- and management considerations, theory and practice of open innovation.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TEM 330; Credit is allowed for only OMT 494 (Strategic Planning & Management) or TMC 430
TMC	470	Enterprise Planning and Implementation	Investigates and tests tools and techniques for effective design and management of enterprise projects and programs using computer applications. Develops and demonstrates teambuilding and leadership skills in course projects.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 330 OR W.P. Carey BA Technology major with MGT 300. Credit is allowed for only OMT 570 or TMC 470
TMC	480	Senior Project	Capstone project experience refining skills in communication, research and information retrieval, critical analysis and criticism, and demonstrating technical competence in each student's area of study.	N	LEC	N	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): TMC 430 and senior standing OR BAS major
TMC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-4		
TMC	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-7	L	Prerequisite(s): Fulton Polytechnic School undergraduate or graduate student; minimum 2.25 GPA
TMC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-3		Prerequisite(s): Fulton Polytechnic School undergraduate; minimum 3.00 GPA
TMC	555	Leadership and Teams	Evaluates and discusses the latest research in leadership and teams in terms of accomplishing set goals efficiently and effectively both within large organizations and smaller groups. Addresses management and leadership styles and concepts such as team cognition and team situational awareness. Seminar-style course with a large amount of reading, discussion, synthesis and application of current research. Field trips to local airline operations and high-operational tempo organizations accompany the readings and in-class discussions.	N	LEC	N	GNA	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TMC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TMC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only

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TMC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1		Pre Requisites: Graduate or Non Degree Students Only
TMC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Tech Entrepreneurship & Mgmt	1-12		Pre Requisites: Graduate or Non Degree Students Only
TSS	500	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	501	A Deep History of the United States/Mexico Borderlands I	Using a comparative and relational approach, the seminar explores various layers of development starting with economic structures and culture and their impact on various aspects of transborder society including politics, social organization, demography, and cultural practice. Focuses on the period from pre-contact times to the Mexican American War.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	502	Foundations of Transborder Studies	Using a comparative and relational approach, explores various layers of development starting with economic structures and culture and their impact on various aspects of transborder society including politics, social organization, demography, and cultural practice. Focuses on the period from the Mexican American War to the recent past. Centers on comparative economic growth and development of Mexico and the United States, the impact of unequal development on the border region and its people, and the development of a transnational society in the U.S./Mexico borderlands.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	503	Epistemologies and Transborder Thought	Examines different approaches to the production and critique of knowledge relevant to transborder social, political, economic, cultural, and institutional structures and processes. The complexity of these structures and processes require transdisciplinary methods of inquiry that go beyond a single set of disciplinary assumptions. Explores the transdisciplinary articulation of theory and method, and considers the strengths and limitations of various approaches and critiques.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	504	Tools for Transborder Research	Focuses on the selection of methods appropriate for transborder research. Considers the pitfalls of conducting monodisciplinary research in a stratified, differentiated and multicausal world; the most robust methods used in various approaches; the main methodological obstacles to transdisciplinary research; and the challenges of using mixed methodology.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	505	Theories and Methods of Migration, Health & Applied Social Policy in a Transborder Context	Divided conceptually in three broad analytical areas: (1) migration with an emphasis on demography, (2) health with an emphasis on epidemiology, and (3) public policy analysis. Provides basic training in the application and interpretation of quantitative and qualitative methods and techniques commonly used in researching these areas. Applies these techniques to issues that are specific to the reality of transborder and/or transnational contexts. Students are required to apply and present an analysis in their field of interest which demonstrates their grasp of theory and method.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	506	Theory and Methods of Transborder Media and Expressive Culture	Overview of the interdisciplinary theories and methods employed to research and analyze media and creative cultural production. Objects of analysis include literature, film, live performance, theater, Web-based media, popular culture production, and visual arts. Required readings elucidate strengths, limitations, and applicability of particular theories and methods to different types of creative expression and media production as well as to their historical and political contexts. Students engage with, critique, and contribute to the theories and methods presented in the course.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	507	Theory and Methods of Transborder Cultural Acquisition, Language Development, and Learning	This course familiarizes graduate students with literature on relationship between culture, language, and learning, and their theoretical and methodological underpinnings within a transborder context.	N	LEC	N	Z1	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	583	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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TSS	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	600	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	601	Internship in Transborder Studies	Academic internship helps students become full participants in globalized, transnational contexts through a combination of practical experiences in community organizations, readings about transnational life in globalized contexts, reflection, and discussion.	N	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	607	Colloquium in Transborder Studies	Provide students the opportunity to present their skills, learning, research, and topical interests before an open forum of faculty and students at the beginning of their third year and prior to their dissertation research.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	608	Transmitting Transborder Studies to Publics and Institutions	Provides students with the most recent advancements in presenting the underlying theory, methods, and techniques in transborder analysis and application. Designed to enter multiple audiences in public, professional, academic, and school settings, course takes advantage of the latest developments in multimedia, print, and electronic technology, film, and print in order to provide systematic and detailed learning opportunities. Provides the basis of developing capacities to create and develop learning modules, and programs on issues of transborder political ecology, economic transformations, cultural development and emergence, literary constructions and projections, and issues of identity, class, and gender. Course is conducted bilingually and makes use of Spanish- and English-language resources. For this reason, it is advisable, but not required, that students are at least conversationally proficient with Spanish and English.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	609	Prospectus Design in Transborder Studies	Provides doctoral students with the necessary tools to prepare a research proposal that could be submitted as a dissertation prospectus or to a funding agency. Students bring a well-formulated idea of the kind of research they wish to pursue for their dissertation. They also bring a clear idea of the relevant concepts, literature and methods, required to complete the proposal.	N	SEM	N	OPT	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	611	Comparative and Transborder Perspectives on Learning	This small class emphasizes discussion, presentations by students, and written research papers. Surveys theoretical and methodological aspects related to the use of comparative and transborder perspectives to the study of education.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	612	The Political Culture of Learning & Change in Transborder Context	Examines a variety of development and learning issues confronting linguistically and culturally diverse groups with an emphasis on immigrant children and families. Includes such topics as: (1) Theoretical foundations and their related impact on organizing interventions for learning and socialization. (2) The intersection of the development of language, culture, and learning in context of linguistic diversity and immigration. (3) The influence and impact of public policy on language minority groups of immigrant backgrounds.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	614	Bilingualism in Diverse Acquisition and Practicing Contexts	Examines bilingualism, language in society, and languages in contact in transborder contexts and bilingual schooling.	N	SEM	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): PhD student
TSS	615	Dialectical Inquiry in Transborder Contexts	Introduces the application of dialectical inquiry in value-relevant grounded research methods as a complementary approach to value-free scientific inquiry into practical problems in transborder cultural acquisition, language development, and learning.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Transborder Studies	3		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	683	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	695	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Transborder Studies	1		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	700	Research Methods	Course on research methods in a specific discipline.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	783	Fieldwork	Structured, supervised field experience in a field science or other discipline requiring experience in field techniques.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student

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TSS	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	RSC	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Liberal Arts and Sciences	School of Transborder Studies	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Transborder Studies	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	N	RSC	Y	Z3	Liberal Arts and Sciences	School of Transborder Studies	1		Prerequisite(s): degree- or nondegree-seeking graduate student
TSS	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Transborder Studies	1-15		Prerequisite(s): degree- or nondegree-seeking graduate student
TWC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
TWC	301	Fundamentals of Writing for Digital Media	Foundational concepts and technologies of writing for a variety of digital media.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 45 hours
TWC	347	Written Communication for Managers	Strategies, techniques and genres for developing and presenting information intended for business and other workplace audiences.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 45 hours
TWC	361	Writing for Health Care Management	Strategies, formats, and techniques for effective writing and presentation of information for nursing professionals.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102, 105, or 108 with C or better; RN-BSN student. Credit is allowed for only TWC 361 or TWC 362
TWC	362	Writing in Health Professions	Focuses on effective communication practices in health-related fields, emphasizing communicating professionally with both scholarly and workplace audiences. In addition to providing a foundation in workplace communication, emphasizes information and technology literacy to help students become proficient in collecting, analyzing, interpreting and synthesizing information using appropriate tools, sources and styles.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Medical Studies major or Nursing and Health Innovation student; Credit is allowed for only TWC 361 or TWC 362
TWC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
TWC	401	Fundamentals of Technical Communication	Basic information design principles for producing effective technical communication, including rhetorical and audience analysis, as well as common workplace genres and technical communication tools.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 401 or TWC 501
TWC	403	Writing for Professional Publication	Analyzes the market and examines the publication process, including the roles of the author, editor, and reviewer.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 45 hours
TWC	411	Principles of Visual Communication	Principles and tools of visual communication in print and electronic media, with an emphasis on document design, including typography and color.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 411 or TWC 511
TWC	414	Visualizing Data and Information	Covers how to process data and information in ways that help discover what's important about the information and what the clearest way is to communicate that information. Covers how to manage data and use a variety of software tools to communicate patterns and tell visual stories, as well as how to make choices in visualization style in ways that will assist an audience to effectively interact with and process the information.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 45 hours. Credit is allowed for only TWC 414 or TWC 494 (Visualizing Information or Information Visualization) or TWC 514 or TWC 598 (Visualizing Information or Information Visualization)
TWC	421	Principles of Web Authoring	Principles of writing for the Web, including information architecture, accessibility, usability and responsive design. Explores basics of markup language and content management.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 421 or TWC 521
TWC	422	Social Media in the Workplace	Analyzes different social media platforms and develops strategies and techniques for effective and appropriate use of social media in the workplace.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only TWC 422 or TWC 494 (Social Media in the Workplace)

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TWC	431	Principles of Technical Editing	Principles and techniques of technical editing for print and electronic media, including standards, styles, copyediting, comprehensive editing and project management.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 431 or TWC 531
TWC	435	Global Issues in Technical Communication	Helps students understand issues that shape workplace communication in a global environment. Technical communicators are expected to be specialists who interact effectively with a broad range of audiences. Given the global nature of today's workplace, those audiences typically include people from many cultures and countries. Through readings, written assignments, and analysis of case studies, documents, and websites, explores ways in which culture and language shape professional interactions. Also examines other critical issues such as translation, localization, technology and distributed work teams that impact writing and designing documents in a globalized work environment.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 45 hours; Credit is allowed for only TWC 435 or TWC 494 (Global Issues in Technical Communication) or TWC 535
TWC	443	Grant & Proposal Writing	Develops persuasive strategies and approaches for researching and writing professional funding proposals and grant applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 443 or TWC 543
TWC	444	User Experience	Explores principles, techniques and tools of user experience (UX), including user and task analysis, user-centered design and usability testing.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 444 or TWC 544
TWC	445	Content Management and Topic-Based Authoring	Explores concepts, techniques, strategies and technologies for authoring, managing, and publishing re-usable content in online documentation, help files and other types of technical communication.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 445 or TWC 545
TWC	446	Technical and Scientific Reports	Explores strategies and techniques for developing informational and analytical reports in a range of genres and for a variety of audiences in scientific and technical fields.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Prerequisite(s): ENG 102 or 105 or 108 with C or better; minimum 45 hours. Credit is allowed for only TWC 446 or TWC 546
TWC	451	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws, with emphasis on electronic environment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 45 earned hours; Credit is allowed for only TWC 451 or 551
TWC	452	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 45 earned hours; Credit is allowed for only TWC 452 or 552
TWC	453	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 45 earned hours; Credit is allowed for only TWC 453 or 553
TWC	454	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	C	Pre-requisites: ENG 102, 105 or 108 with C or better; Minimum 45 earned hours; Credit is allowed for only TWC 454 or 554
TWC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
TWC	490	Capstone	Development of a professional portfolio, creation of a culminating document, and synthesis of undergraduate experience.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ENG 102, 105 or 108 with C or better; minimum 45 hours
TWC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6		Prerequisite(s): Barrett Honors student
TWC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-6	L	Prerequisite(s): Barrett Honors student
TWC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
TWC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-3		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
TWC	501	Fundamentals of Technical Communication	Basic information design principles for producing effective technical communication, including rhetorical and audience analysis, as well as common workplace genres and technical communication tools.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 401 or TWC 501
TWC	504	Applied Rhetoric and Technical Communication	Foundation in applied and technical communication. Covers the emergence and development of technical communication as a profession and field; rhetorical concepts and their application to technical and applied communication, ethical issues; and the impact of internationalization.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): Technical Communication MS student
TWC	505	Research in Technical and Applied Communication	Explores the research process and methods appropriate for technical and professional communication. Provides a foundation for understanding the research process; designing and planning valid research within the context of technical and professional communication; collecting and interpreting information, ethical issues related to research; and reporting results.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): minimum 24 graduate TWC hours; TWC 504
TWC	511	Principles of Visual Communication	Principles and tools of visual communication in print and electronic media, with an emphasis on document design, including typography and color.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 411 or 511
TWC	514	Visualizing Data and Information	Covers how to process data and information in ways that help discover what's important about the information and what the clearest way is to communicate that information. Covers how to manage data and use a variety of software tools to communicate patterns and tell visual stories, as well as how to make choices in visualization style in ways that will assist an audience to effectively interact with and process the information.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 414 or TWC 494 (Information Visualization or Visualizing Information) or TWC 514 or TWC 598 (Information Visualization or Visualizing Information)
TWC	521	Principles of Web Authoring	Principles of writing for the Web, including information architecture, accessibility, usability and responsive design. Explores basics of markup language and content management.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 421 or TWC 521
TWC	522	Social Media in the Workplace	Analyzes different social media platforms and develops strategies and techniques for effective and appropriate use of social media in the workplace.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only TWC 422 or TWC 522
TWC	531	Principles of Technical Editing	Principles and techniques of technical editing for print and electronic media, including standards, styles, copyediting, comprehensive editing and project management.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 431 or TWC 531
TWC	535	Global Issues in Technical Communication	Helps students understand issues that shape workplace communication in a global environment. Technical communicators are expected to be specialists who interact effectively with a broad range of audiences. Given the global nature of today's workplace, those audiences typically include people from many cultures and countries. Through readings, written assignments, and analysis of case studies, documents and Websites, explores ways in which culture and language shape professional interactions. Also examines other critical issues such as translation, localization, technology and distributed work teams that impact writing and designing documents in a globalized work environment.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only TWC 435 or TWC 535 or TWC 598 (Global Issues in Technical Communication)
TWC	543	Grant & Proposal Writing	Develops persuasive strategies and approaches for researching and writing professional funding proposals and grant applications.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 443 or TWC 543
TWC	544	User Experience	Explores principles, techniques and tools of user experience (UX), including user and task analysis, user-centered design and usability testing.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 444 or TWC 544
TWC	545	Content Management and Topic-Based Authoring	Explores concepts, techniques, strategies and technologies for authoring, managing and publishing re-usable content in online documentation, help files and other types of technical communication.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 445 or TWC 545
TWC	546	Technical and Scientific Reports	Explores strategies and techniques for developing informational and analytical reports in a range of genres and for a variety of audiences in scientific and technical fields.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): degree- or nondegree-seeking graduate. Credit is allowed for only TWC 446 or TWC 546

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TWC	551	Copyright and Intellectual Property in the Electronic Age	Explores issues related to copyright and intellectual property laws; emphasizes electronic environment.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Credit is allowed for only TWC 451 or 551
TWC	552	Information in the Digital Age	Explores the creation, organization, dissemination, and use of information; the impact of technologies; and surrounding economic, legal, and social issues.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Credit is allowed for only TWC 452 or 552
TWC	553	Information and Communications Technology in American History	Explores the historical development of information and related technologies in the United States from colonial times to the present.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Credit is allowed for only TWC 453 or 553
TWC	554	Information Technology and Culture	Explores the historical impact and intersection of communications technology and culture in America.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Credit is allowed for only TWC 454 or 554
TWC	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
TWC	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
TWC	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	SEM	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TWC	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
TWC	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
TWC	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		
TWC	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	RSC	Y	Z3	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1		
TWC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-4		
TWC	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Integrative Sciences & Arts	College of Integrative Sciences and Arts	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
UET	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-3		
UET	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
UET	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
UET	305	Introduction to Microelectronics	Quantifies the role of microelectronics technology and its associated skills as drivers for electronics systems development.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisite: Academic Level greater than or equal to Junior
UET	331	Electronic Materials	Physical, chemical, electromagnetic, and mechanical properties of electronic materials. Solid-state device characteristics and their material properties.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: EST 210; CHM 113; PHY 112 OR Applied Science (Electronic Energy Systems) BAS student
UET	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		
UET	411	Layer Deposition Technology	Fundamentals, applications, and vacuum technology of layer deposition processes used in IC fabrication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: UET 331; Credit for UET 411 or 511
UET	416	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: UET 331; Credit is allowed for only UET 416 or 516
UET	418	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: UET 331; Credit is allowed for only UET 418 or 518
UET	432	Semiconductor Packaging and Heat Transfer	Packaging theory and techniques; hermetic and plastic assembly; thermal management; electrical characteristics and reliability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: UET 331. Credit is allowed for only UET 432 or 532
UET	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		

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UET	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6		Prerequisite(s): Barrett Honors student
UET	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Ira A. Fulton Engineering	Engineering Programs	1-6	L	Prerequisite(s): Barrett Honors student
UET	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisites: Fulton Schools of Engineering undergraduate student; Minimum 2.25 GPA; OR Fulton Schools of Engineering graduate student
UET	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-7	L	Prerequisites: Fulton Schools of Engineering undergraduate student; Minimum 2.25 GPA; OR Fulton Schools of Engineering graduate student
UET	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-3		
UET	516	Dopant Control Technology	Design and practical realization of charge distribution in microelectronic devices, including ion implantation and diffusion processes.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Prerequisites: Graduate status. Credit is allowed for only UET 416 or 516
UET	518	Systems on Silicon	Factors that drive integration on silicon, including logic, memory, and interfaces. Economics of system-level solutions.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status; Credit is allowed for only UET 418 or 518
UET	524	Pattern Transfer Technology	Maskmaking, lithography, and etch processes for integrated circuit fabrication.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status; Credit is allowed for only UET 424 or 524
UET	532	IC Packaging	IC packaging theory and techniques; assembly techniques, material issues; thermal management; electrical performance and reliability.	N	LEC	N	OPT	Ira A. Fulton Engineering	Engineering Programs	3		Pre-requisites: Graduate status; Credit is allowed for only UET 432 or 532
UET	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Grad or Non Degree Grad student; 3.0 GPA or better, OR Senior level; Fulton Polytechnic School undergraduate student; 3.0 GPA or better
UET	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Grad or Non Degree Grad student; 3.0 GPA or better, OR Senior level; Fulton Polytechnic School undergraduate student; 3.0 GPA or better
UET	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Graduate or Non Degree Students OR Fulton Schools of Engineering undergraduate senior with minimum GPA 3.0
UET	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Graduate or Non Degree Students OR Fulton Schools of Engineering undergraduate senior with minimum GPA 3.0
UET	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Graduate or Non Degree Students OR Fulton Schools of Engineering undergraduate senior with minimum GPA 3.0
UET	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) with a 3.0 GPA or better OR be a Fulton Polytechnic School senior with a 3.0 GPA or better

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
UET	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Fulton Schools of Engineering senior with minimum 3.0 GPA
UET	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Ira A. Fulton Engineering	Engineering Programs	1		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Fulton Schools of Engineering senior with minimum 3.0 GPA
UET	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Engineering Programs	1-4		Prerequisite(s): Graduate student (degree seeking or nondegree seeking) or Fulton Schools of Engineering senior with minimum 3.0 GPA
UET	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	Y	LEC	Y	Z2	Ira A. Fulton Engineering	Engineering Programs	1-12		Prerequisites: Graduate or Non Degree Students OR Fulton Schools of Engineering undergraduate senior with minimum GPA 3.0
UNI	101	Student Success Seminar	Understanding human diversity, perspectives, and values as they relate to student success. Orientation to ASU resources, study skills, and academic and social issues for students. Seminar, discussion.	N	SEM	N	OPT	University College	Dean, University College	1		
UNI	110	Critical Reading and Thinking	Prepares students to be successful in college-level academics and helps them improve their critical reading and critical thinking skills.	N	LEC	N	OPT	University College	Dean, University College	3		
UNI	120	Academic Success	Assists students in creating strategies for success in their academic lives. Students explore personal and academic strengths and barriers that impact success, identify and utilize university resources available to support success at ASU, acquire and enhance academic skills necessary for success in the university, and discover ways to stay on course to meet academic goals.	N	SEM	N	GNA	University College	Dean, University College	1		Credit is allowed for only ASU 150 or UNI 120 or UNI 194 (Academic Success: Residential, Academic Success: Off-Campus, or Academic Success Seminar)
UNI	150	Major and Career Exploration	Concepts and skills in the process of selecting a major: self-assessment, research, interviewing, and decision making. Exploration of ASU opportunities and investigation of career options.	N	SEM	N	OPT	University College	Dean, University College	1		
UNI	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	GNA	University College	Dean, University College	1-4		
UNI	220	Academic Refresher	Assists students who find themselves in academic trouble (failed courses, academic probations, disqualification). Students explore the barriers that may be keeping them from reaching their academic goals and acquire tools to overcome those challenges. Topics include self management, self assessment, lifelong learning, and interdependence.	N	SEM	N	GNA	University College	Dean, University College	1		Credit is allowed for only UNI 220 or 294 (Academic Refresher)
UNI	250	Choosing a Major	Advanced, one-hour career development course helps students make a thoughtful selection of major and consider the career direction that fits best for them. Students complete advanced assessments of interests, personality, and values; investigate relevant majors and careers, including connecting with working professionals; learn effective decision-making strategies; identify barriers and resources; and make connections to new major department.	N	SEM	Y	OPT	University College	Dean, University College	1		Pre-requisites: UNI 150 Career Exploration with a C or better
UNI	270	Career Direction for a Successful Future	Actively engages students in their educational and career-planning process by exploring factors that influence personal decision making and planning for the future. Students examine their strengths and personal narrative, identify decision making factors, research career development and a particular career, and develop teamwork skills for the workplace.	N	SEM	N	GNA	University College	Dean, University College	1		Pre-requisite: UNI 250 with C or better; Credit is allowed for only UNI 270 or 294 (Next Steps in Career & Major Exploration)
UNI	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
UNI	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		Prerequisite(s): minimum 45 hours
UNI	400	Society and the Individual	Various social institutions, how they shape the socialization process of a group and individual and give a community meaning, values and a set of norms. Focuses on Arizona as a case study for student research inquiries.	N	LEC	N	GNA	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	L	Pre-requisites: Bachelor of General Studies major; Minimum 2.00 GPA; Minimum 90 hours; Credit is allowed for only UNI 400 or COM 494 (Society and the Individual)
UNI	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	University College	Dean, University College	1-12		
UNI	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	University College	Dean, University College	1-4		
URB	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
URB	220	Introduction to Urban America	Investigates traditional and evolving forms of civic engagement and management. Examines leadership and organizational models to urban development and decision making.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
URB	240	Urban Policy	Examines major theories about the purposes and processes of urban policy formulation, adoption, and implementation.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	C	
URB	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
URB	300	Urban and Metropolitan Studies	Examines the city using a multidisciplinary approach drawing from different historical, cultural, social, philosophical, and economic issues and concepts.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Credit is allowed for only URB 100 or 300
URB	301	Urban Research	Introduces the philosophy, scope, and methods of urban affairs research. Includes an overview of quantitative and qualitative methods and research design.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
URB	302	Urban Theory	Examines the sociological, economic, and political theoretical positions underlying the development and evolution of metropolitan areas.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
URB	305	Urban Governance	Examines major shifts and trends in urban America. Concentrates on the changing approaches to governance and policies of urban areas.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: Credit for URB 105 or 305
URB	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
URB	400	Senior Professional Seminar	Demonstrates completion of the urban studies program by synthesizing and applying core knowledge, skills, and abilities to significant urban issues.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		
URB	405	Citizen Engagement and Community Building	Develops a conceptual, critical, and practical understanding of urban dwellers' involvement in community affairs as citizens and as builders of vital neighborhoods and vibrant cities.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: minimum 30 hours
URB	406	Public Administration & Community Development	Critically examines the concepts community and development and considers how important forces such as diversity, civic life, changes in social space, and globalization, affect our understandings about these concepts and influence our actions.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3		Pre-requisite: minimum 30 hours
URB	410	Building Leadership Skills	Introduces understanding and developing leadership skills, including an examination of leadership theories and models from multidisciplinary and crosscultural points of view, an assessment of the student's leadership capabilities, and practical applications to improve individual leadership capabilities.	N	LEC	N	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	3	SB	Pre-requisites: minimum 30 hours; Credit is allowed for only URB 410 or PAF 410
URB	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-12		
URB	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-6	L	Prerequisite(s): Barrett Honors student
URB	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Col of Pub Serv & Comm Solutns	School of Public Affairs	1-4		
USL	210	Service Learning: Intro to Diverse Community Issues	Correlates academic coursework with community service and provides reflection opportunities that examine community needs, the importance of civic engagement and an introduction to the effects of social injustice affecting ethnic minorities and other marginalized populations in contemporary American society. Students dedicate 70 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies) directly serving a population in need or supporting activities that contribute to the greater good of our community. Weekly seminar, course readings, discussions, and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship, and how to contribute to positive social change in our community. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L & C	
USL	216	Service Learning: For Educators	Examines the effects of social justice issues on student achievement. Correlates academic coursework with required community service to analyze community needs, the importance of civic engagement and community issues affecting ethnic minorities and marginalized populations in contemporary American society, particularly how it applies to our education system. Students dedicate a minimum of 70 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services) directly serving high-needs youth or adults. Weekly seminar, course readings, discussions and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship and social injustices, and how to utilize this knowledge in the teaching profession to better serve all students. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L & C	Pre-requisite: Mary Lou Fulton Teachers College major
USL	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
USL	402	Service Learning: Education & Youth	Correlates academic coursework with community service and provides reflection opportunities that examine community needs, the importance of civic engagement, and an in-depth study of the effects of social injustice affecting ethnic minorities and other marginalized populations in contemporary American society as they apply to education in Arizona and the United States (policy, student achievement, teacher and administration effectiveness and parental involvement). Students dedicate 100 service hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies), directly serving high-needs youth. Weekly seminar, course readings, discussions and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship and the importance of civic engagement particularly how it applies to the education system. Provides real-world experiences that exercise advanced academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	3	C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 45 hours
USL	410	Service Learning: Diverse Community Issues	Correlates academic coursework with community service and provides reflection opportunities that examine community needs, the importance of civic engagement and an introduction to the effects of social injustice affecting ethnic minorities and other marginalized populations in contemporary American society. Students dedicate 100 hours at a preapproved site (including Title I K-12 schools, youth programs, health services, social services, environmental programs, government agencies) directly serving a population in need or supporting activities that contribute to the greater good of our community. Weekly seminar, course readings, discussions and reflection assignments facilitate critical thinking and a deeper understanding of cultural diversity, citizenship and how to contribute to positive social change in our community. Provides "real-world" experiences that exercise academic skills and knowledge applicable to each student's program of study and career goals.	N	PRA	Y	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3	L & C	Pre-requisites: ENG 102 (or 105 or 108) with C or better, 45 minimum hours
USL	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	MaryLouFulton Teachers College	Division of Teacher Preparation	1-12		
USL	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	MaryLouFulton Teachers College	Division of Teacher Preparation	1-4		
USL	496	Service Learning Capstone	Graded internship that allows students to integrate coursework with a hands-on service learning experience. Applies theory from service learning pedagogy and educational studies to real-world application and academic success. Provides field experience for students to exercise academic knowledge and skills applicable to career experience and program studies. Students must (a) successfully assess a community need in education that correlates to current research and (b) collectively plan a sustainable service project that benefits high-needs children. The student-directed service project addresses social justice issues in education related to corresponding research.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: USL 210 or 216
USL	497	Service Learning Capstone Project	Graded internship that allows students to integrate coursework with a hands-on service learning experience. Implements a sustainable service project addressing social justice issues in education. Student-directed project corresponds to research and planning completed during the previous semester. Provides field experiences for students to implement academic knowledge and skills acquired through the Educational Studies program and to create realistic solutions to national and local community issues that impact student achievement.	N	PRA	N	GNA	MaryLouFulton Teachers College	Division of Teacher Preparation	3		Pre-requisite: USL 210 (216); 410 and 496
VIP	194-BMI	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
VIP	194-CSE	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
VIP	194-FSE	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
VIP	194-HON	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Prerequisite(s): Barrett Honors student
VIP	194-PSY	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
VIP	294-BMI	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
VIP	294-CSE	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
VIP	294-FSE	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
VIP	294-HON	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Prerequisite(s): Barrett Honors student
VIP	294-PSY	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
VIP	394-BMI	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
VIP	394-CSE	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
VIP	394-FSE	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
VIP	394-HON	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Prerequisite(s): Barrett Honors student
VIP	394-PSY	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
VIP	494-BMI	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	College of Health Solutions	Biomedical Informatics Program	1-4		
VIP	494-CSE	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Computer Science and Engineering Program	1-4		
VIP	494-FSE	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Ira A. Fulton Engineering	Dean, Ira A. Fulton Schools of Engineering	1-4		
VIP	494-HON	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Barrett, The Honors College	Barrett, The Honors College	1-4		Prerequisite(s): Barrett Honors student
VIP	494-PSY	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of Psychology	1-4		
VTN	101	Elementary Vietnamese I	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	
VTN	102	Elementary Vietnamese II	Basic skills in modern conversational Vietnamese and development of basic reading and writing skills, with special emphasis on tones.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisites:VTN 101 with C or better
VTN	201	Intermediate Vietnamese I	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisite: VTN 102 with C or better
VTN	202	Intermediate Vietnamese II	Improves speaking, listening, reading, and writing competence through dialogues, reading passages, pattern drill, and grammar and communicative exercises.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	5	G	Pre-requisite: VTN 201 with C or better
VTN	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	321	Advanced Vietnamese and Literature I	Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisite : VTN 202
VTN	322	Advanced Vietnamese and Literature II	Continuation of VTN 321. Readings from modern, contemporary, and folk literatures as well as current periodicals.	N	LEC	N	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	3	HU & G	Pre-requisite: VTN 321
VTN	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of International Letters and Cultures	1-4		
VTN	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of International Letters and Cultures	1-3		
WAC	101	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): ACT English score of 0-18, or SAT Verbal score of 0-510 (or SAT Verbal score of 0-460 if taken before 2016), or Accuplacer score of 0-4
WAC	101	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): ACT English score of 0-18, or SAT Verbal score of 0-510 (or SAT Verbal score of 0-460 if taken before 2016), or Accuplacer score of 0-4
WAC	101	Introduction to Academic Writing	Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary, and analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ACT English score of 0-18, or SAT Verbal score of 0-510 (or SAT Verbal score of 0-460 if taken before 2016), or Accuplacer score of 0-4
WAC	107	Introduction to Academic Writing	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3		Prerequisite(s): TOEFL score below 560PBT/220CBT/83iBT, or IELTS score 0-6.5, or ACT English score 0-18, or SAT Verbal score 0-510 (or SAT Verbal score 0-460 if taken before 2016), or Accuplacer score 0-4

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WAC	107	Introduction to Academic Writing	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	Department of English	3		Prerequisite(s): TOEFL score below 560PBT/220CBT/83iBT, or IELTS score 0-6.5, or ACT English score 0-18, or SAT Verbal score 0-510 (or SAT Verbal score 0-460 if taken before 2016), or Accuplacer score 0-4
WAC	107	Introduction to Academic Writing	For students for whom English is not the native language. Combines classroom and supplemental instruction to teach academic genres of writing, including definition, summary and analysis.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): TOEFL score below 560PBT/220CBT/83iBT, or IELTS score 0-6.5, or ACT English score 0-18, or SAT Verbal score 0-510 (or SAT Verbal score 0-460 if taken before 2016), or Accuplacer score 0-4
WAC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	Department of English	1-4		
WAC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	Department of English	1-4		
WPC	101	Student Success in Business	Introduces students to resources that help them to succeed in the W. P. Carey School of Business.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1		Credit is allowed for only ASU 101 (or equivalent) or WPC 101 or WPC 201 OR 194 (Business Student Development)
WPC	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WPC	196	WPC Domestic Exchange Placeholder	Reserved for undergraduate participants in a W.P. Carey Domestic Exchange program. This placeholder course remains on the student's academic record until the student's record is updated by WPC following the completion of the student's domestic exchange program. This course is then dropped and replaced with the ASU course(s), credit(s), and grade(s) equivalent to the coursework completed during the domestic exchange program. Students must register for at least the number of credits equivalent to full-time study at ASU (i.e., 12 hours during the fall and spring semesters, or 1-6 hours during the summer session). NOTE: This placeholder course is not an indication of the level of coursework or the total number of credits the student may complete during the domestic exchange program. Acceptance to an WPC Domestic Exchange program is required.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1-18		
WPC	201	Business Student Development	Introductory business course for students transferring into the W. P. Carey School of Business. Focuses on ASU resources and developing professionalism.	N	LEC	N	GNA	W.P. Carey School of Business	Prebusiness Office	1		Prerequisite(s): WPC major with 15-44 earned hours. Credit is allowed for only ASU 101 (or equivalent) or WPC 101 or WPC 201 OR 194 (Business Student Development)
WPC	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		
WPC	301	Business Forum	Provides professional program business students with information on careers, interviewing, job hunting, and resumé skills. Must be taken in the first semester of the professional program for business students.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1		Pre-requisites: Must be a W.P. Carey degree program business student
WPC	302	Honors Professional Development	Provides a foundation for developing key professional knowledge and skills required for future business and personal success. Strategic thinking and design, scenario development, verbal and written persuasion, direct marketing techniques, systems thinking, relationship development, research design, and decision-making models.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	1		
WPC	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must have a minimum GPA of 2.00; Must have a minimum total earned hours of 56
WPC	470	Business Administration Capstone	Develops a general manager's or business owner's perspective on how organizations can create value. Creating long-run value by repeatedly producing goods and services that customers buy at prices that cover the costs of producing them is the key to success for business organizations. The starting point for thinking about how an organization might create value and gain sustainable competitive advantage is analyzing current and future environments to understand threats and opportunities in various institutional settings around the world. Evaluates the impact of institutional settings in different countries and ethical values on decision making. Students learn how to successfully manage relations with key stakeholders including customers, employees, suppliers of capital as well as other component goods and services, and stakeholders from various levels of government in different countries.	N	LEC	N	GNA	W.P. Carey School of Business	Prebusiness Office	3		Prerequisite(s) with C or better: W.P. Carey Business Admin BA major; FIN 300, 302, or 303; LES 305; MGT 300 or 303; MKT 300, 302, or 303; SCM 300 or 303; WPC 301 or 302; Intl Business course; senior standing; Credit is allowed for only WPC 470 or 480

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WPC	480	W. P. Carey Capstone Course	Develops a general manager's or business owner's perspective on how organizations can create value. Creating long-run value by repeatedly producing goods and services that customers will buy at prices that cover the costs of producing them is the key to success for business organizations. Analyzing current and future environments to understand threats and opportunities in various institutional settings around the world is the starting point for thinking about how an organization might create value and gain sustainable competitive advantage. Evaluates the impact of institutional settings in different countries and ethical values on decision making. Students learn how to successfully manage relations with key stakeholders including customers, employees, suppliers of capital as well as other component goods and services, and stakeholders from various levels of government in different countries.	N	LEC	N	GNA	W.P. Carey School of Business	Prebusiness Office	3	L	Prerequisite(s) with C or better: W.P. Carey BS major; FIN 300 or 302 or 303 (or IEE 300 if Egr Mgt); LES 305; MGT 300 or 303; MKT 300 or 302 or 303; SCM 300 or 303; WPC 301 or 302 (unless SCM/SUS conc deg); Intl Bus course; senior standing
WPC	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		
WPC	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-6		Prerequisite(s): Barrett Honors student
WPC	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	LEC	N	Z1	W.P. Carey School of Business	Prebusiness Office	1-6	L	Prerequisite(s): Barrett Honors student
WPC	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Pre-requisites: Must be W. P. Carey BS or BA degree program student; junior or senior standing.
WPC	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-6		Prerequisite(s): Barrett Honors student
WPC	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	LEC	Y	Z1	W.P. Carey School of Business	Prebusiness Office	1-3		
WPC	501	Understanding Facts: Statistics for Managers	Fundamentals of statistical analysis to aid management decision making.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	2-4		Prerequisite(s): degree- or nondegree-seeking graduate student
WPC	502	Self-Discovery Through Career Coaching	Prepares students to navigate the challenging MBA world of work. Applies theories and best practices of career management and job search to help students make informed career choices, to obtain an internship between year one and year two of the program, and to obtain a full-time position upon graduation.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	0-4		Prerequisite(s): W.P. Carey MBA degree major; Credit is allowed for only WPC 502 or MGT 594 (Career Leadership)
WPC	503	Frontline to Boardroom Communication	Provides opportunity to develop and enhance all aspects of business communications including presentation skills, business writing, informal business communication and giving feedback. Students (1) use PowerPoint or other presentation tools to deliver an effective team presentation; (2) write an effective memo proposing a course of action to solve a business problem; (3) deliver effective feedback to peers to enable them to improve their communications skills; and (4) communicate effectively in a team problem solving setting.	N	LEC	N	OPT	W.P. Carey School of Business	Prebusiness Office	0-4		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only WPC 503 or MGT 594 (Leadership Communication)
WPC	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-12		Prerequisite(s): degree- or nondegree-seeking graduate student
WPC	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	W.P. Carey School of Business	Prebusiness Office	1-4		Prerequisite(s): degree- or nondegree-seeking graduate student
WST	100	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Credit is allowed for only WST 100 or WST 300
WST	100	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Credit is allowed for only WST 100 or WST 300
WST	100	Women, Gender, and Society	Interdisciplinary introduction examining critical issues in women's studies.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Credit is allowed for only WST 100 or WST 300
WST	191	First-Year Seminar	Small course emphasizing student-faculty discussion and interaction. Required for first-year students. Must have taken 25 or fewer credit hours. Consulting an academic advisor before enrolling is recommended.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-3		Pre-requisites: Must be a freshman with 25 or less total earned hours
WST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	194	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	220	Gender, Media and Culture	Introduction to gender and the media including magazines, films, advertising, new media, and other popular culture forms.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(HU or SB) & C	
WST	235	Disability, Justice and Advocacy	Overarching history of the disability rights movement and how it is similar to and different from other civil and rights movements. Examines how policies and activism are interconnected within this movement, in addition to looking at other human categories related to disabilities such as gender, sexuality, race and socioeconomic status.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Credit is allowed for only COM 235, JUS 235, SST 235, WST 235 or SST 294 (Disability Justice and Advocacy)

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	270	Global Perspectives on Women	Through lectures, creative class activities and discussions, presents a comprehensive overview of gender and globalization with special emphasis on lived realities of women worldwide. Understands women's lives and gendered experiences through the issues of work, identities (nationality, race, class, age, ability), bodies and embodiment, belief systems, political economy and difference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Credit is allowed for Global WST 270 or 294 (Global Perspective on Women)
WST	276	U.S. Women's Movements	Historical survey of sources influential in the development of the feminist movement in the United States.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H	Prerequisite(s): ENG 102 or 105 or 108 with C or better; Credit is allowed for only AMS 276 or WST 276
WST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	294	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
WST	298	Honors Directed Study	Independent study or practicum under the supervision of a faculty member.	N	RSC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
WST	300	Women and Gender in Contemporary Society	Advanced interdisciplinary examination of such topics as gender, intersectionality, media and representations, sexuality, politics, health, violence and feminism.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Pre-requisite: 30 minimum hours; credit is allowed for only WST 300 or WST 100
WST	300	Women and Gender in Contemporary Society	Advanced interdisciplinary examination of such topics as gender, intersectionality, media and representations, sexuality, politics, health, violence and feminism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisite: 30 minimum hours; credit is allowed for only WST 300 or WST 100
WST	300	Women and Gender in Contemporary Society	Advanced interdisciplinary examination of such topics as gender, intersectionality, media and representations, sexuality, politics, health, violence and feminism.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Pre-requisite: 30 minimum hours; credit is allowed for only WST 300 or WST 100
WST	302	History of Black Women in America	Advanced examination of the challenges that black women have faced historically in America and how they have responded to those challenges socially, politically, economically, and culturally.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & H	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 302 (or AFS 302) or HST 335 or WST 302
WST	305	Poverty and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & G	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 305 or SSH 305 or WST 305
WST	305	Poverty and Global Health	From perspectives of anthropology and allied fields, explores critical, social justice, and ethical issues in health care, research, and disparities. Focuses on vulnerable and special populations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	(L or SB) & G	Prerequisite(s): ENG 101, 105, 107, or 111 with C or better; Credit is allowed for only ASB 305 or SSH 305 or WST 305
WST	313	Women and Sexuality	Explores U.S. women's sexuality in social context, including how women's sexuality is portrayed in popular media, medicine and education; how girls learn to think about sexuality; and how public policies address women's sexuality.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	318	African and African Diaspora Women Writers	An in-depth study of themes such as race, class, gender, and ethnicity in the creative fiction of black women writers of African descent in the United States, the Caribbean, and Africa.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & G	Prerequisite(s): AFR 200 (or AFS 200) or WST 100 or WST 300 or minimum 45 hours; Credit allowed only for AFR 318 (or AFH 318) or WST 318
WST	320	Gender, Drugs and Alcohol	Drug and alcohol use have multiple and diverse meanings shaped by their historical, social and cultural context. Examines how and why alcohol and drug use have been identified as social problems and the role of gender in shaping this process. Reviews multiple social and cultural aspects of gender, drug and alcohol use, as well as the emergence of gender-based health disparities within this context. Fulfills a science and society requirement. Basic scientific principles such as the formulation of research questions, data collection and analysis, have been used to develop our understanding of gender, drugs and alcohol. How society influences the nature of those questions, the perceived value attached to particular scientific studies over others, and how to critically evaluate law and policy around drugs and alcohol in light of those studies.	N	LEC	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only WST 320 or WST 394 (Gender, Drugs and Alcohol)
WST	330	Women, Film, and Culture	Critical examination of the way films can reflect, reinforce or challenge mainstream cultural ideas about women.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 30 hours
WST	330	Women, Film, and Culture	Critical examination of the way films can reflect, reinforce or challenge mainstream cultural ideas about women.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 30 hours

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	331	Asian Pacific American Genders and Sexualities	Explores gender and sexuality issues as they relate to Asian Pacific American experiences, including interracial relationships, stereotypes, feminism, queer theory.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & C	Credit is allowed for only APA 330 or WST 331
WST	333	Critical Perspectives on Sexuality	Examines critical theories of sexuality, including history, commerce, pleasure, LGBT issues, identity, medicalization of sexuality, disorders, sex crime, and pornography.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Pre-requisites: WST 100 or 300 with C or better
WST	335	Lost in Space: Gender, Race, and Sexuality in Science Fiction	Surveys the complex interrelationships of biomedical research and discourses of biological difference as reflected in science fiction. Explores such questions as: How have biological scientists explained human differences along axes of gender, race, class, sexuality? In what ways have these scientific discussions manifested themselves in science fiction?	N	LEC	N	GNA	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only APA 394 (Science Fiction Adventures Race/Gender) or WST 335 or WST 394 (Lost in Space: Gender, Race, & Sexuality in Sci Fi)
WST	340	Gender, Science, and Technology	In-depth examination of the complex interrelationships of gender, science, technology, and society in a number of different contexts. Looks at the participation of women in scientific and technical fields both historically and cross-culturally, and addresses such topics as: gender segregation by status and discipline, feminist theories of gender and science, the conditions under which women have succeeded in the sciences, gender and biological determinism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB	Pre-requisites: WST 100, 300 or minimum 30 hours
WST	341	Latin American Women Writers	In the 20th and 21st centuries, Latin America has seen a proliferation of literature published by women authors. While this explosion of the written word owes in part to changing socioeconomic factors and the opening of the international markets, Latin American women's literary history is often ignored in the canon. Examines the concepts of feminism through a Mexican framework, starting from the point of view of Mexican women theorizing about their own. This is not a history of feminism, but it does aim to highlight certain fundamental texts and key concepts of Mexico's history from the position of women writers, including feminism's critique of social structures beyond the bounds of gender relations.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only LAS 340 or WST 341
WST	345	Gender, Religion, and Global Violence	In-depth study of forms of gendered violence in which religion plays a key role in either the practice or perpetuation of that form of violence in a myriad of cultures and contexts. Analyzes current responses and proposes new approaches to combating or redefining these forms of violence, emphasizing the need to understand and respect the religious and cultural contexts in which these actions occur.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Pre-requisites: WST 100, 300 or minimum 30 hours
WST	360	Women as Healers	Advanced examination of the role of women as caregivers, healers, physicians, midwives, and nurses in different cultures and historical periods.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & G	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	364	Unruly Voices: Black Women and Cultural Narratives	In-depth study of African American women writers and how they (re)define female identities and engage a critical cross-cultural dialogue within the context of cultural history in the United States.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Prerequisite(s): AFR 200 (or AFS 200) or minimum 45 earned hours; Credit is allowed for only AFR 365 (or AFH364) or WST 364
WST	365	Women and International Health	Advanced study of gender-based disparities and global health, including impact of poverty, gender discrimination, political economy, and culture.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	G	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	370	Chronicling Women's Lives	Explores the lives of a selected group of American women as a point of departure for the chronicling of contemporary women's lives.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C	Pre-requisites: WST 100 or 300 with C or better
WST	371	Sex and the City: Women, Sexuality, and Popular Culture	An in-depth study of the changing media representations of young, sexually autonomous women in the city.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	372	Women in Judaism	Studies the legal, social, and cultural status of Jewish women in various historical and contemporary societies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: ENG 102, 105 or 108 with C or better and minimum 24 earned hours or WST 100 or 300 with C or better; Credit is allowed for only JST 373, REL 373 or WST 372
WST	373	Latina/Chicana Issues	Critical examination of the roles Mexican American, Chicana, and/or Latina immigrant women play historically, socially, and politically in the United States and along the border.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 30 hours. Credit is allowed for only TCL 373 or WST 373
WST	374	Desperate Housewives	In-depth examination of the representations of women as wives and/or mothers in the popular discourse from the 20th century to current day through an analysis of various forms of popular culture such as film, magazines, popular writing and television.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Minimum 30 hours; Credit is allowed for only WST 374 or 394 (Desp Housewives: Gender, Family & Pop Culture)
WST	375	Women and Social Change	In-depth course on feminist activism and social change. Combines research and theory on a contemporary social problem with a community action experience.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours

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WST	376	Feminist Theory	Explores feminist theories and the intersection of gender, race, ethnicity, and class through critical analyses.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	H & C	Pre-requisites: WST 100 or 300 with C or better
WST	377	History of American Feminist Thought	Critical analysis of the origins and development of American feminist thought and political movements.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	H & C	Prerequisite(s): WST 100 (or WST 300) or minimum 30 hours
WST	378	Global Feminist Theory	In-depth studies of global feminist theories and exploration of the intersections of gender, race, ethnicity, class, and nation through critical analysis.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	L & G	Pre-requisites: WST 100 or 300 or minimum 30 hours
WST	380	Race, Gender, and Class	In-depth examination of how social inequalities are reproduced and perpetuated. Explores the intersections of race, class and gender in culture and society.	N	LEC	N	OPT	Integrative Sciences & Arts	College of Integrative Sciences and Arts	3	SB & C	Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only AMS 380 or ETH 380 or WST 380
WST	380	Race, Gender, and Class	In-depth examination of how social inequalities are reproduced and perpetuated. Explores the intersections of race, class and gender in culture and society.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only AMS 380 or ETH 380 or WST 380
WST	380	Race, Gender, and Class	In-depth examination of how social inequalities are reproduced and perpetuated. Explores the intersections of race, class and gender in culture and society.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): WST 100 or WST 300 or minimum 30 hours; Credit is allowed for only AMS 380 or ETH 380 or WST 380
WST	382	American Indian Women	Investigate the economic, political and ideological factors contributing to American Indian women's intellectual and creative activities.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	C	Prerequisites:WST 100, 300, or AIS 180 with a C or better; or co-requisite if completed 30 hours or more: AIS 180, or WST 100 or 300. Credit for only AIS 381 or WST 382
WST	385	Psychology of Gender	Examines, from a psychological perspective, the similarities and differences in beliefs, attitudes, and behaviors of women and men.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: WST 100 or 300 with C or better
WST	390	Women, Gender and Religion	Examines the role of women and the construction and practice of gender identities across religious traditions and cultures.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; Credit is allowed for only REL 390 or WST 390
WST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	394	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	413	Queer Studies	In depth exploration of lesbian, gay, bisexual, transgender, and queer experiences in the U.S. and globally, from an interdisciplinary perspective.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): WST 100 (or WST 300) with C or better or minimum 45 hours
WST	420	Women of Color in Film	An in-depth analysis of the history and representations of women of color in film and the film industry through the intersections of gender, race, sexuality, class, and nationalism.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Prerequisite(s): WST 100 or WST 300 or minimum 45 hours; Credit is allowed for only AFR 418 (or AFS 420) or FMP 420 or FMS 420 or WST 420
WST	421	Girlhood and Adolescence	Critical analysis of the changing construction of girlhood and female adolescence through history, memoir, fiction, myth, music, and media.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisite: WST 100 or WST 300 or minimum 30 hours
WST	422	Women, Law and Social Control	Examines social, economic, and legal factors that are relevant to mechanisms of social control of women, including formal legal control and informal control through violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites:ENG 102, 105 or 108 with C or better; minimum 36 hours; Minimum 2.00 GPA; Credit is allowed for only JUS 422 or WST 422
WST	430	Gender on the Borderlands	Examines women's status in the U.S.-Mexico borderlands through key issues such as migration, labor, violence, education, and culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 24 hours OR WST 100 or 300 with C or better; Credit is allowed for only ETH 430 or LAS 430 or WST 430 or JHR 598 (Gender on the Borderlands)
WST	440	Politics of Women's Health	In-depth and interdisciplinary exploration of how women's social, cultural, and economic position affect their health and health care.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisite: WST 100 or WST 300 or minimum 45 hours
WST	444	Gender, Health, and Bodies	Exploresgender and health from a feminist perspective, including critical analyses of medicine, science, and popular culture.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB	Pre-requisites: WST 100 or 300 with C or better; Credit is allowed for only MAS 598 (Gender, Health, and Bodies) or WST 444

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WST	447	Gender, Culture, and Development	In-depth analysis of gender roles related to health, family, work, education and politics in developing countries.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	(L or SB) & G	Prerequisite(s): WST 100 or 300 or minimum 45 hours; Credit is allowed for only SGS 454 or SOS 447 or TCL 447 or WST 447 or TCL 598 (Gender, Culture & Development)
WST	449	Hate Speech, Manifestos, and Radical Writings	Examines writings, speeches and texts that provoke radical or even revolutionary social change. At its core, this course asks: What is the radical and what does it do? How do radical writings function as texts, speech acts, inspirational documents, testimonies, accounts of madness, frightening moments, calls to arms, peacekeeping entities or speaking truth to power? Examines injurious speech and provocative writings that span a range of social movements and topics, including radical feminism, radical queer, Black power, indigenous rights, art and performance, anti-technology, animal rights, violence, madness and revolutionary resistance.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): minimum 35 hours; minimum 2.50 GPA; Credit is allowed for only AMS 449 or ETH 449 or WST 449 or WST 394 (Hate Speech and Manifestos)
WST	457	Women, Cultures, and Societies	Examines issues such as poverty, dependency, interdependency, race, class, and gender in different societies of the world.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & G	Pre-requisites: WST 100 or 300 with C or better
WST	460	Women and the Body	In-depth analysis of the cultural construction of the gendered body and societal prescriptions about beauty, body image, and size.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisite: WST 100 or WST 300 or minimum 45 hours
WST	467	Ethnic Women Writers	Concentrates on selected women writers of the U.S. who are Native American, African American, Latina, and Asian-American.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & C	Prerequisite(s): WST 100 (or WST 300) with C or better. Credit is allowed for only ENG 460 or WST 467
WST	469	Abject Bodies and the Politics of Trash	Examines the possibilities inherent in "theorizing from the gutter"; looking at the world not from a lofty "Ivory Tower" but from the slime, the muck, the dumpster, the trash heap, the wasteland, the discarded and the downtrodden. Takes its theoretical framework from a radical 1960s manifesto called SCUM Manifesto by Valerie Solanas and from the French feminist philosophies of Julia Kristeva, who theorized the abject as a relationship with the grotesque that reveals the deep-seated fear of death. Uses these theoretical positions to examine trash, both abstractly and literally. Works through a variety of concepts ranging from actual trash, garbage, waste, toxic sludge, pollution and dirt, and tackles more abstract notions of trash such as the knowledge produced on the fringe in circuses, amusement parks, "trailer trash" zones, freak shows and the bodies of those marked as "Other" or different.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 36 hours; Credit is allowed for only AMS 469 or ETH 469 or WST 469 or WST 494 (Trash, Freaks and SCUM) or JHR 598 (Trash, Freaks and SCUM) or MAS 598 (Trash, Freaks and SCUM)
WST	470	Gender and Popular Culture	Advanced interdisciplinary examination of how gender is constructed in various popular cultural forms such as film, television, magazines, and music.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisites: WST 100 or WST 300 or minimum 45 hours
WST	471	Women's International Human Rights	In-depth study of the core themes of a global movement for women's international human rights. Analyzes the historical evolution of the development of international human rights and women's rights within the United Nations and regional human rights systems.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): WST 100 or WST 300 or minimum 45 hours. Credit is allowed for only AFR 470 (or AFS 470) or AFR 494 (or AFS 494) (Women's International Human Rights) or AFR 598 (or AFS 598) (Women's International Human Rights) or WST 471
WST	472	Women, Aging, and the Life Course	Critical evaluation of issues affecting women as they age, including media messages, cultural differences, economic issues, and relationships.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3		Pre-requisites: Minimum 60 hours (including 6 hours of PSY and/or SOC).
WST	473	Indigenous and Latina/Chicana Representation	Examines from an interdisciplinary perspective contemporary issues experienced by Indigenous and Chicana/Latina women in the U.S.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Prerequisite(s): ENG 102, 105, or 108 with C or better; minimum 45 hours; Credit is allowed for only ETH 473 or LAS 473 or WST 473
WST	475	Women of the Diaspora across Cultures	Examines the socioeconomic condition, political formation, and identities of contemporary indigenous, ethnic minority, immigrant, and migrant women globally.	N	LEC	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU	
WST	477	Women and Violence	Critical examination of forms of violence against women globally at individual, institutional, and cultural levels.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	SB & C	Pre-requisites: WST 100 or WST 300 or minimum 45 hours
WST	480	Gender Issues in Education	Examines the relationship between gender and educational access and outcomes as a result of public policy in a variety of communities and settings.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Pre-requisites: WST 100 or 300 with C or better
WST	483	Women Writers Across Cultures	Comparative approach to contemporary writings by women from around the world.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	HU & G	Pre-requisites: WST 100 or 300 with C or better
WST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	484	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		

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WST	485	Women, Gender, and Leadership	Explores the gendered nature of leadership and studies strategies that enable women to lead successfully in areas such as business, education, and public service.	N	SEM	N	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	3	SB & C	Pre-requisites: WST 100 or 300 with C or better
WST	490	Transborder Queer Performativity	Explores a rich and diverse body of border-crossing performative expression created by queer and/or Latina/o artists. Course readings and discussions include solo and collaborative works with an emphasis on solo autobiographical performance scripts as well as performer interviews and performance scholarship.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3	HU & C	Pre-requisites: ENG 102 (or 105 or 108) with C or better; Minimum 45 earned hours; Credit is allowed for only TCL 490 or WST 490
WST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
WST	492	Honors Directed Study	Independent study in which a student, under the supervision of a faculty member, conducts research or creative work that is expected to lead to an undergraduate honors thesis or creative project.	N	RSC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
WST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	Liberal Arts and Sciences	School of Social Transformation	1-6	L	Prerequisite(s): Barrett Honors student
WST	493	Honors Thesis	Supervised research or creative activity focused on preparation and completion of an undergraduate honors thesis or creative project.	N	RSC	N	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6	L	Prerequisite(s): Barrett Honors student
WST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	494	Special Topics	Covers topics of immediate or special interest to a faculty member and students.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-6		Prerequisite(s): Barrett Honors student
WST	497	Honors Colloquium	A class emphasizing discussion, written and/or oral presentation by students, and active participation.	N	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-6		Prerequisite(s): Barrett Honors student
WST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-7	L	Pre-requisites: WST 100 or 300 with C or better; ENG 101 or ENG 107 or ENG 105; Majors only
WST	498	Pro-Seminar	Small-group study and research for advanced students within their majors. Major status in the department or instructor approval is required.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-7	L	Pre-requisites: WST 100 or 300 with C or better; ENG 101 or ENG 107 or ENG 105; Majors only
WST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	Liberal Arts and Sciences	School of Social Transformation	1-3		
WST	499	Individualized Instruction	Provides an opportunity for original study or investigation in the major or field of specialization on an individual and more autonomous basis. Neither a substitute for a catalog course nor a means of taking a catalog course on an individual basis. Requires application well in advance of regular registration with the student's advisor, the advisor's signature, and approval by both the instructor with whom the student will work and the chair of the department offering the course.	Y	IND	Y	GNA	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-3		
WST	501	Foundations of Feminist Thought	Provides key concepts and theories that have shaped the field of women and gender studies. Also provides overview of resources for research in women's studies scholarship at ASU and prepares students to participate in the field.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only WST 501 or WST 691 (Foundations of Fem Thought)
WST	502	Interdisciplinary Gender Research Methods	Describes the ways in which feminist scholars conceptualize and design their research. Explores the decisions scholars make in their research including the choice of research topics, applications of feminist theories and methodologies, the choice of methods and how and why feminist scholars have increasingly incorporated interdisciplinary methods, and what is at stake in these decisions for the research design and research outcomes.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student
WST	547	Gender, Activism, and the Built Environment	Explores issues of gender in the built environment. Includes traditional attitudes toward gender underlying the physical form and continuing impacts.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Graduate student (degree seeking or nondegree seeking) ; Credit is allowed for only PUP.547 or WST.547
WST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	580	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
WST	584	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		

Subject	Catalog Nbr	Course Title	Course Description	Allow Mult Enroll	Component Primary	Crse Repeatable	Grading Basis	College	Department	Units	General Studies	Requirements
WST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	590	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
WST	591	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: degree-seeking graduate students only
WST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	592	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	LEC	Y	Z1	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-12		
WST	593	Applied Project	Preparation of a supervised applied project that is a graduation requirement in some professional majors.	Y	LEC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	594	Conference and Workshop	Topical instruction, usually in compressed format, leading to academic credit. Often offered off campus to groups of professionals.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	595	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	LEC	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		
WST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-4		
WST	598	Special Topics	Topical courses not offered in regular course rotation--e.g., new courses not in the catalog, courses by visiting faculty, courses on timely topics, highly specialized courses responding to unique student demand.	Y	LEC	Y	OPT	New Interdis Arts & Sciences	School of Humanities, Arts, and Cultural Studies	1-4		
WST	599	Thesis	Supervised research focused on preparation of thesis, including literature review, research, data collection and analysis, and writing.	N	LEC	N	Z2	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	601	Critical Concepts of Gender	Key concepts, theoretical frameworks, disciplinary and interdisciplinary approaches, and the critical debates that have shaped the field of gender studies.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: degree-seeking graduate students only
WST	602	Mapping the Intersections of Gender	Theoretical concepts, metaphors, and frameworks employed by feminist scholars to understand the way gender articulates with other categories of difference.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Degree-seeking graduate students only
WST	603	Engendering Methodology	Focuses on the methodologies, epistemologies, and ethical dilemmas of researching gender.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Degree-seeking graduate students only
WST	615	Masculinities	Explores the theoretical concepts, frameworks and disciplinary and interdisciplinary approaches that have accompanied the emerging analysis of masculinity studies as a field. Interrogates the ways in which masculinities have been defined in relation to femininities and other institutionalized constructions of difference, and how these definitions have contributed to material conditions and specific socio-historical contexts in which gendered bodies are included or excluded, privileged or disadvantaged, taken for granted or contested. Considers the articulations and contestations of diverse masculinities as expressed through gender, race, sex, ethnicity, sexuality, kinship, politics, popular culture, economics, nationalism, science and medicine, and violence.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only WST 615 or WST 691 (Masculinities)
WST	620	Advanced Feminist Theory in a Transnational Context	Concentrates on transnational feminist theory and its intersections with queer theory, postcolonial theory, and critical race theory. Also looks at the ways in which (or indeed, whether) academic discourses have anything useful to say about the worlds in which we live. Among the questions we'll need to have constantly in our minds are: In what ways has feminist theorizing changed over time? Does transnational feminist theory challenge or even undermine previous feminist theoretical discussions or the perspectives you might be familiar with from your undergraduate days? What kinds of engagements do our authors have with theorists in other areas (queer studies, postcolonial studies, critical race theory)? Can you discern any sort of new feminist grand narrative emerging from these works? In what ways might our authors' perspectives help you conceptualize and contextualize your own work?	N	SEM	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Prerequisite(s): degree- or nondegree-seeking graduate student; Credit is allowed for only WST 620 or WST 691 (Feminist Theory) or WST 791 (Feminist Theory)
WST	640	Visual and Narrative Culture	Feminist analysis of gender representations in visual and narrative culture, including film, dramatic literature, fiction, and autobiography.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Degree-seeking graduate students only

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WST	684	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	690	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	691	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Degree-seeking graduate students only
WST	692	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a thesis or dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	701	Research Design and Proposal Development in Gender Studies	Prepares students for careers in gender studies by developing skills in research design, proposal writing, and identifying funding outlets.	N	LEC	N	OPT	Liberal Arts and Sciences	School of Social Transformation	3		Pre-requisites: Degree-seeking graduate students only
WST	780	Practicum	Structured practical experience in a professional program, supervised by a practitioner and/or faculty member with whom the student works closely.	Y	PRA	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	784	Internship	Structured practical experience following a contract or plan, supervised by faculty and practitioners.	Y	PRA	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	790	Reading and Conference	Independent study in which a student meets regularly with a faculty member to discuss assignments. Course may include such assignments as intensive reading in a specialized area, writing a synthesis of literature on a specified topic, or writing a literature review of a topic.	Y	IND	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-12		
WST	791	Seminar	A small class emphasizing discussion, presentations by students, and written research papers.	Y	LEC	Y	OPT	Liberal Arts and Sciences	School of Social Transformation	1-12		Pre-requisites: Degree-seeking graduate students only
WST	792	Research	Independent study in which a student, under the supervision of a faculty member, conducts research that is expected to lead to a specific project such as a dissertation, report, or publication. Assignments might include data collection, experimental work, data analysis, or preparation of a manuscript.	Y	RSC	Y	Z1	Liberal Arts and Sciences	School of Social Transformation	1-15		
WST	795	Continuing Registration	Used in situations where registration is necessary but where credit is not needed. Replaces arbitrary enrollment in reading and conference, research, thesis, dissertation, etc. Used by students when taking comprehensive examinations, defending theses or dissertations, or fulfilling the continuous enrollment requirement in doctoral programs. Credit is not awarded, and no grade is assigned.	Y	IND	Y	Z3	Liberal Arts and Sciences	School of Social Transformation	1		
WST	799	Dissertation	Supervised research focused on preparation of dissertation, including literature review, research, data collection and analysis, and writing.	Y	RSC	Y	Z2	Liberal Arts and Sciences	School of Social Transformation	1-15		